EVALUATION

Evaluation of ICI cooperation in Asia

Final Report

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14/05/2025

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Acronyms and Abbreviations

AIMS	Arsenic Information Management System
BGR	Federal Institute for Geosciences and Natural Resources
BMKG	Agency for Meteorology, Climatology, and Geophysics of the Republic of Indonesia–Badan Meteorologi, Klimatologi, dan Geofisika (INDFIN implementing partner)
CAC	Laboratory for Central Agency for Pollution Control (TJK Water Quality II implementing partner)
CAHMP	Central Asia Hydrometeorology Modernization Project
CAP	Common Alerting Protocol
CC	Concessional Credit
CCO	Cross-Cutting Objective
CEP	Committee of Environmental Protection (TJK Water Quality II implementing partner)
CEWAFO	Center for Water Resources Warning and Forecast (VietMAR implementing partner)
COVID-19	Corona Virus Disease
DAC	Development Assistance Committee
DGSU	Department of Geology and Subsoil Use
DWSSM	Department of Water Supply and Sewerage Management (NeAs implementing partner)
EFDM	European Forest Dynamics Model
EQ	Evaluation Question
EU	European Union
EUR	Euro
FC	Facilitation Consultant
FCHV	Female Community Health Volunteer
FGD	Focus Group Discussion
FINKMET	Finnish-Kyrgyz Meteorology Project
FINTAJ	Finnish-Tajikistan Meteorology Project
FINUZ	Predecessor of FMI-Uzhydromet Meteorology Project
FMI	Finnish Meteorological Institute
FORMIS	Management Information System for Forestry Sector
FUME	FMI-Uzhydromet Meteorology Project
FWF	Finnish Water Forum
GDP	Gross Domestic Product
GIS	Geographic Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GOSCOMGEOLOGY	State Committee of the Republic of Uzbekistan for Geology and Mineral Resources
GTK	Geological Survey of Finland
HRBA	Human Rights-Based Approach
ICI	Institutional Cooperation Instrument
ICON	ICOsahedral Nonhydrostatic model
ICT	Information and Communication Technology
IMHEN	Institute of Meteorology, Hydrology and Environment

INDFIN	Enhancing BMKG Capacity on Weather Climate and Air Quality Forecast and Warnings to Better Serve the Indonesian Society
ISEMWO	Information System of Environment Monitoring over Water Objects
ISO	International Organization for Standardization
IT	Information Technology
ITN-BUET	Centre for Water Supply and Waste Management
JSWQMP	Joint Surface Water Quality Monitoring Programme
KCHE	Kyrgyz Complex Hydrogeological Expedition
KGE	Kyrgyz Geological Expedition
KGS	Kyrgyz Geological Survey (Strengthening the Mastering of Natural Resources for National Welfare in the Kyrgyz Republic implementing partner)
KGZ	Kyrgyzstan
KOICA	Korea International Cooperation Agency
M&E	Monitoring and Evaluation
MAR	Managed Aquifer Recharge
MFA	Ministry for Foreign Affairs of Finland
MFI	Meteo France International
MINGEOLOGY	Ministry on Mining Industry and Geology (Strengthening the Mastering of Natural Resources for National Welfare in Uzbekistan implementing partner)
MNRETS	Ministry of Natural Resources, Ecology and Technical Supervision
MONRE	Ministry of Natural Resources and Environment
NAWAPI	National Centre for Water Resources Planning and Investigation
NCEM	Northern Centre for Environmental Monitoring (PROMOAIR implementing partner)
NCHMF	National Centre for Hydrological and Meteorological Forecasting
NDS	National Development Strategy
NeAs	Towards Arsenic Safe Drinking Water
NHMS	National Hydro-Meteorological Service of Vietnam
NR	Natural Resource
NR UZB	Strengthening the Mastering of Natural Resources for National Welfare in Uzbekistan
NR II KGZ	Strengthening the Mastering of Natural Resources for National Welfare in the Kyrgyz Republic, phase II
NSACC	National Strategy for Adaptation to Climate Change of the Republic of Tajikistan
NWASH-MIS	National Water Services, Sanitation and Hygiene – Management Information System
NWP	Numerical Weather Prediction
NWS	National Water Strategy
OECD	Organisation for Economic Co-operation and Development
PCD	Pollution Control Department
PIF	Public Investment Fund
PM	Particulate Matter
PROMOAIR	Promoting Modernisation of Air Quality Observation and Management Systems in Urban areas of Vietnam
PROMOSERV	Promoting Modernization of Hydrometeorological Services in Viet Nam
QGIS	An open-source Geographic Information System software
RBMF	Results-Based Management Framework
RCF	Red Cross Finland
RIFI	Research Institute of Forest Industry (WOODVN implementing partner)
SAEPF	State Agency for Environmental Protection and Forestry

SAGMR	State Agency on Geology and Mineral Resources (Kyrgyzstan)
SCIESU	State Committee of Industry, Energy and Subsoil Use of the Kyrgyz Republic
SIHYMECC	Sub-Institute of HydroMeteorology and Climate Change (VietMAR implementing partner)
SILAM	System for Integrated Modelling of Atmospheric Composition (chemical transport model used by FMI)
SMART	Specific, Measurable, Attainable, Relevant, Time-Bound
SOP	Standard Operating Procedure
Syke	Finnish Environment Institute
TJK Water Quality II	Development of Tajik surface Water Monitoring by Quality Management and Collaboration
TUNDUK	Kyrgyzstan's national e-government platform
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNICEF	United Nations Children's Fund
USD	United States Dollar
VAFS	Vietnam Academy of Forest Sciences (WOODVN implementing partner)
VEA	Vietnam Environment Agency
VietMAR	Managed aquifer recharge to ensure sustainable groundwater availability and quality under ongoing climate change and fast economic development in Vietnam
VN-HAZ	WB5 Vietnam Managing Natural Hazards Project
VNFOREST	Vietnam Administration of Forestry (WOODVN implementing partner)
VNMHA	VietNam Meteorological and Hydrological Administration (PROMOSERV implementing partner)
WASH	Water, Sanitation, and Hygiene
WB	World Bank
WEI	Wider Europe Initiative
WHO	World Health Organization
WMO	World Meteorological Organization
WOODVN	Capacity building for value chains of wood products industries in Vietnam

Executive Summary

Background

This report presents the findings of an evaluation of support provided through Finland's Ministry for Foreign Affairs' (MFA) Institutional Cooperation Instrument (ICI) in Central Asia (Uzbekistan, Tajikistan, Kyrgyzstan), Vietnam, Nepal and Indonesia. ICI projects are capacity building and organisational development interventions in which Finnish government agencies cooperate with their partner (sister) institutions in developing countries. The evaluation included 12 ICI projects that have been implemented by the Finnish Meteorological Institute (FMI), the Geological Survey of Finland (GTK), the Finnish Environment Institute (Syke), and the Natural Resource Institute Finland (Luke). The evaluation was undertaken in the period January-April 2025.

Many of the ICI projects in Asia have been on-going for several phases but some have never been evaluated. The purpose of the evaluation is to provide decision-makers and stakeholders with objective and impartial information that can be used for monitoring accountability, learning and decision-making regarding the ICI Asia projects and overall approach.

The evaluation team applied a participatory, consultative, utilisation-focused, theory-based and context sensitive approach, and implemented quantitative and qualitative methods. Three projects ("case studies") were evaluated in a more detailed manner than the other nine projects. The reports of the project evaluations are included in Annexes 4–15 ("case study" reports in Annexes 4–6).

Summary of main findings, conclusions and recommendations

Overall, the evaluation presents a positive view of the ICI approach, which can be considered an added value to the other development cooperation instruments. The evaluation findings indicate that the ICI projects are relevant, coherent, and generally efficient and cost-effective, particularly given their relatively limited resources. Most of the outputs have been achieved and a certain level of adoption by the partner institutions has been observed in most projects. The peer-to-peer technical "hands-on" capacity building approach is considered a strength of the ICI instrument. However, the full institutionalisation of improved capacities and introduced systems within the partner institutions' operational processes appears more challenging. This has implications for the effectiveness, impact and sustainability of the results. While there are positive signs, various challenges are also identified that could hamper the sustainability of the project results in several countries.

Relevance

The ICI projects are well aligned with the policies and priorities of MFA and the partner countries, and respond closely to the capacity development needs of the partner institutions. Although improvements in design are noted from earlier ICI projects, questions were raised regarding the integration of human rights-based approach (HRBA)/cross-cutting objectives (CCOs). Although the limitations of the ICI projects to contribute to transformative change at the partner institutions is recognised, it is proposed that these aspects continue to be included in a realistic and pragmatic manner, building on "good practices" observed across projects. Weaknesses were also found in the design of results-based management frameworks (RBMF) and risk management. RBMFs have issues with vertical logic, especially regarding the differentiation between outputs and outcomes.

It can be concluded that the ICI projects are relevant and if required preconditions for success and sustainability are in place and if good practices are applied, the ICI projects can provide added value to MFA's other development cooperation instruments.

Coherence and ownership

ICI projects are generally coherent with Finnish and other development initiatives in the countries, and deliberate efforts are made to avoid duplicating efforts. However, the level of collaboration between institutions and other projects remains mostly limited. The sense of ownership of partner agencies and their parent institutions is satisfactory but is often affected by partner countries' institutional changes and political decisions.

Efficiency

ICI projects are generally efficient, flexible and relatively easy to manage due to their technical focus. However, the relative short duration, small budget, and short-term inputs limit the level of capacity built and internalisation of knowledge, affecting cost-effectiveness. There is also a risk of spreading the resources too thin over many areas/outputs and actors. While the nature of the ICI projects should be maintained, a clear focus, longer presence in-country and continued capacity building to the same experts could enhance cost-effectiveness.

In terms of coordination and facilitation of the ICI programme, the frequent turnover of MFA staff is not conducive to high efficiency of the operations and knowledge management. The ICI Facilitation Consultant (FC) support is considered useful but limited. Due to the issues of the RBMFs, the monitoring and evaluation (M&E) systems do not adequately measure real outcomes and the risk analysis is not consistently monitored and updated.

Effectiveness

While the ICI practical "hands-on" approach and technical focus contribute to increased capacity of partner institution staff, adoption of the introduced systems and practices at institutional level is complex and is often hampered by institutional changes, political decisions, turnover of trained experts, and other challenges. Projects can build on good practices to achieve and retain skills.

Sustainability

Positive signs of sustained use of introduced concepts, systems or methodologies exist, but sustainability of main results is not yet achieved in many projects. A strong sense of ownership, financial capability and adequate human resources within the partner institutions, as well as commitment from the partner country government are key enablers for project sustainability. However, numerous challenges undermine sustainability, particularly related to institutional, political, financial, and human resources factors. A good contextual and institutional analysis at design phase can possibly help identifying the prospects for success and sustainability.

Impact

The projects have contributed to improved working processes, results and recognition of the partner institutions but the institutional impact varies across the projects. Some projects contributed to wider impact, such as disaster risk reduction and improved environmental management but no major impact on gender equality was found.

The ICI projects can act as a catalysing force, contributing to increased impact through linking up with—or adoption of the approach and introduced systems by larger programmes. ICI projects can also leverage private sector support, but Finnish products are often considered technically too advanced or not well adapted to the local conditions in the partner countries and too expensive. The collaboration between FMI and Vaisala (through ICI, PIF and other projects) is considered successful and contributes to increased impact.

Table 1 Summary of main findings, conclusions and recommendations

Main findings	Conclusions	Recommendations
RELEVANCE		
1. The ICI projects are well aligned with the partner country's priorities and policies. 2. The ICI projects respond closely to MFA policy guidelines related to climate change, biodiversity and sustainable management, and use of natural resources. 3. More emphasis was put on integrating HRBA, gender equality and non-discrimination in the project approach than in earlier ICI projects, but the degree of integration varies. 4. The projects respond closely to the capacity development needs of the partner institutions, but partners were not much involved in the design of the project documents. 5. The Results-Based Management Frameworks (RBMF) are usually reasonably well developed but have issues with vertical logic, especially regarding the differentiation between outputs and outcomes. 6. A risk analysis is conducted in the project documents but not all projects regularly updated the matrix. In some projects the identified risks affected the project implementation, indicating that the mitigation measures were less effective than expected.	1. ICI projects are highly relevant, though questions arise on the design regarding the integration of HRBA/CCOs, the formulation of the RBMF, and the application of risk analysis.	1. Continue with ICI projects, based on participatory and context-responsive project planning, while strengthening their design and implementation through meaningful partner involvement in all phases, realistic integration of development cooperation principles, and improved results-based management and risk frameworks. 2. Integrate HRBA/CCOs "realistically" in the design, focusing on practical measures on gender-equality and non-discrimination. 3. Design simple, realistic and high quality RBMFs, based on clear horizontal and vertical logic and SMART indicators. Involve partner institutions in the design. 4. Involve partner institutions in risk analysis and avoid high-risk actions without feasible mitigation measures.
COHERENCE AND AID EFFECTIVENESS		
7. The projects are coherent with the Country Strategies and Country Programmes. Collaboration with other Finnish actors varies but is often limited. 8. The general approach of the ICI projects is to complement other projects and avoid duplication.	2. ICI projects are generally coherent with Finnish and other development initiatives in the countries, but the level of collaboration remains mostly limited.	5. Strengthen coherence and coordination through participatory planning, identification of other initiatives in the sector, and stakeholder alignment to avoid duplication and ensure complementarity of supported interventions. 6. Ensure proper analysis and consideration of the broader organisational and political context and involve higher-level decision-makers in the design, implementation and

9. Partner institutions (and consulted parent authorities) have mostly good sense of ownership, but this is sometimes affected by changes of leadership, institutional restructuring, and political decisions. 10. The participation of decision makers in visits to Finland can enhance their commitments, but in some projects, issues arose on the decision who should participate. To avoid this, some projects arranged separate tours for technical experts and high-level officials (sometimes combining with board meetings).	3. The sense of ownership is mostly satisfactory but is often affected by partner countries' institutional changes and political decisions.	reporting on the project. Separate study tours for decision makers could be considered to strengthen commitment.
EFFICIENCY		
11. Most of the activities were implemented but COVID-19 disrupted the project implementation, and most projects got a no-cost extension. Delays happened due to several factors. 12. The ICI projects are generally efficient in producing outputs without many overheads/administrative costs. 13. The projects are planned for a relative short duration, which (because of the intermittent inputs) is not always conducive for achieving the expected results, especially for first phase projects with new partner institutions. 14. The short-term, intermittent inputs of Finnish experts in the partner countries can affect the continuity and effectiveness of the support as the momentum is not always maintained in between missions. 15. There is a risk of ICI projects being over-ambitious, trying to cover (too) many aspects and sometimes different actors within the relatively short time frame and limited resources. 16. The management procedures are mostly implemented as expected. The ICI facilitation is generally appreciated but the ICI FC are not involved in the initial project identification and design.	4. ICI projects are generally efficient, flexible and relatively easy to manage due to their technical focus. 5. The relative short duration, small budget, and short-term inputs limit the level of capacity built and internalisation of knowledge, affecting cost-effectiveness. There is also a risk of spreading the resources too thin over many areas/outputs and actors. 6. The MFA ICI framework is relatively complex, and frequent turnover of MFA staff has occurred affecting the efficiency of the ICI programme. The ICI FC support is useful but limited. 7. The M&E systems are not adequately designed to measuring effectiveness and the risk analysis is not consistently monitored and updated across projects.	7. Ensure a clear focus of project support to get optimal (cost-effective, sustainable) results, avoiding spreading the resources over many areas, outputs and actors. 8. Identify options for longer-term (4–5 years) projects, combined with a higher budget, especially for the first phase. 9. Identify options for improved ICI management processes: (i) continuity of staff and improved documentation; (ii) possibility for enlarging the role of ICI FC to also provide support to the design phase and link up with partner organisations, or alternatively, strengthen the skills of dedicated development cooperation specialists within the ICI implementing institutions; and (iii) possibility of supporting external evaluations. 10. Continue self-assessments but simplify the evaluation template, improve M&E of outcomes (adoption, institutional performance), and strengthen risk management.

17. The M&E systems are simple but affected by the issues of the RBMF and generally do not provide much information on the outcomes and impact, although the level of analytical reporting varies. The self-assessments are useful (although the framework is considered too complex), but no independent evaluations have been implemented. The risk analysis is not always monitored and updated.		
EFFECTIVENESS		
18. The support is considered of high quality by the partners. 19. Most outputs were (partly) achieved and the support has contributed to enhancing capacities but not always sufficiently. Some projects encourage good practices to achieve and retain skills. 20. The level of adoption of the introduced practices varies but is often limited due to several institutional challenges.	8. The ICI practical "hands-on" approach and technical focus is good, but the level of capacity building is not always sufficient to achieve good results. 9. Adoption at institutional level takes time and is often hampered by institutional changes, political decisions, loss of trained experts, and other challenges.	11. Continue the practical "hands-on" capacity building approach and technical focus but provide prolonged training to key staff—see also recommendation 7 regarding clear focus of project support to get optimal results and recommendation 8 focusing on options for longer-term projects and in-country support. 12. Support good practices to achieve and retain skills: a) Agreement at management level for staff to continue working on project activities. b) Support inter-organisational training—staff retention measures/incentives. c) Provide "homework" between missions and remotely monitor implementation. d) Provide remote ad-hoc technical advice. 13. Identify and support options for further institutionalisation and up-scaling through other donor-supported or private sector activities, including PIF.
SUSTAINABILITY		
21. The level of institutionalisation and sustainability of the introduced practices varies. While some measures for enhancing sustainability are taken, also challenges are identified.	10. Positive signs of sustained use of introduced concepts, systems or aspects exist, but sustainability of main results is not yet achieved in many projects.	*Many of the earlier recommendations apply with respect to: comprehensive contextual and institutional analysis (recommendation 1), adequate risk analysis (recommendation 4), high level decision-makers' involvement and commitment (recommendation 6), focused approach (recommendation 7), prolonged capacity building*

22. The prospects for sustainability (and impact) varies across the countries.	11. Numerous challenges undermine sustainability, particularly related to institutional, political, financial, and human resources factors—though these vary by country.	*on key areas/resource persons (recommendation 11), support to good practices (recommendation 12), and enhanced collaboration and upscaling with support from other projects/ institutions (recommendations 5 and 13).* 14. Ensure during project design that basic preconditions for project success and sustainability exist.
IMPACT		
23. The transition to modern technologies and digitised information has eased working processes and improved the quality of products (but the institutional impact varies across the projects). 24. In some cases, wider impact has been reported that contributed to risk reduction and improved environmental management. 25. The impact on gender equality and reduction on inequalities is not clear. 26. Although the projects facilitated interactions with the Finnish private sector, this does not seem to have generated major business contracts yet, except for Vaisala and Econet. The high costs and advanced equipment from Finnish manufacturers often do not match the specific needs of the partner countries.	12. The projects have contributed to improved working processes, results and recognition of the institutions but the impact varies. 13. Some projects contributed to disaster risk reduction and improved environmental management but no major impact on gender equality was found. 14. Apart from Vaisala and Econet, interactions with the Finnish private sector have not resulted in clear business opportunities. The collaboration between FMI and Vaisala (through ICI, PIF and other projects) is considered successful and contributes to increased impact.	*Most of the recommendations above apply. Impact will be enhanced by adequate relevance and proper design, a high level of coherence and aid effectiveness, an efficient implementation process, achievement of meaningful results and outcomes, and good prospects for sustainability.* 15. Support the implementation of complementary ICI-PIF projects, which could reinforce each other and contribute to higher impact.
REGIONAL VERSUS COUNTRY LEVEL APPROACH		
27. The comparative advantages of regional projects versus country-level projects depend on the subject that the project addresses (a common cross-bordering need), the national context, different capacity levels and specific needs of each partner institution, and other factors.	15. A regional project can have some administrative and strategic benefits, but certain preconditions must be in place for it to be successful.	16. The common needs as well as the specific conditions, requirements and skills of each participating country and partner institution must be well assessed and a SWOT (strengths, weaknesses, opportunities, and threats) or cost-benefit analysis undertaken before a decision on the regional project is taken.

Lessons learned

1. The ICI projects are relevant and if required preconditions for success and sustainability are in place and if good practices are applied, the ICI projects can provide added value to MFA's development cooperation instruments.
2. The ICI projects are reasonably efficient, but their relative short duration and intermittently provided inputs limit the level of internalisation of the capacity built. Prolonged, continued support to the same experts is expected to contribute to increased cost-effectiveness.
3. While the ICI practical "hands-on" approach and technical focus contribute to increased capacity of partner institution staff, adoption of the introduced systems and practices at institutional level is complex and is often hampered by institutional changes, political decisions, turnover of trained experts, and other challenges.
4. A strong sense of ownership, financial capability and adequate human resources within the partner institutions, as well as commitment from the partner country government are key enablers for project sustainability.
5. The ICI projects can act as a catalysing force, contributing to increased impact through linking up with—or adoption of the approach and introduced systems by larger programmes.
6. The ICI projects can leverage private sector support but the Finnish products are often considered technically too advanced or not well adapted to the local conditions in the partner countries and too expensive.

1 Introduction, purpose and methodology of the evaluation

1.1 Introduction to this report

The Department of the Asia and Oceania (ASO) of the Ministry for Foreign Affairs of Finland (MFA) has commissioned Particip to undertake an evaluation of the support provided through the Institutional Cooperation Instrument (ICI) in Central Asia (Uzbekistan, Tajikistan, Kyrgyzstan), Vietnam, Nepal and Indonesia. The evaluation includes 12 ICI projects that have been implemented by the Finnish Meteorological Institute (FMI), the Geological Survey of Finland (GTK), the Finnish Environment Institute (Syke), and the Natural Resource Institute Finland (Luke).

The evaluation was undertaken in the period January-April 2025.

This report presents the purpose of the evaluation, the background and context and the main findings, conclusions and recommendations, and lessons learned.

1.2 Rationale and purpose of the evaluation

The evaluation is expected to provide decision-makers and stakeholders with objective and impartial information that can be used for monitoring accountability, learning and decision-making.

Although some ICI-related evaluation studies have been conducted over the past ten years, many of the ICI projects in Asia have been on-going for several phases and have never been evaluated. Most of the ICI projects are implemented by three actors, namely FMI, GTK, and Syke.

The purpose of the evaluation is to evaluate the ICI projects, based on the Organisation for Economic Co-operation and Development (OECD)-Development Assistance Committee (DAC) evaluation criteria, especially on effectiveness, impact, and sustainability of the supported capacity building interventions and investments, and identify lessons learnt on the provided support that can be used for improving the cooperation and provide an input to a more comprehensive evaluation of the development cooperation instrument that will be conducted in the future.

The evaluation combines a summative and formative evaluation.

With respect to the formative evaluation, the evaluators will also assess if-and how MFA and the ICI-facilitation consultant could support ICI projects in a more efficient way. Furthermore, the evaluation will also identify the advantages and disadvantages of implementing separate country level ICI projects versus combined regional level ICI projects as perceived by the involved Finnish institutions. In addition, the evaluators will assess if the projects and ICI Asia have leveraged opportunities and market access for Finnish actors and Finnish private sector, and how effective this has been. This includes opportunities for the private sector to access the Public Investment Fund (PIF) from MFA or prospects for the institutions to access other financing sources in addition to ICI funding. The evaluation will identify possible other linkages between the ICI projects and other Finnish actors (e.g. universities, civil society organisations, others) and assess the advantages and disadvantages as perceived by the stakeholders.

1.3 Scope of the evaluation

The evaluation covers 12 projects listed in Table 2 (a more detailed description of the projects is provided in the project evaluation reports in Annexes 4–15). The evaluation primarily focused on the current/last phases of the projects but also considered previous phases, especially to put questions of effectiveness, sustainability and impact into perspective. All projects were assessed according to the OECD evaluation criteria, but given the available resources for the evaluation, only a few selected projects, one for each main Finnish institution (FMI, GTK and Syke) were evaluated in a slightly more comprehensive manner, including an analysis of their previous phases. The last year to be evaluated was 2024. Based on the project evaluations, lessons learned for the support to ICI Asia projects were determined[1].

Table 2 Projects to be evaluated

Finnish Institute/Project	Abbreviation[2]	Country	Budget EUR	Duration
Finnish Meteorological Institute (FMI)				
FMI-Uzhydromet Meteorology Project	FUME	Uzbekistan	2,000,000	2022-2026
Finnish-Tajikistan Meteorology Project, phase III	FINTAJ III	Tajikistan	1,000,000	2023-2026
Promoting Modernisation of Air Quality Observation and Management Systems in Urban areas of Vietnam	PROMOAIR	Vietnam	600,000	2020-2024
Promoting Modernisation of Hydrometeorological Services in Vietnam	PROMOSERV III	Vietnam	650,000	2019-2024
Enhancing BMKG Capacity on Weather Climate and Air Quality Forecast and Warnings to Better Serve the Indonesian Society	INDFIN	Indonesia	500,000	2023-2025
Geological Survey of Finland (GTK)				
Strengthening the Mastering of Natural Resources for National Welfare in the Kyrgyz Republic, phase II	NR II KGZ	Kyrgyzstan	905,000	2020-2024
Strengthening the Mastering of Natural Resources for National Welfare in Uzbekistan	NR UZB	Uzbekistan	1,100,000	2022-2024
Managed aquifer recharge to ensure sustainable groundwater availability and quality under ongoing climate change and fast economic development in Vietnam	VietMAR	Vietnam	600,000	2018-2023
Towards Arsenic Safe Drinking Water in Nepal (joint project with Syke)	NeAs	Nepal	650,194	2020-2024
Finnish Environment Institute (Syke)				
Development of Tajik surface Water Monitoring by Quality Management and Collaboration	TJK Water Quality II	Tajikistan	750,000	2020-2025

[1] The evaluation does not comprise a comprehensive evaluation of the ICI development cooperation instrument and neither a comparative analysis of different types of development cooperation instruments.
[2] Some of the project abbreviations used in this report have been developed by the evaluation team for ease of reference when referring to the individual project evaluation reports in the annexes.

Consolidating institutional capacities for national surface water quality monitoring in the Kyrgyz Republic	KGZ-Water III	Kyrgyzstan	850,000	2021-2024
Towards arsenic Safe Drinking Water in Nepal (joint project with GTK)	NeAs	Nepal	349,806	2020-2024
Natural Resource Institute Finland (Luke)				
Capacity building for value chains of wood products industries in Vietnam	WODVN	Vietnam	450,000	2020-2024

1.4 Approach and methodology

1.4.1 Approach and operating principles

The evaluation team applied the following operating principles: (i) utilisation-focused; (ii) human rights and gender sensitive; (iii) objective, impartial but also participatory, consultative, and inclusive; (iv) evidence-based; and (v) context sensitive.

A theory-based evaluation approach was used, building on the Theories of Change of the programmes. In as far as possible triangulation of findings and substantiation of outcomes were undertaken through the verification by independent sources and observations.

For accountability purposes the quantitative achievements and attainment of indicators were analysed but a major focus of the evaluation was the assessment of qualitative aspects, outcomes and lessons learnt through discussions with stakeholders and beneficiaries, particularly the direct beneficiaries, such as the trained professionals and managers of the partner institutions. A third level of beneficiaries, comprising the wider population that might eventually benefit from the contribution of the partner institutions' services could not be consulted within the scope of the assignment.

The evaluation was conducted at three intervention levels (Figure 1):

1. Projects implemented by counterpart agencies in the recipient countries. The evaluation focused on the six OECD-DAC criteria with major emphasis on effectiveness, impact and sustainability.
2. Finnish government agencies responsible for the implementation and support. The main focus was on the review of their approaches and performances in supporting the projects and the implications for the functioning of the ICI development approach.
3. Programmatic level of the ICI projects in Asia. The focus was on effectiveness, sustainability and impact of the instrument. The evaluation identified opportunities and limitations for improving the ICI facilitation process, and options for leveraging market access for Finnish institutions and the private sector.

Figure 1 Evaluation model



1.4.2 Evaluation questions

Based on the ToR, a number of main evaluation questions (EQs) were identified that guided the evaluation (Table 3). The number of questions is slightly higher than the ones listed in the ToR, as some important aspects were not specifically mentioned that the evaluation team also considered important.

Table 3 Evaluation criteria and key questions

Evaluation criteria	Main evaluation questions
Relevance: *is the intervention doing the right things?* The extent to which the project is consistent with- and responds to the partner's needs, country priorities and Finland's policies and adequacy of design.	1. To what extent is the project aligned with- and responds to the development objectives/priorities of the partner country?
	2. To what extent is the project aligned with- and responds to the development policies of MFA Finland (including HRBA and CCOs, and more recently benefits for Finnish actors)?
	3. To what extent does the project respond to the conditions and capacity development needs of the partner agency?
	4. To what extent is the project design coherent and are the objectives and the intervention approach logically structured within the Results-Based Management Framework?
Coherence: *how well does the intervention fit*? Compatibility with other interventions. Internal and external coherence of the different programmes, their approaches, methods, goals and implementation.	5. How coherent is the project with the Country Programme and other MFA supported initiatives, e.g. linkages, coordination, compatibility and synergy with other Finnish interventions and agencies in the partner countries?
	6. How coherent is the project with other initiatives, e.g. linkages, coordination, compatibility and synergy with other relevant interventions and agencies in the partner countries?
Aid effectiveness: *how effective is aid management and delivery?* Implementation of the commitments to promote ownership, alignment, harmonisation, management for	7. To what degree do the partner country agencies and higher-level authorities and decision-makers have responsibility and ownership of the projects?

Evaluation criteria	Main evaluation questions
development results and mutual accountability.	
Efficiency: *how well are resources being used*? Have the activities transformed the available resources into the intended results in an economical and timely manner? Quality of management and administrative arrangements.	8. What is the progress against the work plan target and time schedule (implementation progress)?
	9. To what extent are the results and processes feasible and cost-effective?
	10. To what extent is the project well managed and are M&E systems and risk analysis processes adequately designed and implemented?
Effectiveness: *is the intervention achieving its objectives*? To what extent have the project outputs and direct results furthered the achievement of the project purpose (outcome).	11. What are the main results (planned and unplanned) and to what extent have capacity strengthening efforts been adopted and contributed to the provision of improved services?
Sustainability: *will the benefits last?* The extent to which the project achievements will continue or are likely to be continued.	12. How sustainable are the results and approaches, in terms of institutional, technical, human and financial capacities, socio-economic conditions, governance and environmental/climate resilience risks and potential trade-offs?
Impact: *what difference does the intervention make?* Contribution to overall objective (positive or negative), higher level, potentially transformative effects.	13. In what ways has the project affected the work of the partner country agencies (both in intended and unintended ways, and directly or indirectly related to the developed capacities), including aspects of human rights, gender equality, reduction of inequalities and contribution to climate resilience and low emission development?
	14. What are the wider (indicative) impacts of the project on other stakeholders and beneficiaries in the partner country including aspects of HRBA and CCOs?
	15. To what extent did the project have an impact on the Finnish institutions or Finnish private sector in terms of leveraging business opportunities and other linkages?

The EQ, indicators (or judgement criteria), and main data collection methods were further developed in the evaluation framework (Annex 2)[3].

1.4.3 Methodology

A mix of qualitative and quantitative methods and tools were used to gather and analyse primary and secondary data. Most quantitative data derived from the project and ICI records and monitoring and evaluation (M&E) systems.

The following data collection methods/tools were used:

	*Documentary review.* A desk study of main documents and other materials was undertaken, including those related to MFA policies, ICI programme (and previous evaluations), Finnish government agencies, supported projects and partner agencies (project documents, M&E data, progress reports, technical reports, administrative data, self-evaluations), national development plans, and Country Programmes.

[3] The Inception report included 45 indicators, which, in consultation with MFA were later reduced to 30 to avoid duplication of answers in the reports.

	*Meetings and Focus Group Discussions (FGD) with key stakeholders* from MFA (the Department of the Asia and Oceania /evaluation Reference Group, the Department for Development Policy and embassies), ICI FCs, Finnish institutions (managers), partner institutions (managers, technical staff), higher-level authorities (parent institutions) and representatives from relevant public and private institutions.
	*Key Informant Interviews.* Semi-structured interviews *(remote and physical)* were conducted with individual key respondents from Finnish and partner institutions and representatives from relevant public and private institutions.
	*Observations* were undertaken during visits to the partner institutions and project sites to validate or contextualise the reported progress—for example, existence and use of provided equipment and implementation of activities.

Considering the large number of projects and countries, for the data collection in the countries, the international experts split up and visited different countries to support the national experts. In Nepal and Indonesia the evaluation was conducted by national consultants.

MFA acknowledged that the resources and time frame for the evaluation were not sufficient to conduct a thorough evaluation of all 12 projects. Therefore, it was agreed that three projects, one of each main institution, would be evaluated in a more comprehensive and detailed manner than the other nine projects.

Based on the criteria and discussions during the inception phase, the following projects were selected as case studies:

- FMI: Promoting Modernisation of Hydrometeorological Services in Vietnam (PROMOSERV III).
- GTK: Strengthening the Mastering of Natural Resources for National Welfare in the Kyrgyz Republic, phase II.
- Syke: Development of Tajik surface Water Monitoring by Quality Management and Collaboration (TJK Water quality II).

A list of anticipated risks was prepared in the inception phase, many of which posed some challenges in the implementation. These included the large number of projects to be evaluated with relatively limited resources, which affected the time the evaluation team could spend on each project. Especially for the assessment of impact and sustainability, additional time and resources would have been required for a more in-depth analysis. In addition, the stakeholders' availability was compromised in some cases, especially due to restructuring exercises within government ministries and agencies in several countries. This especially made it difficult to meet with key decision makers at high level. Finally, the compilation of required data and project materials proved time consuming.

1.4.4 Limitations

The evaluation had to manage several challenges of which some were already identified as risks in the Inception Report. The evaluation team undertook related mitigation measures to limit the impact on the evaluation process. The following challenges were encountered:

Large number of projects to be evaluated with relatively limited resources. The resources were almost similar to other evaluations, such as the evaluation of ICI Projects in Afghanistan, Bhutan, India, and Nepal (Palenberg et al., 2021), which only evaluated four projects. As this evaluation was covering twelve projects in six countries, it was agreed with MFA that only three projects would be evaluated in a more comprehensive manner (termed "case studies"), while the remaining nine projects would go through a "lighter" evaluation approach, although based on the same EQs. Although this approach was maintained during implementation, the distinction between case studies and lighter evaluated projects became less pronounced as envisaged. The lighter projects required reporting on all EQs and implicitly also on the

evaluation criteria, which involved more work than anticipated, not only in terms of report writing but also with respect to data collection. The available information for the case studies was not very different from those of the lighter evaluated projects and also varied strongly across the case study projects. The mitigation measure therefore was not as effective as anticipated and the resources were very limited for such evaluation.

Lack of stakeholders' availability. Although especially the Finnish implementing institutions were very helpful in providing the contact details of stakeholders, not all intended respondents could be reached in the countries. The time for contacting them was limited, and due to government restructuring processes, management changes, and staff turnover, some stakeholders could not be consulted. Because of time and resource limitations, the evaluation team could not travel much in-country. It also proved difficult to consult the relevant stakeholders from international organisations.

Availability of data. Although the Department of Asia and Oceania provided many project materials from MFA's data management system, they required further processing before they could be used by the evaluation team. The documents had a coded title and most annexes were separately provided, making it challenging to link them to the correct documents. In addition, not all reports were obtained and, in the end, the missing data were requested from the implementing institutions.

Reliance on national experts in two countries. The evaluations in Nepal and in Indonesia were implemented by national consultants. For compatibility purposes, this required substantial additional coordination and remote supervision from the senior international experts.

Selection and response bias. Given the fact that most partner institutions have an interest in continuing the ICI support in the future, there was a risk of positive bias in terms of selection of respondents and responses to the EQs. The evaluation tried to mitigate this by insisting on having separate meetings and FGDs with management and technical staff. In addition, responses were triangulated with other information, including self-assessments, progress reports and other data. Through probing techniques and further assessing of individual experts' use and adoption of the trained skills, it was aimed to get a more balanced view of the ICI projects' results.

2 Background and Context

2.1 Overview of the Institutional Cooperation Instrument (ICI)

The ICI was established in 2008 by an administrative order (MFA, 2008) on the basis of a 1989 law on the Participation of Government Agencies and Institutions in Development Cooperation (Government of Finland, 1989). In 2010, a new administrative order 3/2010 was established (MFA, 2010) and it remained valid until the ICI manual version 8 was published in March 2021 (including all the instructions). Several changes have taken place over time regarding the implementation arrangements with the latest (9th) version of the ICI manual being established in March 2023[4].

ICI projects are capacity building and organisational development interventions in which Finnish government agencies cooperate with their partner (sister) organisations in developing countries (MFA, 2023b). With relatively small investments, ICI projects aim to accomplish well-focused short-term project interventions. The ICI project must be based on a partner organisation's clear demand with evidence of strong ownership of the project and cooperation (MFA, 2023b).

The 2010 administrative order restricted ICI project budgets to EUR 500,000 but allowed for higher budgets in cases where those projects promoted key priorities of the MFA's country or regional cooperation

[4] As most projects in this evaluation started before the latest ICI manual update, not all changes (such as updated CCO sections) might have been considered or integrated in the project planning phases.

strategies. In 2021, as part of an updated ICI manual, the budget limit was increased to one million euros. From May 2023, larger projects (over one million euros) are allowed when two or more Finnish government agencies jointly launch the project with one institution acting as the lead agency or it promotes regional thematic cooperation between neighbouring countries. The implementation of the project should be at least 12 months and maximum 48 months.

In addition to the development goals, the objective of the ICI has been to support Finnish government agencies to act in a developing country. Finland's current and previous main partner countries are prioritised in the ICI, and other developing countries where Finland has an Embassy are also supported. In the assignments for ICI projects no tendering procedure is needed. (MFA, 2023b).

Several actors are involved in the ICI programme:

- The **Department for Development Policy** in MFA takes the main responsibility for managing the ICI as an instrument of development cooperation with relevant management documents and instructions.
- The MFA's **Regional Departments** are responsible for assessing, approving, financing and monitoring of ICI projects and for project-level management in the Ministry.
- **Finnish embassies** support the Regional Departments, especially in assessing ICI project proposals and project documents and in monitoring progress.
- The **Finnish institute** ensures that the project is relevant and has the responsibility for project planning and implementation in cooperation with the partner country agency. It is responsible for the capacity development, providing expertise and support.
- The **partner country agency** initiates the mutual contact, expresses the need for the ICI project, and collaborates with the Finnish agency in the project document preparation and implementation.
- The **Facilitation Consultant**—a consulting company contracted by the Department for Development Policy to support all ICI projects—supports the Ministry in ensuring that the projects and project documentation meet the normative and qualitative requirements set for ICI projects and development policy and cooperation in general. The FC also provides support services to the Finnish agency in project planning, implementation and results reporting.

2.2 Development policy context

ICI projects are expected to be in line with the goals and principles of the Finnish development policy (MFA, 2023b). New policy directions were published in summer 2024 based on 2023 Government Programme: the "Report on Foreign and Security Policy" and "Report on International Economic Relations and Development Cooperation Policy" (MFA, 2024a and 2024b). Especially the latter report defines Finland's development policy and cooperation, having closer connection between trade and development as the overarching objective. It also describes the thematic focus of Finland's development cooperation including the rights of women and girls, education, and climate action. Regionally, increasing share of development cooperation focuses on Ukraine.

Since all the ICI projects included in this evaluation were planned, and major part of the projects' implementation have also taken place before the current policy directions, it is important to take into consideration also the previous development policy directions (e.g. "Report on Development Policy Extending Across Parliamentary Terms 2021", "Government Report on Development Policy 2016"). The primary objectives of these policies have been poverty and inequality reduction. The thematic focus of Finland's development cooperation has been broader in the previous policies (MFA, 2016; MFA, 2021a) than in the current one (MFA, 2024a and 2024b), see also the OECD Peer Review 2024).

In addition, Finland's development cooperation policies have been guided by human rights principles. An HRBA was adopted, following the elements laid down in the UN Common Understanding (United Nations Development Group, 2003):

- Aim at realising human rights;
- Regard human rights both as means and objectives;
- Be guided by a set of principles derived from international human rights law, including the principles of participation, non-discrimination, transparency and accountability;
- Pay attention to persons or groups in marginalised or vulnerable situations;
- Empower rights-holders; and • Strengthen the capacity of duty-bearers to realise human rights.

Finland's commitment to the UN 2030 Agenda and the Sustainable Development Goals strengthens the emphasis on HRBA in Finland's development policy and cooperation. The 2030 Agenda is based on international human rights norms and principles with specific emphasis on the principles of non-discrimination and equality with an emphasis on "leaving no one behind."

The Guidance Note HRBA in Finland's Development Cooperation, adopted in 2015, has guided the implementation of HRBA in development cooperation by defining different levels of human rights consideration:

- Human rights blind: The intervention is ignorant of human rights.
- Human rights sensitive: Human rights principles guide the planning, implementation, monitoring and evaluation of the intervention.
- Human rights progressive: The intervention adheres to human rights principles in its processes and includes expected results that further the respect, protection, or fulfilment of human rights.
- Human rights transformative: The intervention actively seeks to transform societies and eliminate discrimination by addressing root causes in legislation, customs, norms and practices in line with human rights standards and principles.

In addition, Finland's development cooperation policies are guided by five Cross-Cutting Objectives (CCOs), which are gender equality, non-discrimination with an emphasis on disability inclusion, climate resilience, low emission development and protection of the environment with an emphasis on safeguarding biodiversity. Gender equality and non-discrimination form an integral part of the HRBA.

In addition, MFA has prepared Country Strategies and Country Programmes for its partner countries that guide the thematic priority setting and expected results of the development cooperation in these countries.

In case of Nepal, there was a Country Strategy for the years 2016-2019 focusing on water supply and sanitation, high-quality education, and rights and status of women and vulnerable groups. The following Country Strategy and Country Programme 2021-2024 (MFA, n.d.; MFA, 2021b) build on the results achieved and continued to focus on the same, although slightly reformulated priorities (climate resilience and water, sanitation and livelihood development; inclusive education; and gender equality and social inclusion).

For the Central Asian countries, there was the "Country Strategy for the Kyrgyz Republic and Tajikistan 2018-2021", which included three impact areas: more equal societies and strengthened realisation of human rights and rule of law; sustainable and inclusive economic growth; and environmentally sustainable society. This strategy was followed by the Country Strategy and the Country Programme for 2021-2024 including besides Kyrgyzstan and Tajikistan, also Uzbekistan. The impact areas were a continuation for the previous ones (more equal societies and strengthened implementation of human rights and rule of law; a more sustainable and market-oriented economy; and more sustainable use of natural resources and resilience to the impacts of climate change).

In case of Vietnam, for the transition period from grant-based development cooperation programmes to commercial cooperation, the guidance document "Cooperation between Finland and Vietnam 2016-2020" was published. The document presented key focus areas for the cooperation such as water sector; forestry; science, technology and innovation; energy and other cleantech solutions; and education.

2.3 Country context

The evaluated projects were located in Central Asia, South Asia and Southeast Asia. Half of the projects were in Central Asian countries, in Kyrgyzstan, Tajikistan and Uzbekistan, two projects in each country. Five projects were in Southeast Asia: one in Indonesia and four in Vietnam. One project was in Nepal, representing the South Asian region.

Indonesia is the most populated country amongst the six countries, and its gross domestic product (GDP) in 2023 was also the highest (Table 4). It has cut its poverty rate by more than half since 1999, to under 10% in 2019, but as in many other countries, the COVID-19 pandemic halted the positive development. (WB, 2023c). However, the recovery after the pandemic has been strong, and in March 2024 the poverty rate was 9% (WB, 2024b). Since 1998, a series of reforms have transformed Indonesia into the world's fourth largest democracy. Despite of the political reforms, there are some concerns related to its democracy development. The Corruption Eradication Commission does not have enough resources to deal with all the cases, the military is making a comeback in politics, and populism and intolerance for minorities is rising. (IDEA, 2024a; Jochheim, 2024).

Indonesia is highly vulnerable to climate change impacts, ranked in the top three of countries in terms of climate risk. This is also seen its high value in the World Risk Index (Table 4), ranking among the top three countries with the highest natural disaster risk (Hille, 2024). It has high exposure to extreme events such as flood and droughts, and long-term changes from sea level rise, shifts in rainfall patterns and increasing temperatures. Climate change is likely to have impacts on water availability, disaster risk management, urban development, particularly in the coastal zones, and health and nutrition, with implications for poverty and inequality. Therefore, ensuring that public and decision-makers have access to the most accurate weather information possible for managing and mitigating the risks of severe weather events is crucial. (WB & Asian Development Bank, 2021a).

Vietnam has shifted from one of the poorest countries in the world into a lower middle-income country. The share of the population living in poverty less than USD 3.65/day dropped from 14% in 2010 to less than 4% in 2023. (WB, 2024c). The annual GDP growth has been quite high during the recent years, between 5-8% (WB, 2024d). The diverse economy is based on a lively manufacturing sector complemented by tourism and agriculture. Vietnam has been praised as a public health success story. The government focused on corruption issues and has recently undertaken a large-scale anti-graft campaign. However, Vietnam has a poor human rights record, and censorship is pervasive. Gender inequality is also prevalent and noted throughout society. (IDEA, 2024b).

Vietnam's rapid growth and industrialisation have caused negative impacts on the environment and natural assets. Water security and access to clean water has become an increasingly important issue in recent years. Existing water supply and treatment facilities are inadequate and face increasing strain from the growing populations of many cities, alongside increasing water demand from the industrial and agriculture sectors. Vietnam is struggling with alarming air pollution. In 2024, Vietnam ranked the highest of 180 countries on air pollution. Vietnam is also one of the world's five most vulnerable countries to climate change. A high proportion of the country's population is concentrated along its long coast, which is also frequently threatened by typhoons, floods, droughts and landslides. In addition, Vietnam's own greenhouse gas emissions have multiplied fivefold in the last 20 years. Climate change and environmental degradation also negatively impact Vietnam's economy, and therefore, there is an increased attention to climate change and environment issues, e.g. Vietnam has set ambitious goals to decarbonise its economy by 2050. (International Trade Administration, 2024).

Table 4 Country statistics

Indicators	Indonesia	Kyrgyzstan	Nepal	Tajikistan	Uzbekistan	Vietnam
Population (million)	285.7	7.3	29.6	10.8	37.1	101.6
GDP per capita 2023 (USD)	4876	1970	1378	1161	2850	4282
Human Development Index (2022-2023)	0.713	0.701	0.601	0.679	0.727	0.726
Rank: out of 193 countries	112	117	146	126	106	107
Gender Inequality Index (2022) *Low value indicates low inequality*	0.439	0.345	0.495	0.269	0.242	0.378
*Labour force participation rate, F/M	53/82	53/78	28/55	33/52	40/73	69/78
Democracy Index (2024)	6.44	3.52	4.60	1.83	2.10	2.62
Rank: Out of 167 countries	59	111	96	159	146	133
Press Freedom Index (2024)	51.15	49.11	60.52	33.31	37.27	22.31
Rank: Out of 180 countries	111	120	74	155	148	174
Corruption Perceptions Index (2024)	37	25	34	19	32	40
Rank: Out of 180 countries	99	146	104	164	121	88
World Risk Index (2024)	41.13	2.53	2.71	2.36	1.52	24.24
Environmental Performance Index	33.6	33.1	42.8	32.3	42.6	24.6
Rank: Out of 180 countries	163	165	105	167	107	180
Individuals using internet (% of pop, 2023)	69	89	56	57	89	78
Ease of Doing Business (2019), n=190	73	80	94	106	69	70

Sources:
Population: World Population Review: https://worldpopulationreview.com/countries
GDP per capita: World Bank Group https://data.worldbank.org/indicator/NY.GDP.PCAP.CD
Human Development Index: UNDP, Data for Human Development Report 2023-2024: https://hdr.undp.org/data-center/country-insights#/ranks
Gender Inequality Index (GII): UNDP: https://hdr.undp.org/data-center/thematic-composite-indices/gender-inequality-index#/indicies/GII
*Labour force participation rate is included in the GII
Democracy Index: Economist Intelligence: https://www.eiu.com/n/campaigns/democracy-index-2024/
Press Freedom Index: Reporters without borders: https://rsf.org/en/2024-world-press-freedom-index-journalism-under-political-pressure
Corruption Perceptions Index: Transparency International: https://www.transparency.org/en/cpi/2024
World Risk Index, IFHV and Bündnis Entwicklung Hilft: https://www.ifhv.de/publications/world-risk-report
Environmental Performance Index, Yale Center for Environmental Law & Policy: https://epi.yale.edu/measure/2024/EPI
Individuals using internet, World Bank Group: https://data.worldbank.org/indicator/IT.NET.USER.ZS
Easy of Doing Business ranking, World Bank Group: https://archive.doingbusiness.org/en/rankings

In **Kyrgyzstan**, the number of people living under the national poverty line decreased significantly between the years 2000 and 2019, from 62.6% to 20%. The growth was facilitated by a shift in employment from agricultural services and light industry, and lately by scaling up gold mining and worker remittances from abroad. However, many households are just above the poverty line, with a high probability to fall back, as happened during the COVID-19 pandemic. (WB, 2023a). The national poverty rate increased again and was around 30% in 2023 (Eurasianet, 2025b; National Statistical Committee of the Kyrgyz Republic, 2024). There are large urban-rural and intraregional disparities and gaps in service delivery, infrastructure and livelihoods opportunities. Little progress has been made on institutional reforms and governance strengthening, and Kyrgyzstan scores poorly on governance and anti-corruption indicators. (WB, 2023a).

Kyrgyzstan has several environmental problems and challenges, including air and water pollution, degradation of mountain ecosystems, desertification, biodiversity loss and climate change. The major sources for water pollution are wastewater from industry, agriculture, and households, landfill leachate, and mine drainage. Most of the mining waste is located in river basins, and since Kyrgyzstan is prone to disasters such as earthquakes and landslides, waste poses also high risk of trans-boundary pollution. In 2024, Kyrgyzstan recorded an unprecedented number of mudflows, and the frequency and intensity of these types of disasters are rising, driven by climate change, environmental degradation and rapid urbanisation. Climate change also exacerbates water stress. In this context, the sustainable water management, including water monitoring, is crucial. (UNDP, 2025; Zhakipova, n.d.).

Tajikistan's economy has grown strongly over the last decade, with GDP growth averaging above seven percentage. This growth, together with higher wages and international remittances have reduced the number of people living in poverty, from 32% of population in 2009 to 10.7% in 2023 (at the international poverty line of USD 3.65/day). (WB, 2023e; WB, 2024a). Despite the progress, Tajikistan's economy remains vulnerable due to the undiversified economy, high risk of debt distress, high dependency of migrant remittances, uneven implementation of structural reforms, weak governance, widespread unemployment, and seasonal power shortage. (IFAD, n.d; WB, 2024a). The democracy index and ranking went down in 2024 compared to the year 2023 due to downgrading the score for political participation, as the president retained total control over the political sphere. Tajikistan's rank in the Transparency International's Corruption Perception Index was 164 out of 180 indicating that corruption is a widespread phenomenon in the Tajik society (Table 4). Although gender inequality is not high compared to other countries included in this evaluation, women's participation rate of the labour force is quite low. (IDEA, 2024c; EIU, 2025).

Tajikistan is prone to earthquakes, floods, drought, avalanches, landslides and mudslides, and these disasters have significant impacts on society and the economy. Climate change is recognised to increase the risk for natural disasters. Therefore, the development of disaster risk management system needs national institutional capacity for natural disasters forecasting, preparedness and mitigation. In addition, Tajikistan's surface and groundwater are suffering from pollution, caused by agricultural chemicals, industrial wastewater, plastics and landfill leaks. Being able to provide e.g. reliable surface water monitoring data and information is essential in the context of Tajikistan. (CAREC, 2025; WB, 2021a).

Uzbekistan's long-time poverty measurement method was not compatible with international standards. In 2021 the government introduced a new method, and according to that, the poverty rate has gone from 17% in 2022 to 8.9% in 2024 (Eurasianet, 2025a; Knight et al., 2024). The economic growth was based on the value of natural resources exports, such as gold and natural gas, and also remittances from estimated two million Uzbeks working abroad. Since 2016, the country has experienced a period of gradual economic liberalisation but less with respect to governance. (IDEA, 2024d; WB, 2022a). No opposition parties operate legally. The legislature and judiciary system effectively serve as instruments of the government, which initiates reforms by decree, and the media are still tightly controlled by the authorities. (Freedom House, 2025).

Uzbekistan is at risk of hydrometeorological hazards and natural disasters, e.g. seasonal flooding and periods of drought. Landslides are also major natural hazard risk, particularly for southern and eastern areas. Impacts from climate change make Uzbekistan increasingly vulnerable to droughts, high temperatures, heat waves, heavy precipitation, mudflows, floods, and avalanches. Uzbekistan is also vulnerable to water shortages, and

situation is worsened by climate change. Groundwater and surface water resources are polluted due to inefficient operations of wastewater treatment installations. The main polluters are industrial, agricultural, and municipal enterprises. Therefore, there is a need for enhanced hydrometeorological and early warning services as well as improved water management, including reduction of mining's impacts on water. (Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan, 2023; UNDP, n.d.; WB, 2021b).

In **Nepal**, the national poverty rate was at 20.3% in 2023 compared to 25.2% in 2011. The expectations were even for higher reduction, but the earthquake in 2015 and the COVID-19 pandemic affected the efforts to cut down the poverty rate. (Prasain, 2024; WB, 2025a). Nepal is going through a transition from a least developing country to a developing country. This five-year process will be concluded in 2026. The adoption of the new Constitution in 2015 established Nepal as a federal democratic republic with three tiers of government: local, provincial and federal. Nepal has made substantive progress, as it has conducted two rounds of elections for the federal, provincial and local governments in 2017 and 2022. However, the transformation and strengthening of existing institutions and promotion of a service-oriented public administration at all three tiers of government requires further efforts. (IDEA, 2024e; UN, 2024).

Nepal has also made significant progresses in expanding access to water and sanitation over the last few decades. Despite of the progress, the functional status of water schemes and the quality of water remains poor. (UNICEF, n.d.). One of the issues related to the water quality is high arsenic levels in groundwater. In the early 2000s, Nepal was added to the list of countries suffering from arsenic contaminated water. The World Health Organization (WHO) has classified arsenic as a human carcinogenic substance and thus, the consumption of arsenic contaminated drinking water leads to adverse impacts on human health. (Mchayk et al., 2023). Nepal is also highly vulnerable to climate and disaster risks, and therefore, mainstreaming disaster risk management and climate change action into the water, sanitation, and hygiene (WASH) sector is essential. (CGIAR, 2024; UNICEF, n.d).

3 Findings

The findings are based on the evaluations of the 12 projects. Although there are differences between the projects, a certain level of generalisation cannot be avoided. When considered relevant, major differences between projects are referred to, but no comparisons of individual projects are discussed in this section. The project evaluation reports are included in Annexes 4–15 ("case study" reports in Annexes 4–6).

3.1 Relevance

EQ1. To what extent is the project aligned with- and responds to the development objectives/priorities of the partner country?

Finding 1. The ICI projects are well aligned with the partner country's priorities and policies.

All evaluated projects address key capacity areas related to environment, natural resources management and climate change.

Serious problems exist in the evaluated countries related to the effects of climate change and inefficient management and use of natural resources, contributing to pollution of air and water resources, land degradation, droughts, melting glaciers, floods and other geohazards. The needs for increased capacities to analyse, monitor and predict those issues are well reflected in the country's policies (for details see the project reports Annexes 4–15).

As explained in chapter 2.3, Vietnam and Indonesia are prone to the effects of climate change. Vietnam's weather extremes include droughts, storms, and typhoons. Indonesia is one of the world's most vulnerable countries for natural hazards and climate related incidents, situated on the Pacific Ring of Fire (an area with a high degree of tectonic activity). The country must cope with the constant risk of volcanic eruptions, earthquakes, floods, and tsunamis.

Air pollution is becoming one of the most critical factors affecting the health of Vietnamese and Indonesian population, especially in the big cities. For example, the 2024 Environmental Performance Index ranked Vietnam 180 and Indonesia 148 out of 180 countries for air quality.

The support by FMI through PROMOSERV III, PROMOAIR, and INDFIN for improving the meteorological services and air quality monitoring and forecasting is therefore highly relevant to the two countries, which is also reflected in their policies.

In addition to adverse climate change impacts, in Vietnam groundwater resources are at risk specifically in coastal areas, given the expected intensification of groundwater consumption and changes in land use. GTK's VietMAR project on managed aquifer recharge (MAR) as a solution to the country's groundwater challenges is therefore highly relevant and the concept has gained national recognition.

Forestry is a main contributor to Vietnam's GDP. Vietnam is the largest wood products exporter in ASEAN (Association of Southeast Asian Nations) but the local logwood supply is not adequate to meet the demand of the wood production (furniture) industry, which largely depends on the import of raw materials. Luke's WOODVN project responds well to Vietnam's policy objectives and priorities through its support to improved forest plantation management and better wood processing technologies.

Nepal

Nepal is one of the countries suffering from arsenic contaminated water. Arsenic-bearing rocks in the Himalayas have eroded and formed deposits in the Terai region (Nepalese lowland) causing high arsenic levels in groundwater. GTK's and Syke's project focusing on improved capacities in arsenic mitigation is therefore very relevant responding to Nepal's policy objectives on access to safe drinking water.

Central Asia

The countries in Central Asia have major problems of inefficient use and pollution of water resources from mining, agriculture, land degradation and industry. The increasing amount of melt water forms a risk in respect of possible toxic contaminations. In some countries uncontrolled drilling of boreholes is taking place. The importance of water and sustainable management of water resources is clearly reflected in the policies of Uzbekistan, Tajikistan and Kyrgyzstan.

GTK's projects (Strengthening the Mastering of Natural Resources for National Welfare) in the Kyrgyz Republic (phase II) and Uzbekistan, focusing on groundwater, and Syke's projects KGZ Water III in Kyrgyzstan and TJK Water Quality II in Tajikistan, focusing on surface water, are highly relevant, responding to the countries' policy priorities.

In addition, the mineral sector plays an important role in the economy of those countries but is also a source of pollution and water contamination. GTK' focus on geological/geophysical/hydrogeological aspects are relevant in that context and well supported by national policies.

Central Asian countries are vulnerable to a wide range of weather-related disasters as well as impacts of climate change. They also suffer from air pollution. Reducing vulnerability to climate change and disasters requires reliable weather and climate information and capacities to produce it. FMI's projects FINTAJ III in Tajikistan and FUME in Uzbekistan are highly relevant in this context, since they focus on improving capacities of national hydrometeorological services to provide air quality, weather and early warning services.

EQ2. To what extent is the project aligned with- and responds to the development policies of MFA Finland (including HRBA and CCOs, and more recently benefits for Finnish actors)?

Finding 2. The ICI projects respond closely to MFA policy guidelines related to climate change, biodiversity and sustainable management, and use of natural resources.

Due to the nature of the evaluated ICI projects, they directly respond to MFA's policies related to climate change and natural resources management and use:

- FMI: weather forecasting, air quality measurements and forecasting, early warning and weather aviation services;
- GTK: ground water monitoring/MAR and geological/geophysical/hydrogeological analysis;
- Syke: surface water quality monitoring, and ground water monitoring;
- Luke: forestry value chain.

Most of the projects have been designed and planned during the previous development policy guideline (MFA, 2021a) and are well in line with one of its policy priorities: climate change (decrease of vulnerability to extreme weather events and natural disasters, and increased resilience), biodiversity and sustainable management and use of natural resources. In addition, the current policy guideline (MFA, 2024b) has climate action as one of Finland's areas of strength. The projects contributed to the partner countries' preparedness for extreme weather events. Regarding low emission development, practical actions were taken by implementing institutions, such as combining missions with other projects in the same country or region when possible and including several tasks in the same mission.

The projects are further aligned to MFA Finland's Theory of Change (ToC) for Priority Area "Climate and Natural Resources":'

- Outcome 1: Forests and biodiversity: Luke's project in Vietnam;
- Outcome 3: Meteorology and disaster risk reduction: all FMI projects;
- Outcome 5: Water: all GTK and Syke projects.

Although mineral resources are not specifically mentioned in the ToC, they are considered relevant due to their connection to the water and environmental aspects and because of their economic relevance. The water related projects are aligned with the Finnish Water Way – International Water Strategy Finland.

Finnish private sector engagement, a priority of the current Finnish development policy, was embedded in the design of some projects, even though most started before the policy was enacted. Most projects have attempted to link up with Finnish private sector institutions during implementation, including Finnish Water Forum (FWF), Mining Network Finland, and many private companies especially in the forestry and water sectors. FMI integrated major collaboration with Vaisala in its ICI projects.

Finding 3. More emphasis was put on integrating HRBA, gender equality and non-discrimination in the project approach than in earlier ICI projects, but the degree of integration varies.

The HRBA and CCOs related to gender equality and non-discrimination, and reduction of inequalities were discussed at length in the project documents. In comparison to previous ICI projects, more concrete emphasis was put on integrating these aspects in the project design and implementation. Earlier evaluations, including the HRBA evaluation 2023, found that ICI projects' references to HRBA were very limited and the concept was not mainstreamed. Although the 2023 evaluation found that the integration of HRBA in ICI was somewhat improving due to proactive support, it remained limited. However, during this evaluation, several positive developments were identified, with some institutions planning practical measures to support especially gender equality but also non-discrimination by encouraging young and disabled people to participate in the project activities (in as far possible). Practical measures related to gender equality included the undertaking of gender surveys, gender equality workshops, discussions at management/leadership level,

encouraging women to participate in project activities and taking leading roles, and providing good examples by including Finnish female project managers and senior experts.

Despite these good practices, it is also noted that gender equality is often interpreted in terms of participation of women and to a lesser extent considered in terms of roles, and division of responsibilities and power. The integration of these measures varied across the projects and institutions.

The discussion touches upon a more general question on the extent to which ICI projects should mainstream and integrate Finnish overall development cooperation principles and policies, including HRBA and CCOs. The consultations with many stakeholders during this evaluation show that there is no clear consensus on this, even amongst MFA staff.

Basically, two different schools of thought exist. The first group believes that the ICI projects do not put enough effort and pay lip service on integrating CCOs in the project design by putting some related text in the documents (to "check the boxes") without doing in-depth analysis or designing meaningful actions. The second group believes that ICI projects, due to their nature, having a technical focus and providing short-term inputs by technical experts who are specialists in their field but not well versed with development cooperation principles, are not well positioned to contribute to transformatory and behavioural change in the partner institutions. Proponents of this school believe that MFA should not overload the projects with policies that are not highly relevant within the context of the types of projects and that are difficult to integrate, taking away resources from the core activities and objectives. This discussion goes beyond CCOs and HRBA to include also other aspects, such as the design and reporting on a comprehensive RBMF, and risk matrix.

The evaluation team considers that there are elements of truth in both views. Indeed, the projects, because of their nature and type of experts have limitations, although there are also differences between the institutions. For example, FMI has its in-house gender expert, which makes it a bit easier to respond to some of these requirements. But it was also noted that there is indeed some tendency of "checking the boxes" and reporting on HRBA and CCOs because it is required. For example, in the progress reports many projects continuously repeat the same text on CCOs that is included in the project documents. On the other hand, the HRBA and CCO principles are part of Finland's development policies, guiding development cooperation, which cannot be ignored, irrespective of the type of project. In addition, clear examples of "good practices" have been found in projects that in a pragmatic manner have tried to address gender equality aspects, within the limitations of their resources. It is therefore proposed that these aspects continue to be included but in a realistic and pragmatic manner, and if needed with support from gender or other development cooperation specialists.

EQ3. To what extent does the project respond to the conditions and capacity development needs of the partner agency?

Finding 4. The projects respond closely to the capacity development needs of the partner institutions, but partners were not much involved in the design of the project documents.

Many projects evolved from personal contacts between experts from the Finnish institution and the partner institution who met, for example through conferences. In other cases, the Finnish institution identified an issue and initiated the process. For example, the PROMOAIR project started from a realisation of the FMI international cooperation manager that air pollution was high in Hanoi when he was in Vietnam. Each project might have its own story. Most projects in the evaluation had previous phases. Irrespective of who took the initiative, the projects were designed in a participatory manner, and follow-up projects were building on the results and gaps of previous phases.

Many partner institutions did not have a formal capacity building plan. However, most Finnish institutions conducted one or several fact-finding visits to assess existing gaps and needs and discussed them with the partner institution management. In some projects extra efforts were put to identify the capacity needs, even at the individual level. For example, in GTK's projects in Uzbekistan and Kyrgyzstan, the local experts who participated in capacity strengthening activities got tasks ("homework") to be completed before the next

phase of training. GTK's experts followed closely the progress and provided feedback on the performance of the participants, giving additional tasks and/or on-line training if needed. The partner organisation appreciated this approach.

The capacity needs identification process and project design were usually conducted in a participatory manner. Partner institutions confirmed that they could influence the planning process, introduce new activities and agree on modifications and budget re-allocations. Several examples were provided from different projects. The PROMOAIR partner requested the use of satellite imageries for PM (Particulate Matter) 2.5 monitoring and also web geographic information system (GIS), which were not included in the original project proposal. The NeAs activities were also revised. The project intended to develop the Arsenic Information Management System (AIMS), but when the National Water Services, Sanitation and Hygiene – Management Information System (NWASH-MIS) water quality module was designed, it was decided to integrate the information into NWASH instead of developing AIMS. In Tajikistan, study tours on hydrobiological methods to Uzbekistan were organised at the request of the partner organisations to support peer learning from neighbouring countries. Similar examples are provided by other project evaluations. Generally, needs assessments were jointly undertaken during the entire project implementation.

However, partners were not much involved in the preparation of the project document, the RBMF, the risk analysis, integration of HRBA/CCOs, and other aspects. Some partner institutions mentioned that they commented on the draft project document but many did not know the project document details and considered it more a document for the Finnish government. In the reporting to their own government, the RBMF logic was not necessarily followed, and the reports were based on other requirements.

EQ4. To what extent is the project design coherent and are the objectives and the intervention approach logically structured within the Results-Based Management Framework?

Finding 5. The RBMFs are usually reasonably well developed but have issues with vertical logic, especially regarding the differentiation between outputs and outcomes.

In terms of a ToC, the ICI projects are relatively simple. Their primarily focus is on capacity building, including training, introduction and utilisation of new tools, and exchanging experiences on ways of working and organisational set-ups.

The main **outputs** are therefore related to improved capacity in specific areas, which includes technical knowledge and skills, access to better modern tools and equipment, and possibly knowledge of improved organisational processes.

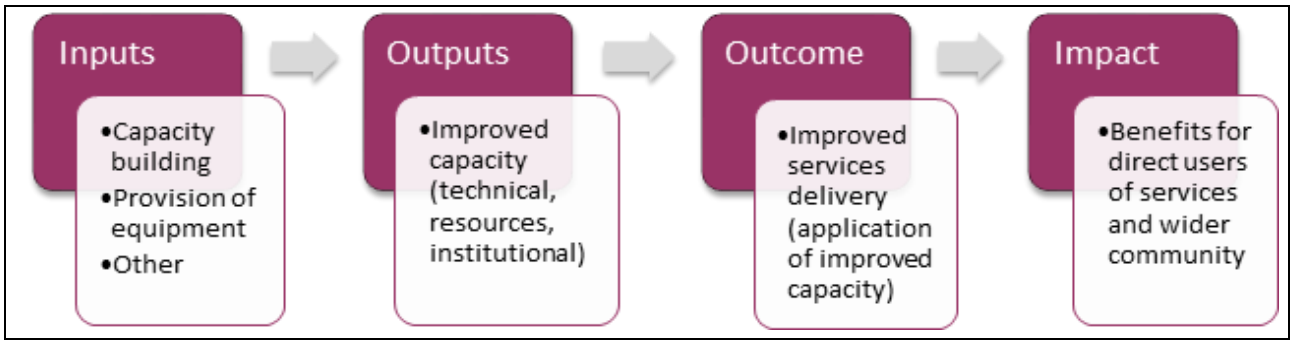
The **outcome** of these projects should reflect the effects of the strengthened capacity, such as the meaningful adoption and application of the new skills (which can be considered an intermediate outcome), contributing to better service delivery (project outcome related to the intervention). However, the RBMFs of all evaluated ICI projects include *improved or increased capacity* as the outcome. This is not entirely correct as capacity building is not an end in itself but a means to achieve an objective, which would entail at least the application or utilisation of the improved capacity. The capacity is strengthened *in order for the partner agencies to apply the taught skills and improve their services*. This should logically be the objective or intended state at the end of the project (outcome). But as this logic is not applied, the RBMFs of many projects show some duplication between the output and outcome statements or indicators. A reported reason for referring to increased capacity at outcome level is that it reflects the "sum" of the specific capacities built at output level. However, this still defies the logic that capacity in itself without referring to its use cannot be an objective or intended outcome. Although it is understandable that the institutions do not want to set ambitious outcomes over which they have little control, a certain level of adoption and application of the improved capacity must be referred to in the outcome statement. And actually, a number of projects have included indicators to that effect.

The final intervention level, **impact**, is related to the longer term and wider effect, primarily for the direct users, such as public and private sector institutions making use of the improved services, and ultimately the wider community that benefits from the contribution to development objectives, such as improved access to

safe water, or reduced vulnerability to climate risks. However, due to the relatively small size, technical nature and short duration of the projects, the wider impact is expected to be limited in most cases and therefore the impact statement should remain realistic. For some projects, the formulated impact is too ambitious and consequently, the indicators cannot be easily measured.

The evaluation looked at the impact from different angles, including the impact for the partner institution itself (increased recognition and demand for services for example), or for other stakeholders, such as the Finnish public institutions or private sector, benefitting from opportunities leveraged by the project. The project could also contribute to wider collaboration and scaled-up approaches, which will have greater impact.

Figure 2 Simplified Theory of Change



Evaluation team

Although many of the indicators are adequately formulated, the following observations were made:

- Due to the issue of vertical logic discussed above, in some projects the outcome indicators reflect implemented activities or direct outputs such as number of people trained.
- Some of the output indicators are formulated in terms of implemented activities instead of reflecting the intended output achievement.
- Some projects include complex formulated indicators (almost like an objective), which are further defined in the targets (reflecting the real indicator). This is not good practice as the indicator itself should be clear and SMART (Specific, Measurable, Attainable, Relevant, Time-Bound). The target should just show the intended value that the project wants to reach at the end of its implementation.
- Several projects use qualitative indicators, for example to indicate the level of capacity, but do not always indicate how these indicators are measured, leaving room for subjective interpretation. In some of the progress reports this contributes to long narrative texts or subjectively put percentages representing the level of achievement.
- As mentioned above, some of the impact statements are over-ambitious, and the indicators become unmeasurable within a reasonable period.

The evaluation found that most project managers found the training provided by the ICI FC quite useful as they do not consider themselves experts in RBMFs. The Finnish institutions might have different levels of experience in this area. The semi-annual reports of the ICI FC indicate that there exist general differences in how institutions may interpret the results framework and CCOs in project document preparation. But it was also found in the evaluation that the level of understanding of the individual project managers on the RBMF within the same institutions varies. However, it should also be noted that MFA's RBMF guidance was updated in 2023 and that the contracted company providing the ICI FC changed in 2022. Both of these factors implied some changes during the implementation of the projects.

Although there seems to have been quite an improvement in the design of the RBMFs compared to previous ICI projects, still further enhancement is required to make the RBMF a meaningful management tool.

Finding 6. A risk analysis is conducted in the project document but not all projects regularly updated the matrix. In some projects the identified risks affected the project implementation, indicating that the mitigation measures were less effective than expected.

All projects included a risk analysis and risk matrix in their project documents, including mitigation measures. The risks are usually not much referred to in the progress reports unless they clearly affected the project implementation. Monitoring and updating of the risk matrix vary across the projects but is generally not frequently done.

Many of the policy and institutional related risks are beyond the control of the project and meaningful mitigation measures are difficult to identify and implement. In some cases, the identified risks actually materialised and affected the project implementation. For example, in GTK's project Strengthening the Mastering of Natural Resources for National Welfare in the Kyrgyz Republic, phase II, the risk of "confidentiality of mineral deposits data" was identified during project design and even in the previous phase of the project, but it was assumed that the likelihood of it to occur was low and the response basically referred to positive conditions rather than mitigating measures. However, the risk actually materialised. The training had to be provided with other data and nearly the entire output related to this aspect had to be changed. While it is difficult to predict government policies in countries like Kyrgyzstan, the question arises if the risk analysis could have been more effectively conducted. This project was singled out as an example but other projects also experienced unforeseen issues. In many cases the identified risk of staff turnover actually happened and influenced the results and effectiveness of the projects.

3.2 Coherence and Aid effectiveness

EQ5. How coherent is the project with the Country Programme, other MFA supported initiatives, and other Finnish interventions and agencies in the partner countries?

Finding 7. The projects are coherent with the Country Strategies and Country Programmes. Collaboration with other Finnish actors varies but is often limited.

Coherence with Country Programmes and Country Strategies

The ICI projects include a focus on sustainable natural resource management, climate change mitigation/adaptation and technology and innovation, and are well aligned with MFA's development priorities in the countries.

Finland's Country Strategy for the Central Asian countries of **Kyrgyzstan**, **Tajikistan**, and **Uzbekistan** 2021–2024, includes the ICI support under the strategy goal 4.3 "Climate change mitigation/adaptation and sustainable management of natural resources". Coherence is obvious as the policy document directly refers to the ICI projects and the Finnish public institutions implementing the projects.

Due to **Vietnam**'s transformation into a low middle income country with one of the fastest growing economies, Finland's bilateral cooperation strategy is shifting from aid to trade. The overall strategy to guide this process is described in the framework arrangement "Cooperation between Finland and Vietnam 2016–2020", which builds further on the key areas supported through the earlier Country Strategy Vietnam: transition document 2016–2020. The PROMOAIR and PROMOSERV III projects are well aligned to these strategies and especially one of the cooperation's focus areas: science, technology and innovation. The VietMAR project responds to the priorities of water. The WOODVN project is also aligned as the strategy builds further on the provided forestry support and highlights management information system development (FORMIS) and promoting Finnish forest sector products and services. All projects respond to the strategy's priority focus on private sector collaboration.

Finland does not have a Country Programme for **Indonesia**, but consultations with the embassy confirm that the project is considered highly relevant and coherent with Finland's policy priorities within the context of

Indonesia. Capacity building in Indonesia's climate-related agencies is a critical priority, and the INDFIN project directly responds to this need.

The NeAs project is also coherent with the **Nepal** Country Programme and Country Strategy 2021–2024. The Country Programme includes the outcome "People in the municipalities supported by Finland have improved an equitable access to safe and sustainable water and sanitation services and improved hygiene practices in households and institutions". The project is directly mentioned as an input for the Country Programme.

Collaboration with Finnish actors

The Finnish institutions sometimes organised joint activities, such as the Conference on Environmental Cooperation between Finland and Kyrgyzstan (FMI, GTK, Syke), or a Climate Resilience Seminar in 2022 (FMI, GTK) in Uzbekistan, and occasionally collaborated when organising study tours to Finland. In Vietnam, ICI-involved institutions were invited for seminars organised by other ICI projects. Due to COVID-19 or other reasons, some planned joint activities were cancelled. However, although institutions claim that close collaboration is pursued in some countries, no clear evidence was provided. Even in the case that institutions are working with the same partner institution on different projects, very little collaboration was reported. This might be due to the fact they focus on different aspects (for example meteorology and water) and work with separate departments/technical units within those institutions.

Sometimes country coordination meetings are facilitated by MFA. In Vietnam, regular meetings were organised by the Embassy, but this was discontinued after COVID-19. The MFA desk also organised meetings in Helsinki (or virtual meetings during COVID-19) with implementing institutions of ICI projects in Vietnam to share experiences and discuss project results and findings.

In Nepal, the synergy with the bilateral "Sustainable WASH for All" project that worked with the same partner institution, was lower than expected, although some collaboration took place. The projects were quite different in nature, which confused the partner organisation. However, the projects have shared information and the NeAs project hosted two "Sustainable WASH for All" participants during the project visit to Finland in September 2024.

In terms of partnership and collaboration with the Finnish private sector, FMI and Vaisala have a strong collaboration through ICI, PIF and other donor funded projects. In other projects, meetings with the Finnish private sector were facilitated, such as the FWF, Business Finland, Mining Finland, suppliers of equipment (water measurements, laboratory, wood technology), and several others. For example, FWF and GTK had good cooperation e.g. in Vietnam where also FWF had an MFA funded project supporting networking. It provided visibility for VietMAR and GTK, and similarly, GTK's project provided a platform for FWF. However, despite these connections, few examples were provided on leveraging business opportunities (see EQ 15).

EQ 6. How coherent is the project with other initiatives, relevant interventions and agencies in the partner countries?

Finding 8. The general approach of the ICI projects is to complement other projects and avoid duplication.

Partner institutions commended Finnish institutions for their adaptive planning approach, taking into consideration other existing projects and adapting their plans to the needs of the partner institution, avoiding duplication of efforts and enhancing synergy and compatibility.

Collaboration with other donor funded projects takes place in various countries, although details were not always shared during the evaluation. Some Finnish institutions are involved in different projects related to the same subjects, which increases synergy and impact. For example, in Vietnam, apart from the ICI projects FMI has been involved in PIF and World Bank (WB) projects, which are complementary. FMI also stated that they try to be involved in relevant fora and networking activities related to their interest areas in the

countries. However, it was also found that donor coordination and collaboration in the countries is sometimes weak or has decreased after COVID-19.

In some countries no other donor organisations were initially working in the same sector, but ICI projects have triggered interest or pioneered areas that are becoming more popular—for example attention to arsenic issues in Nepal or MAR in Vietnam [5].

Some ICI projects have introduced methodologies or technologies that relate to equipment or systems developed by other projects, which provide some risks of poor compatibility and reliance on systems that do not produce the expected results. Especially in the meteorological field, other donors have also contributed to the provision of radar equipment or other hardware systems, or as in the case of Vietnam, developed a central data hub that is supposed to link up with SmartMet (but with varying degrees of success).

EQ 7. To what degree do the partner country agencies and higher-level authorities and decision-makers have responsibility and ownership of the projects?

Finding 9. Partner institutions (and consulted parent authorities) have mostly good sense of ownership, but this is sometimes affected by changes of leadership, institutional restructuring, and political decisions.

Although the initiative for many projects was taken by the Finnish institutions, most partner institutions show a high sense of ownership and responsibility. Due to participatory planning and especially in cases of consecutive projects, close relationships and levels of trust were built, which increased the sense of ownership. Most consulted stakeholders confirm that at the initial phase both institutions had to get used to each other's way of working and cultural barriers had to be overcome. Most countries have a very different management culture from the more direct, informal and egalitarian Finnish approach. However, over time these hurdles were overcome and all partner institutions were quite positive about the project management and their own role and responsibilities. As mentioned earlier, some partner institutions managed to introduce changes and modify the plans, which increased their sense of ownership.

However, due to institutional issues in some countries, the level of ownership and responsibility of the projects also varies. In case a project works with multiple partners, responsibility is mostly felt for their own components. In some countries like Kyrgyzstan, almost continuous institutional changes and management replacements have occurred, which obviously affected the knowledge on the project and sense of ownership, although some key people continued to play a role in the projects.

Previous evaluations found that high-level decision makers at the parent organisations (usually ministries), were often not aware of the projects and consequently did not provide required support. However, this was generally not confirmed by this evaluation. Although the evaluation team was not able to meet all intended high-level officials due to institutional restructuring exercises and limited time frame, the consulted decision-makers appeared well aware of the projects and had positive views about them. Clear signs of top management supporting the projects were seen, including (i) provision of adequate resources to the project for maintenance and operation of new equipment; (ii) nomination of technical staff to participate in the trainings and closely monitor their progress to ensure effective transfer and absorption of newly acquired skills within the organisation; (iii) support to resolving issues of taxation on imported goods; and (iv) other types of support.

However, these positive attitudes were not always matched by the political realities in some countries, which affected the desired level of financial support or human resources made available for implementing or upscaling the projects. In some cases, political decisions affected the project implementation. For example, in Vietnam, the People's Committee made key decisions affecting VietMAR project implementation, including rejecting groundwater use in one study site and expressing concerns about MAR's potential risks at another, leading to study site relocations. The political decision in Kyrgyzstan regarding the confidentiality

[5] Although no other projects were involved in MAR when the VietMar project started, currently, several donor organisations are supporting MAR approaches (e.g. Germany, Netherlands, and Australia).

of mineral data, cited earlier, is another example. In Tajikistan, from the beginning of the year 2025, there is a presidential decree which has declared a moratorium on all types of inspections of business entities until 2027, which is likely to affect the surface water monitoring. In other projects, the limited financial and resource capacity might induce managers to provide priorities to other aspects than the project.

Finding 10. The participation of decision makers in visits to Finland can enhance their commitments, but in some projects, issues arose on the decision who should participate. To avoid this, some projects arranged separate tours for technical experts and high-level officials (sometimes combining with board meetings).

Finnish institutions sometimes involved higher level managers in the study tours to Finland as a strategy to strengthen or increase their commitment and support. However, in some cases this gave rise to conflicts over the participation of beneficiaries, with some non-relevant officials wanting to join, which derailed the programme, especially in Nepal. Especially in the poorer countries, which are also characterised by a high level of corruption, such issues are more prone to arise. Other than such trips, the ICI projects, with a focus on capacity building have not much to offer in that sense.

It is understood that FMI organised separate trips for managers and technical experts, but it is not clear if this resolved the issue. Apparently, in at least one project the nature of the ICI projects, focusing on technical capacity building rather than material support, was not clearly communicated at the higher level.

3.3 Efficiency

EQ 8. What is the progress against the work plan target and time schedule (implementation progress)?

Finding 11. Most of the activities were implemented but COVID-19 disrupted the project implementation, and most projects got a no-cost extension. Delays happened due to several factors.

The COVID-19 pandemic's travel restrictions had an important effect on the projects. Some projects effectively started later whereas others tried to support certain activities remotely during the pandemic, such as theoretical trainings, webinars, and distance coaching. However, as the planned project activities were affected and the project implementation was delayed, the projects were granted a non-cost extension of one to two years.

Generally, most of the activities were undertaken as planned and the outputs were generally achieved or are on target for those projects that are still on-going. However, some activities were cancelled or changed due to political decisions (as explained earlier).

Several projects also experienced delays, due to the following issues:

- **Slow decision-making.** In Vietnam, because of the hierarchical institutional set-up and management culture, some decisions took long to be taken, which affected the implementation progress.
- **Procurement of equipment** was delayed in some countries, for example due to tax exemption regulations in Uzbekistan, or bank transfers in Kyrgyzstan. The geopolitical situation with the war in Ukraine forced the projects to purchase the equipment from other countries than Russia. Especially for countries in Central Asia that were used to the Russian hardware (due to easier access to maintenance and spare parts), this affected efficiency. In addition, transfers to these countries required substantial explanations to banks, delaying the process.
- **Staff capacity, availability and turnover**. The projects required a minimum level of capacity for certain aspects, such as basic computer and information technology (IT) skills, which were not always available. For some projects, there was not much continuity of staff attending the training sessions. Consequently, new participating staff lacked the knowledge provided in earlier trainings and had to be brought to the same level as the others. Staff turnover also affected implementation. As

trained staff in some cases left their jobs, new employees had to be trained. These aspects contributed to delays.

- **Debates on who can participate in study tours** (as discussed earlier) also affected the progress.
- **Institutional restructuring** is probably one of the major factors contributing to reduced efficiency in some countries, such as Kyrgyzstan.

EQ 9. To what extent are the results and processes feasible and cost-effective?

Finding 12. The ICI projects are generally efficient in producing outputs without many overheads/ administrative costs.

The project budgets were spent in line with the ICI manual (MFA, 2023b), which stipulates that at least 60% of the costs should focus on capacity building, the costs directly benefitting the partner country should be minimum 20%, and subcontracting costs should not be more than 15%. Expert fees comprised the largest part of the costs, which is logical given the nature of the projects, focusing on capacity building. ICI projects in general are quite efficient and have small overheads and administrative costs.

The number of experts involved varied substantially for the institutions and projects. The support by a small number of the same experts was appreciated by the partner institutions as it helps strengthening personal relationships and trust building. While this also depends on the interventions and different types of expertise required, some projects involved many different experts for only few days (or even hours). Although for specific activities, such as lectures by Finnish experts during study tours in Finland, short inputs can be valuable, the continued support by the same experts was considered crucial by the partner institutions.

Some institutions made use of experts who could communicate in a common language. For example, for Central Asian countries some experts from Syke and FMI were fluent in Russian and able to train partners without an interpreter.

Finding 13. The projects are planned for a relative short duration, which (because of the intermittent inputs) is not always conducive for achieving the expected results, especially for first phase projects with new partner institutions.

Despite the cost-efficiency of the ICI projects, partner institutions also consider the budget quite small, which limits the level of capacity built and institutionalisation. Many trained partner institution experts find their knowledge not yet adequate to perform high quality services, which compromises cost-effectiveness. It is recognised that the internalisation of knowledge requires time. Trained staff need to practice their skills before they can go to the next level, but there is little time for this during the project. Some trainings are relatively short. Therefore, many consulted technical staff who were trained felt that their capacity is not yet up to the required standard for which they would need further training.

Finding 14. The short-term, intermittent inputs of Finnish experts in the partner countries can affect the continuity and effectiveness of the support as the momentum is not always maintained in between missions.

The capacity building in the ICI projects is based on short-term inputs provided by the Finnish experts. These inputs are intermittently supplied through visits to the partner countries, study tours/training sessions in Finland, or in some cases through remote support. However, the ICI projects do not include permanent support, which affects the continuity and the momentum, especially if technical staff from the partner institutions are not able to work on the project activities in between training sessions due to other allocated duties. In order to keep the momentum, Finnish experts keep in close contact with the trained staff remotely and for example GTK mentioned that they provide homework in between missions. The capacity building process also depends on the availability of the Finnish experts. Some partner institutions mentioned that this is sometimes a problem as the experts are very busy and “in Finland they seem to have many holidays.”

In countries in Central Asia, Syke employed a local consultant as a coordinator/liaison officer to provide support to the coordination and implementation of the activities. The presence of such person facilitated the continued implementation of project activities.

Finding 15. There is a risk of ICI projects being over-ambitious, trying to cover (too) many aspects and sometimes different actors within the relatively short time frame and limited resources.

Some projects appear very ambitious, trying to cover a wide range of activities and actors. For example, the GTK project in Kyrgyzstan addresses multiple aspects that involve different technical departments/units (geophysicists, hydrogeologists, geoinformation, IT, including thematic and regional expeditions). In principle, the interlinkages are related to groundwater studies, but the project also addresses several other aspects. While the approach is logic considering the project objectives, cost-effectiveness could be reduced if the resources are spread over many different areas. Similarly, the WOODVN project in Vietnam covered two institutions and project results that are loosely related. Syke's projects also included various institutions within the same project. Again, this might be justified but there is a risk of spreading the resources too thin to achieve optimal results given the limited budget. For some projects, the resources could probably have been more efficiently used through increased focus on fewer areas.

EQ 10. To what extent is the project well managed and are M&E systems and risk analysis processes adequately designed and implemented?

Finding 16. The management procedures are mostly implemented as expected. The ICI facilitation is generally appreciated but the ICI FC are not involved in the initial project identification and design.

The board meetings were usually conducted as planned on a semi-annual or annual basis. The meetings typically reviewed the project progress, discussed the next period's plan and budget (including re-allocations), and took decisions about upcoming matters and missions. The meetings were usually conducted in the partner country, but GTK alternated between Finland and the partner country. In some cases, they were also conducted remotely, especially during the COVID-19 period. The composition of the partner institution board members varied frequently for some projects. The minutes, usually prepared by the project managers, are mostly concisely written and for some projects they are extremely short, not providing any details on the results of the discussions and decisions taken, which defeats the purpose of the minutes.

Overall, the management of the project by the Finnish institutions was considered satisfactory to good, but it was also found that the capacity of project managers varied, particularly regarding the already mentioned development cooperation principles and policies related to RBMF, CCOs and HRBA, risk management, M&E, and progress report writing.

The support provided by MFA regional desk and embassies varied. Frequent changes of the MFA desk officers were observed, with some projects experiencing five different desk officers during the project implementation. This lack of continuity is not conducive to high efficiency of the operations and knowledge management. The support of the embassies is appreciated by the Finnish institutions. Some countries do not have embassies, which makes it more difficult to be in close contact. The Embassy of Vietnam had been very active in the past in organising country meetings with MFA supported projects. The Finnish Embassy in Indonesia is also in close contact with the INDFIN project and referred to it in a publication to celebrate 70 years of diplomatic relations between Finland and Indonesia.

The facilitation by the ICI FCs is considered useful, given the limitations of MFA to provide these services, and is well appreciated by MFA and the Finnish institution managers. The objective of the services is to improve the quality and effectiveness of the ICI projects and their implementation. This includes reporting and communication on the results of ICI projects. The ICI FC provides support services to the MFA and Finnish agencies based on needs and requests for quality assurance in the project planning, implementation, monitoring, and communication of results to ensure that the projects and project documentation meet the normative and qualitative requirements set for ICI projects and development cooperation in general. The services can be summarised as follows:

- Support in preparation and implementation;

- Quality assurance of progress reports, completion reports, and self-assessment reports;
- Training;
- Support in recipient countries on request.

While most consulted institutions value the ICI FC support, the facilitation also depends on the project managers' receptiveness, which can vary. Previous evaluations considered the role of the ICI FC too limited and indeed, this could be enlarged to provide more support to the institutions, especially regarding overall development cooperation principles in the early design of the projects. On the other hand, this would require adequate capacity for the ICI FCs to undertake such role. It could also be argued that especially the larger Finnish institutions that are implementing multiple international projects should have this capacity in-house.

Finding 17. The M&E systems are simple but affected by the issues of the RBMF and generally do not provide much information on the outcomes and impact, although the level of analytical reporting varies. The self-assessments are useful (although the framework is considered too complex), but no independent evaluations have been implemented. The risk analysis is not always monitored and updated.

The ICI projects have not established specific M&E systems. They are basically reporting on (activity and output) indicators, which are straightforward and do not require additional data collection tools. However, the usefulness of the M&E system depends on the quality of the RBMFs. As commented earlier, most of these frameworks have issues, especially at outcome level. As a result, very little information is collected on the "real" outcomes, e.g. the level of adoption and changes in institutional performance.

The self-assessments are very useful and provide information on the partner institution's staff and managers' perceptions regarding the project implementation and performance. The self-assessments are well appreciated by the partner institutions, but the analysis framework is considered too complex with too many questions and overlapping requirements.

Although the self-assessments are useful, there might be a need for more independent evaluations to avoid a too subjective view. Most projects have not been evaluated before.

As mentioned earlier, risk assessments were conducted at the design phase, but they are not regularly updated in all cases during implementation. According to implementing institutions, they were checked but not updated if no need was identified. It was also reported that risk assessments were rarely commented on by ICI FC or MFA. In some cases, risks identified in previous phase have materialised.

3.4 Effectiveness

EQ 11. What are the main results and to what extent have capacity strengthening efforts been adopted and contributed to the provision of improved services?

Finding 18. The support is considered of high quality by the partners.

The partners institutions were all quite positive about the quality of the support provided by the Finnish institutions. They particularly appreciated the practical "hands-on" approach, and the provided equipment. The Finnish trainers were considered experts in their technical fields. The trained partner institution staff appreciated the informal style of the Finnish experts and their attention to details. Through the project their English language level also increased. In addition, they learned "soft" skills, for example on how to improve teamwork, or how to write scientific papers and proposals. In addition, they appreciated the networking that was supported through the project, enabling them to build relationships with other institutions and universities.

Interestingly, although the relationship usually is defined in terms of teacher-student, some respondents felt that the Finnish institutions also learned from the collaboration as in some areas the partner institution had more experience, or the local conditions were very different from those in Finland, which required adaptation

of the models or methodologies. This made the collaboration more balanced as both institutions could learn from each other and work in tandem.

The visits and study tours to Finland and Syke's supported tours for institutions of other countries to Uzbekistan were also considered highly beneficial, offering participants insights into the advanced practices and developments. Apart from being considered a bonus (see earlier discussion on issues related to participation), the demonstrated technologies were sometimes an eyeopener for partner institutions. However, not all showcased technologies and practices were considered applicable in the partner countries due to the different conditions. For example, with respect to forestry, the advanced equipment for logging and saw milling, require a certain level of plantation management, which is not much available in Vietnam, as the production is dominated by small scale tree growers using sub-optimal management practices, including a short rotation cycle. Similarly, for other projects such issues were mentioned. For example, the Kyrgyz experts did not find the MAR concept applicable yet for their situation, "although it could become relevant for the southern part of Kyrgyzstan in the future."[6]

The projects have a strong technical focus, and the introduced technologies are based on the ones used and developed in Finland or internationally, especially within the European Union. However, it is important that the local conditions are considered to ensure that the technologies and knowledge are relevant and sustainable. This seems to vary for the evaluated projects. For some projects, for example in Central Asia, the support and provided equipment is adapted to the existing capacity levels. But for other projects, the demonstrated technologies might be too advanced for the local adoption in the partner countries.

Finding 19. Most outputs were (partly) achieved and the support has contributed to enhancing capacities but not always sufficiently. Some projects encourage good practices to achieve and retain skills.

Although the evaluation of the twelve projects shows mixed findings, with some projects showing better results than others, overall, the achievements are satisfactory to good. Many outputs were achieved or are on target to be achieved for the projects that are still on-going.

The support has clearly contributed to enhancing capacities, but as indicated earlier, not always sufficiently. Not all staff acquired an adequate level of capacity to implement the new skills to the required standard. In many cases, the training was relatively short and provided intermittently. In other projects, challenges were encountered with staff turnover or institutional issues.

The success of capacity building also depends on the local conditions and basic knowledge and education levels at the start of the project. There are clear differences between the countries in that respect, with Indonesia and Vietnam being at the higher end. Within Central Asia, Uzbekistan appears more advanced than Tajikistan and Kyrgyzstan. In the latter countries, the basic education levels, infrastructure and resources are relatively lower, which complicates the capacity building process.

In addition, as reported earlier, some introduced systems must be used by staff for some time for them to understand and adapt them to the local needs. Partner institutions also need to test the systems internally before they can fully adopt them. For example, some of the introduced weather and air forecasting and modelling software packages by FMI are still not publicly available and only used internally to validate their performance.

In order to achieve adequate capacity and retain skills, the institutions tried to implement some good practices:

- Get agreement at management level for staff to continue working on project activities, even in between missions from the Finnish experts;
- Support inter-organisational training whereby trained local experts provide training to other staff;

[6] It should be noted that this refers more to the MAR concept than to the technical implications as MAR can be realised using local techniques, and be based on local conditions.

- Encourage partner institutions to devise staff retention measures and incentives;
- Provide "homework" between missions and remotely monitor implementation;
- Provide remote ad-hoc technical advice.

Finding 20. The level of adoption of the introduced practices varies but is often limited due to several institutional challenges.

While the application of the improved capacity and skills of the trained partner institution staff is not always easy, the adoption at institutional level is even more complex. The institutionalisation of the introduced systems takes time and is often hampered by institutional and management changes, political decisions, loss of trained experts, and many other challenges.

In some countries such as Tajikistan and Kyrgyzstan, the shift from manual and old-fashioned (Soviet Union inherited) systems to modern high-tech solutions is a big step that cannot be achieved overnight. In such context, longer term projects with various phases could be more effective, provided that certain preconditions are met. For example, the recurrent institutional changes and many other structural challenges in Kyrgyzstan limit the effectiveness of the projects. In other countries, the prospects for adoption are better. The following section provides some examples of adoption.

3.5 Sustainability

EQ 12. How sustainable are the results and approaches?

Finding 21. The level of institutionalisation and sustainability of the introduced practices varies. While some measures for enhancing sustainability are taken, also challenges are identified.

Positive signs of adoption and institutionalisation of introduced concepts and systems can be found for all projects. Box 1 presents an example of this. However, there are also clear differences regarding the level of institutionalisation. More detailed discussions are found in the project evaluation reports in Annexes 4–15.

Box 1 Examples of adoption and sustained use of introduced concepts, systems or aspects

- FMI PROMOSERV III (Vietnam), PROMOAIR (Vietnam), INDFIN (Indonesia), FUME (Uzbekistan), FINTAJ (Tajikistan): SmartMet/SmartAlert and air quality SILAM are used by the partner institutions.
- GTK VietMAR (Vietnam): introduced MAR approach has gained recognition and is referenced in the national law development process.
- GTK Kyrgyz NR II (Kyrgyzstan): the skills and equipment provided to the Kyrgyz Geological Expedition (KGE) are integrated into the geophysical work.
- GTK NR (Uzbekistan): digitalisation and drone-based technology are continuing.
- Syke Kyrgyzstan Water III and Tajikistan Water II: the accreditation process is in place, and improved water monitoring is conducted.
- Luke WOODVN: the concept of wood thermal modification is adopted by a company in Vietnam.
- GTK & Syke NeAs: enhanced understanding of the arsenic problem, improved data management.

The following factors that contribute to increased sustainability were identified:

- Finnish institutions:

    - Strong and in most cases also long/continued cooperation with technical experts.
    - Introduction of technologies that are highly relevant for the country, adapted to the local conditions. This can also include purchase of equipment that can be locally maintained.
    - Continued support by Finnish institutions after the project has ended for the maintenance of equipment, and ad-hoc technical advice. This can only be continued up to a certain level and limited time frame.
- Clear exit strategy. The project must be clear on how the results will be continued after the end of the project. In many cases this is not done. The continuation of the project through another phase should not be assumed (and even then, it should be clear at what point the support will stop). For example, the Central Asian Geoportal is currently, managed by GTK and the project paid for the hosting, but this is not a sustainable solution. Uzbekistan is in charge of the updates but the hosting is more complex due to the Central Asian countries inter-relationships. According to GTK, the new Central Asian EU-Team Europe Initiative water project (EU4 Sustainable Central Asia: Joint Action and Coordination on Water, Energy and Climate Change) will decide on how the hosting will be organised. Partner institutions:
    - High sense of ownership and motivation of management and staff.
    - Financial capability and adequate human resources. This is key for the uptake and continuation of the project results. Some institutions developed interorganisational training and staff retention measures or incentives, including increased salaries. Others were able to generate increased revenue from the use of adopted technologies, which enabled them to sustain the equipment.
    - Possibility for wider knowledge transfer through partnerships with research institutes, universities and training centres.
    - Support from other, national and international donors building on- and upscaling the project results.
- The partner country parent institution/government:
    - High level government support. For example, presidential decrees on modernisation of hydrometeorological services (Uzbekistan), accompanied by allocation of respective budgets. In other countries, such as Vietnam and Indonesia, the government invested in the project related equipment and enabled further development, building on the project results.

Also, various <u>issues undermining sustainability</u> have been found, including the following:

- Staff turnover (due to low salaries, no payment, few working days, or better opportunities due to training) and managerial reshuffling within departments. This has been a major issue in several institutions. Although at the individual level staff leaving for career improvement is good, it does not help sustainability at institutional level.
- Limited funding of partner agencies and sometimes poor working conditions.
- Frequent institutional restructuring processes.
- Weak coordination and collaboration between state institutions. Several examples were provided where state institutions did not share data or where collaboration through the project was discontinued.
- Hierarchical management culture in many countries. Top leaders might take decisions that are not in favour of the continuation of project results.

- Political decisions that undermine sustainability of the results. Apart from the already cited examples of Vietnam, Tajikistan and Kyrgyzstan, the situation in Indonesia is worrying as the newly elected president seems to have different priorities than the previous government and the BMKG budget was reportedly reduced by 50%.

Finding 22. The prospects for sustainability (and impact) varies across the countries.

The listed factors enabling or inhibiting sustainability vary across the countries. Vietnam, Indonesia, and to some extent Uzbekistan (at least in the Central Asian context) seem to have the highest prospects for sustainability (although the cut budget in Indonesia might have a negative effect), whereas the situation in Tajikistan and Kyrgyzstan is more complex as these countries are affected by many issues. Especially the continuous institutional changes in Kyrgyzstan, together with the political climate has a negative effect on the sustainability of the results. The justification for continued support in such environment can be questioned.

3.6 Impact

EQ 13. In what ways has the project affected the work of partner country agencies?

Finding 23. The transition to modern technologies and digitised information has eased working processes and improved the quality of products (but the institutional impact varies across the projects).

The projects have had a positive impact on the work of the partner institutions in various ways. They contributed to increased efficiency and higher quality of services, enabling partner institutions to provide more accurate and timely information with respect to the following aspects:

- forecasting, early warning and product development for weather, lightning, and air quality (FMI);
- integration of MAR, groundwater monitoring and modelling, geophysical surveys, and use of the geoportal (GTK);
- surface water quality monitoring and laboratory analysis (Syke);
- plantation timber use (Luke).

The institutional impact and the level of integration and provision of better services vary across the projects. As some projects are still on-going, it is difficult to measure the impact at institutional level as some of the outputs have not been achieved and introduced systems are still being tested. But many projects have integrated the improved knowledge and skills into their working processes. Box 2 presents some examples of the impact at institutional level.

Box 2 Examples of impact at institutional level

- PROMOSERV III: SmartMet is extensively used by forecasters in the national, regional and provincial centres and it is becoming a mainstreamed tool in the institution. Efficiency and quality in forecasting have improved, allowing the partner institution to provide more accurate and timely early warnings.
- PROMOAIR: the introduction of new technologies has eased the way of working for the technical staff with regards to air quality reporting. The process is considered more efficient and the results more useful and accurate. The partner institution is able to conduct new analysis methods for pollutants that have not been analysed before. The partner institution's increased expertise in air quality monitoring has been recognised. The project's assessment

of national air quality monitoring networks and support to the Master Plan has enhanced the visibility of the partner institution/its parent institution.

- VietMAR: The project contributed to laying the foundation for research and policy developments and the results were referenced in the national law development process. One of the partner institutions was consulted during the development of legislation on MAR, which shows its increased visibility and credibility as an expert institution regarding the MAR concept.
- WOODVN: The partner institution's researchers highlighted that the project has helped them changing their mindset on research, showing the value of having a more practical focus. The problems related to short rotation plantations are recognised and new technical solutions are now being better understood. The partner institution is looking for more research projects related to the topics but the institutional impact remains limited.
- TJK Water Quality II: The project is still on-going, and several outputs are not yet fully achieved. Improved water quality monitoring is appreciated and needed for effective control protection of water resources. Laboratory work has demonstrated the capacity to carry out analyses in reliable and effective way (identifying a source of emissions), but the impact at institutional level appears still limited.
- FINTAJ III: The project is still halfway through implementation, but the knowledge and skills related air quality monitoring as well as glacier studies seem to be quite well incorporated in the partner institution's work. This is less the case for weather forecasting and early warning (SmartMet, SmartAlert).
- Strengthening the Mastering of Natural Resources for National Welfare in Uzbekistan: The project has contributed to the improvement of data accessibility, accuracy and efficiency. The outputs of the project are directly used by various government agencies and stakeholders. The digital hydrogeological maps and models serve as fundamental tools for planning and executing infrastructure projects, improving disaster risk management strategies, and optimising resource extraction efforts. Digitising techniques are applied in other projects, including local contract work. The skills gained related to landslide monitoring are actively in use.
- FUME: The project still has two years to go. Respondents stated that the capacity of the partner institution's staff has been strengthened in air quality monitoring and weather forecasting but as installations (SmartMet workstations, lightning detection sensors, air quality sensors, SmartAlert, and SILAM) are still ongoing, it is too early to assess institutional impact.
- Strengthening the Mastering of Natural Resources for National Welfare in the Kyrgyz Republic, phase II: Information on groundwater and mineral resources are distributed to water utilities, private citizens, and various mining companies. Private citizens use hydrogeological services. Although no exact figures were provided on the increased demand, the shift from old fashioned manual systems to modern technologies and digitised information has contributed to improved recognition of one of the partner institutions. One of the supported sub-institutions, the KGE has a constant demand for its services, especially from private companies, including mining firms.
- KGZ-Water III: The project contributed to enhancing the capacities of surface water quality monitoring, covering 70-75% of the water bodies in the country. The use of introduced technologies, such as passive sampling devices and deep-water monitoring has increased efficiency and data accuracy. The laboratories have improved capacity but only the central laboratory is currently well-equipped and meets the ISO (International Organization for Standardization) standards. Collaboration at technical level has increased.

- INDFIN: The SILAM model, tailored for Indonesian conditions, has had a major impact on the partner institution's ability to predict and manage air quality and is already used as an operational air quality forecast. The project enhanced BMKG's competence to use advanced meteorological equipment such as Radar and Lidar contributing to more accurate weather predictions and early warning systems. The partner institution's role as a regional training centre was strengthened and it became more engaged in regional meteorological cooperation, which enhanced its reputation in Southeast Asia.
- NeAS: The Project has contributed to bringing the issue of arsenic in the forefront among the agencies working in water supply. The federal government officials and experts on arsenic contamination have recognized the need for launching initiatives on mitigating arsenic contamination in Kathmandu valley as well and conducting more research on practical aspects of hydrogeology.

Several of the partner institutions managed to get a higher recognition as experts in their field or achieve increased credibility to provide quality services. Others received increased demand for their services and products. However, there are also substantial variations between the projects. Some projects are more research oriented (especially WOODVN), whereas others focus on the capacity development related to specific products or systems.

Although for most projects it is early to assess the lasting impact at the institutional level, the evaluation findings seem to suggest that given the relatively limited resources, the projects focusing on specific areas within a single institution are likely to achieve higher impact than those that have a broader focus.

The impact is also influenced by the different conditions in the countries. The impact of projects in Kyrgyzstan and Tajikistan appears relatively less due to several institutional constraints. For project in Vietnam and Indonesia the impact appears higher despite hierarchical management and cultural differences.

Previous evaluations indicated that longer term projects are likely to create larger impact. The assumption is that a longer-term presence and support to the same partner institution will strengthen and "deepen" the capacity of the institution, building on knowledge and skills achieved in earlier phases. However, such logical progress also depends on other external factors and preconditions at the partner institution level that enhance the continued absorption of the knowledge. This evaluation indicates that the assumption is true for projects with favourable conditions but is more complicated for others that experience various institutional and other challenges. For example, some "new" projects, such as PROMOAIR and INDFIN, show some good results, and even better than some projects that have gone through several phases.

This shows that for achieving institutional impact, certain preconditions at the partner institution and at the country level must exist. For the complete adoption and integration of introduced systems in the institution's day to day operations to take place, not only commitment of the institution's top management is needed, but also the necessary support and budget from the government to operate the systems.

EQ 14. What are the wider (indicative) impacts of the project on other stakeholders and beneficiaries in the partner country including aspects of HRBA and CCOs?

Finding 24. In some cases, wider impact has been reported that contributed to risk reduction and improved environmental management.

In theory, many of the projects are expected to have a wider impact, as the provision of reliable meteorological data and monitoring of natural resources use is essential in the context of the countries. For some projects, examples of this were already provided (Box 3) but for many others and on-going projects, such impact will only materialise after some time.

However, it should also be noted that the ICI projects are relatively small and the contribution to wider impact is expected to be limited. Much will depend on the consolidation, continuation (sustainability) and upscaling of the provided support in the future.

Box 3 Some examples of wider impact

- In Vietnam, the SmartMet/SmartAlert systems, together with the radar network provided forecasts and early warning for widespread storms, including Typhoon Yagi in 2024, the strongest storm in 70 years in Northern Vietnam.
- In Vietnam, the introduced MAR concept received increased recognition and popularity, which provides an important contribution to improved water management.
- Lake Son Kol in Kyrgyzstan was heavily polluted. Through different phases of Syke's water projects, surface water quality monitoring was revitalised. According to respondents, not only the presence of heavy metals and pesticides was traced, but also the sources were identified and addressed, which eventually contributed to improved water quality.
- In Tajikistan, a significant emission source was quickly and reliably identified.
- In Kyrgyzstan mining companies have increasingly made use of the geological services of the partner institution.
- In Uzbekistan improved access is provided to geological data for various stakeholders including investors. The Central Asian geoportal generates much information and many hits.

Finding 25. The impact on gender equality and reduction on inequalities is not clear.

Although specific action was taken in some projects to ensure the participation of women, and introduce the gender equality concept through training, discussions with management, and other activities, the impact on the institution is not clear.

Gender equality varies across the countries but in many countries, better paid jobs and highly technical functions are dominated by men, while female staff work more in lower paid jobs in laboratories, libraries, doing digitisation work, and other tasks. While female managers are encountered in many institutions, no clear evidence was found regarding the contribution of the projects to increased gender equality.

EQ 15. To what extent did the project have an impact on the Finnish institutions or private sector in terms of leveraging business opportunities and other linkages?

Finding 26. Although the projects facilitated interactions with the Finnish private sector, this does not seem to have generated major business contracts yet, except for Vaisala and Econet. The high costs and advanced equipment from Finnish manufacturers often do not match the specific needs of the partner countries.

The ICI projects provided a platform for the Finnish institutions to increase their visibility and contacts in the countries, which contributed to identifying further opportunities for collaboration. Several institutions are in the process of preparing new proposals, either through the ICI programme or using other opportunities, such as PIF, Business Finland funding, or development cooperation projects supported by the European Union (EU), WB or other donors.

With respect to cooperation with the private sector, it must be noted that the consideration of leveraging business opportunities was not included in the design of many projects. However, most tried to facilitate such linkages. The collaboration between FMI and Vaisala is the clearest example. The partnership is considered highly beneficial by both parties. Through ICI, Vaisala can introduce their measuring equipment to get more business. Although the budget for material support in the ICI projects is usually very low and barely sufficient for Vaisala to introduce and demonstrate their equipment, it provides the company with an opportunity to showcase the quality of their products. As FMI can provide training and take care of installation and optimisation, the costs for the company are reduced. The ICI project can leverage further business as after testing of the equipment, the partner institution might want to adopt and upscale the technology and acquire more of such materials through other projects. Again, through those projects (PIF,

WB or other donors) FMI continues to play an important role in capacity building. Usually, Vaisala only provides limited training for the installation and use of the equipment, but FMI can play a major role in providing longer term support for the optimal use of the systems, including for their forecasting and modelling products and methods.

Other projects also facilitated interactions with the Finnish private sector, but this mostly did not result in clear business arrangements. Only few examples were provided. The GTK projects in Uzbekistan and Kyrgyzstan organised seminars together with Mining in Finland and FWF. Altogether 13 companies presented their products and services. Apparently, the project facilitated a new collaboration contract, between Econet's water purification initiative with an Uzbek Mining Company. Econet also signed an MoU with a Vietnamese water company in 2025 to collaborate in MAR in addition to other water management issues.

Apart from the projects, through their contacts with local high level authorities, the Finnish institutions might also contribute to leveraging business opportunities. GTK mentions a contract of a Finnish company (Metso) with an Uzbek mining company.

In addition, some preliminary discussions between Finnish companies and partner country private sector were mentioned that did not result in clear business proposals. For example, through the WOODVN project a Vietnamese furniture production company visited Finland and discussed the purchase of thermal modification equipment with a Finnish producer, but did not place an order. The Vietnamese company said that it could not get the required information on certain parameters such as energy consumption. In addition, the demonstrated size of the equipment was different from their needs, and the price was very high. Eventually, even though the Finnish quality and efficiency of the equipment was considered higher, the company bought the equipment from Italy. This example demonstrates the challenges of leveraging business opportunities for Finnish companies. First, the technology is often considered too advanced or at least not adapted to the local requirements. Second, the costs of the products are relatively high compared to other countries. Even though the quality and durability might be high (and the need for maintenance low), the price difference might be too large—for example, the Italian price was only 15% of the one quoted by the Finnish company. In addition, as was also mentioned for the Syke project in Tajikistan, it was avoided to purchase too high-tech devices, which cannot be maintained in the country.

Although not all projects aimed at facilitating business opportunities with the private sector, some respondents also felt that the Finnish institutions are not experts in this field and would need business expertise to be more effective in this area.

Apart from business opportunities, the projects also leveraged linkages with universities and research institutes. The university of Helsinki was mentioned a few times in the project evaluations, creating opportunities for future joint research and knowledge exchange. For some projects that had clear research components, such as the WOODVN project, those linkages were part of the project design but in other cases, such as the INDFIN project, they were not planned but considered an unforeseen result.

3.7 Regional versus country-level projects

In addition to the evaluation criteria, a specific question related to the comparative advantages or disadvantages of regional- versus country-level ICI projects was included in the ToR. A regional project is understood as a project that covers two or more neighbouring countries. As the evaluation did not cover any regional project, the findings are based on the perceptions of relevant respondents from MFA and the implementing agencies that have some experience with a regional approach.

EQ 16. What are the perceived advantages and/or disadvantages of country level ICI projects versus regional level ICI projects (combining different countries)?

Finding 27. The comparative advantages of regional projects versus country-level projects depend on the subject that the project addresses (a common cross-bordering need), the national context, different capacity levels and specific needs of each partner institution, and other factors.

The options for implementing regional projects depend on the subject that the project tries to address. The problems and needs could be shared or be similar in the participating countries. For example, water does not follow borders and common activities related to improved water monitoring and management would benefit the participating neighbouring countries. Similarly, shared information on other aspects, such as geological or meteorological data can also be considered beneficial and efficient.

A regional project can reduce the administrative work, not only for MFA but also for the implementing institution, as certain activities could be shared and commonly undertaken for different countries. In addition, countries could stimulate each other to achieve better results. A regional approach can also contribute to improved cooperation between countries.

However, this assumes that certain preconditions are in place, but there might also be complications that hinder the coordination and collaboration. For example, countries might have different capacity levels or using different types of systems that are not compatible. The political relationships might not favour collaboration or create competition between the countries.

Any regional project must therefore consider the specific needs and skills of each participating country and match the intervention support to those conditions. Although some common activities, study tours, etc. can be planned, most of the technical work must be customised to the conditions of each country and partner institution. Under the umbrella of a regional project, in practice most activities will need to be specifically developed for the situation in each country, which does not make the approach very different from country-level projects. This also entails other complications, such as the design of a common RBMF that considers the requirements of each country.

4 Conclusions and Recommendations

The conclusions are based on the findings elaborated in the previous chapter. To avoid duplication of the findings, the discussion is kept concise.

Overall, the evaluation presents a positive view of the ICI approach, which can be considered an added value to the other development cooperation instruments. The evaluation findings indicate that the ICI projects are relevant, coherent, and generally efficient and cost-effective, particularly given their relatively limited resources. Most of the outputs have been achieved and a certain level of adoption has been observed in most projects. However, the full institutionalisation of improved capacities and introduced systems within the partner institutions' operational processes appears more challenging. This has implications for the effectiveness, impact and sustainability of the results.

While there are positive signs, various challenges are also identified that could hamper the sustainability of the project results in several countries.

Recommendations are provided for further improving the programme design and implementation.

4.1 Relevance

4.1.1 Conclusion

Conclusion 1. ICI projects are highly relevant, though questions arise on the design regarding the integration of HRBA/CCOs, the formulation of the RBMF, and the application of risk analysis.

The projects were well aligned with the partner country's priorities and policies and responded closely to the capacity development needs of the partner institutions. The projects were well aligned with MFA's policy guidelines, especially related to climate change and sustainable management and use of natural resources. Gender equality and non-discrimination were more systematically incorporated in the project approach than in earlier ICI projects, although the degree of integration varies across the evaluated projects.

Challenges were noted on the vertical logic of the RBMFs, especially in clearly distinguishing between outputs and outcomes. The impact is not always realistically formulated and some indicators are not defined in a SMART manner. In addition, issues were found in the formulation and use of the risk management frameworks.

A main question that arose in the evaluation concerns the extent to which ICI projects should be expected to integrate development cooperation policies and requirements, specifically related to HRBA/CCOs, RBMF, and risk management. No clear consensus was found amongst interviewed respondents on this and two perspectives seem to exist. One suggests that more meaningful action is needed as the ICI projects "only pay lip service" to these requirements whereas the other considers that a simpler design is required due to ICI's technical focus and short-term inputs. Although the evaluation team recognises the limitations of the ICI projects to contribute to transformative change at the partner institution, it is proposed that these aspects continue to be included but in a realistic and pragmatic manner, building on "good practices" observed across projects. Where needed, support from gender or other development cooperation specialists could enhance meaningful integration.

4.1.2 Recommendations

Recommendation 1. Continue with ICI projects, based on participatory and context-responsive project planning, while strengthening their design and implementation through meaningful partner involvement in all phases, realistic integration of development cooperation principles, and improved results-based management and risk frameworks.
MFA: Support the continuation, facilitation and monitoring of ICI projects. Finnish institutions: Continue the ICI projects, while integrating the recommended improved measures.

This general recommendation reflects the overall positive view of the evaluation regarding the relevance of the ICI projects. The participatory approach should be continued. However, some design aspects can be improved, which are further detailed in the following recommendations. Other detailed recommendations regarding the design are included under the section of Coherence.

Recommendation 2. Integrate HRBA/CCOs "realistically" in the design, focusing on practical measures on gender-equality and non-discrimination.
Finnish institutions: Implement the recommendation with the support of gender/thematic experts.

With regards to gender-equality and non-discrimination, practical measures can be taken, including the following:

- Gender and social inclusion surveys to identify major issues and possible actions to be supported.
- Gender equality workshops to exchange views and raise awareness.
- Discussions and lobbying at management/leadership level, encouraging women to participate in project activities and taking leading roles.
- Gender equality and social inclusion monitoring throughout the project implementation.
- Provision of good examples by including Finnish female project managers and senior experts.
- Other practical measures that support sustainable solutions.

Furthermore, it is recommended to involve gender or other thematic experts during the project design and implementation to ensure relevance and credibility.

The CCOs related to climate change and natural resource management are already covered by the projects due to their nature and objectives (at least the type of projects supported by FMI, GTK, Syke and Luke). The explanation of the contribution of the projects to these CCOs in the project document must be continued, but the same information must not be repeated in the progress reports. If no changes have occurred during the reporting period, reference could be made to the project document.

Recommendation 3. Design simple, realistic and high quality RBMFs, based on clear horizontal and vertical logic and SMART indicators. Involve partner institutions in the design.
Finnish institutions: Implement recommendation with support from RBMF experts, and possibly ICI FC. ICI FC: Ensure adequate capacity of ICI FC team on RBMF, continue training on RBMF, and support projects in the design of the RBMF.

This recommendation must be operationalised through, e.g. the following measures:

- Ensure vertical logic of RBMFs by clearly distinguishing outputs, outcomes, and impacts, and formulate indicators in a SMART manner.

- Formulate realistic impact statements and indicators that reflect the expected contribution of the project to the overall development objectives of the sector.
- Formulate the outcome in such a way that it reflects the intended change at the end of the project in terms of adoption and institutionalisation of the developed capacity.
- Involve RBMF specialists and/or ICI FCs to ensure that the RBMF meets the required quality.
- Involve the partner institutions in the design to ensure full ownership.
- Continue targeted training for implementing institutions, project managers and ICI actors on RBMFs.

Recommendation 4. Involve partner institutions in risk analysis and avoid high-risk actions without feasible mitigation measures.
Finnish institutions: Implement recommendation.

A realistic risk analysis at design phase is important to avoid planning actions that are high-risk and might derail the project. Partner institutions must be involved in conducting the risk assessments and mitigation plans. The risk analysis and mitigating measures should be revisited periodically.

4.2 Coherence and Aid effectiveness

4.2.1 Conclusions

Coherence

Conclusion 2. ICI projects are generally coherent with Finnish and other development initiatives in the countries, but the level of collaboration remains mostly limited.

The ICI projects are well aligned with the Country Programmes and Strategies and, and in some cases, are explicitly referenced within them. The collaboration with other Finnish actors, including institutions implementing ICI projects, varies but is mostly limited.

The projects are coherent with other development initiatives in the countries and play a complementary role. However, due to the specific niche and subject areas, in some cases no other development cooperation initiatives exist and the only support provided to the partner institutions is through the ICI projects.

Aid effectiveness

Conclusion 3. The sense of ownership is mostly satisfactory but is often affected by partner countries' institutional changes and political decisions.

Most partner institutions and consulted parent authorities demonstrate a good sense of ownership. However, at times this was affected by changes in leadership, institutional restructuring, and political decisions in partner countries.

Commitment at the high governance level, e.g. parent institution or ministries, has emerged as a critical factor for project success and sustainability. However, ensuring continued commitment and support from decision-makers for ICI projects can be challenging. Participation of decision makers in visits to Finland has proven helpful in enhancing their commitments. Yet, in some projects, issues arose on the decision who should participate. To avoid this, some projects arranged separate tours for technical experts and high-level officials—sometimes in connection with board meetings.

However, beyond the influence of high-level officials, there are several contextual factors that can influence the project over which the institutions have little control, such as institutional changes and political decisions.

4.2.2 Recommendations

Recommendation 5: Strengthen coherence and coordination through participatory planning, identification of other initiatives in the sector, and stakeholder alignment to avoid duplication and ensure complementarity of supported interventions.
Finnish institutions: Implement recommendation. MFA/embassies: Facilitate and strengthen project exchange and donor coordination.

The recommendation intends to ensure coherence and can be operationalised through, e.g. the following actions:

- Conduct participatory project planning that avoids duplication and enhances complementarity by mapping existing initiatives in the sector and involving partner institutions and sector stakeholders early in the design process.
- Continue coordination with relevant stakeholders throughout the implementation process.
- Link up with other ICI implementing institutions, even if not working in the same subject area to exchange experiences and coordinate support activities.
- Promote donor coordination in partner countries. MFA and embassies should support or initiate coordination platforms and identify entry points for collaboration and information exchange amongst donors and MFA supported projects.

Recommendation 6: Ensure proper analysis and consideration of the broader organisational and political context and involve higher-level decision-makers in the design, implementation and reporting on the project. Separate study tours for decision makers could be considered to strengthen commitment.
Finnish institutions: Implement recommendation. MFA/embassies: Facilitate and strengthen project exchange and donor coordination.

This recommendation refers to aid effectiveness and specifically ownership. The support and sense of ownership of high-level decisionmakers is crucial to the success and sustainability of the project. This can be supported through the following activities:

- Analysis of the broader organisational and political context during project design to ensure that the project is relevant and well aligned to the specific needs and expectations of high-level decisionmakers.
- Involvement of senior decision-makers throughout the project cycle, including through tailored engagement such as separate study tours.

4.3 Efficiency

4.3.1 Conclusions

Conclusion 4. ICI projects are generally efficient, flexible and relatively easy to manage due to their technical focus.

Most of the planned activities were implemented although many projects experienced delays due to COVID-19 and received no-cost extensions. Other factors contributed to delays, but these did not seriously hamper the project progress. The ICI projects are generally efficient in producing outputs without many overheads or and administrative costs.

Conclusion 5. The relative short duration, small budget, and short-term inputs limit the level of capacity built and internalisation of knowledge, affecting cost-effectiveness. There is also a risk of spreading the resources too thin over many areas/outputs and actors.

Although ICI projects can have an added value alongside other development cooperation projects, their relatively short duration, small budget, and short-term inputs, constrain the level of capacity built, which is often not considered sufficient by the partner institutions. The short intermittent inputs of Finnish experts can affect the momentum and effectiveness of the support. The approach has some limitations for achieving a high level of cost-effectiveness. There is also a risk of trying to cover (too) many aspects and different actors within the limited timeframe and resources.

The main question is how cost-effectiveness can be improved? It has been suggested by several consulted stakeholders that slightly longer term projects—particularly in the first phase—combined with a higher budget and a longer presence or provision of technical assistance in-country, could be more cost-effective. At the same time, the unique characteristics and technical focus of ICI projects are valued by stakeholders and should remain a defining feature, distinguishing them from other bilateral development programmes.

Conclusion 6. The MFA ICI framework is relatively complex, and frequent turnover of MFA staff has occurred affecting the efficiency of the ICI programme. The ICI FC support is useful but limited.

The ICI facilitation provided by MFA, the embassies and the ICI FC is generally appreciated by stakeholders. However, the frequent turnover of MFA desk officers and lack of continuity is not conducive to reaching a high level of efficiency of the operations and enhancing good knowledge management. The role of the ICI FC is considered useful but also relatively limited, as the facilitators are not involved in the early stages of project identification and design.

This raises broader concerns about the current setup of ICI management and facilitation as challenges with the integration of general development cooperation principles, and weaknesses in the design of the RBMF and risk framework were found. While these aspects are reportedly reviewed, gaps in quality and consistency were noted. Addressing such issues would require a more robust facilitation function with sufficient capacity, which has implications for resourcing. At the same time, the evaluation notes that some larger Finnish institutions implementing multiple international projects may be in a position to assume more responsibility for these functions, building expertise in-house.

Conclusion 7. The M&E systems are not adequately designed to measuring effectiveness and the risk analysis is not consistently monitored and updated across projects.

The M&E systems, partly due to issues of the RBMF, do not provide much information on the (real) outcomes and impact, although the level of analytical reporting varies. While self-assessments are useful, the guiding evaluation template that is used for these assessments is considered too complex, contributing to many replications of reported findings. The absence of external evaluations limits the ability to gain an independent perspective on results. Finally, the risk analysis is not always monitored and updated, while some risks have affected project implementation.

4.3.2 Recommendations

Recommendation 7: Ensure a clear focus of project support to get optimal (cost-effective, sustainable) results, avoiding spreading the resources over many areas, outputs and actors.
Finnish institutions: Implement recommendation.

The project evaluation findings suggest that projects that are focused on few areas and limited number of partner institutions and stakeholders are more efficient and cost-effective, within the available timeframe and resources. The risk of becoming over-ambitious, spreading the resources too thin over many outputs and actors must be avoided.

Recommendation 8: Identify options for longer-term (4–5 years) projects, combined with a higher budget, especially for the first phase.
MFA: Implement recommendation. Finnish institutions: Provide longer-term capacity building and technical assistance in-country.

While maintaining the unique characteristics and technical focus of ICI projects, a longer duration, combined with a higher budget, especially for the first phase, would contribute to increased cost-effectiveness. Especially in the first year, adequate time is needed to establish the foundation of the project, building relationships between the partners and finetuning the planning and implementation process. At the same time, Finnish institutions should aim at a longer presence and in-depth capacity building in-country.

Recommendation 9: Identify options for improved ICI management processes: (i) continuity of staff and improved documentation; (ii) possibility for enlarging the role of ICI FC to also provide support to the design phase and link up with partner organisations, or alternatively, strengthen the skills of dedicated development cooperation specialists within the ICI implementing institutions; and (iii) possibility of supporting external evaluations.
MFA: Implement recommendation. ICI FC: Ensure adequate capacity and knowledge in required development cooperation areas, including RBMF, M&E, risk analysis and management, and HRBA and CCOs.

While implementing changes in the current ICI management system might be challenging due to cost implications and MFA's institutional policies and arrangements, it is still recommended that MFA identifies the options for making possible improvements with respect to the following areas:

- Continuity of Desk Officers.
- Improved documentation and information management system.
- A greater role for ICI FCs to provide support even in the initial design phases of the projects, and, if needed, to the partner institutions. However, it should be ensured that no conflict of interest arises between the quality assurance and facilitatory roles. If quality assurance remains the main task, alternatively more effort could be put on increasing the in-house capacity of the Finnish institutions through a training of trainer approach, strengthening the skills of dedicated development cooperation experts within those organisations. These experts should then be responsible for integrating the development cooperation requirements in the design of all ICI projects, in collaboration with the project managers. Irrespective of the selected option, the training by ICI FC to project managers and other stakeholders should continue as also mentioned in recommendation 3.
- Possible integration of ("light") external evaluations. To reduce the costs, a light evaluation approach, such as the EU type of Result Oriented Monitoring (ROM) system could be considered, whereby a selected evaluation consultant spends a few days in-country assessing the project progress mid-way its implementation. Or, alternatively, a sampling approach could be used whereby a limited number of projects are selected for a more in-depth evaluation.

Recommendation 10: Continue self-assessments but simplify the evaluation template, improve M&E of outcomes (adoption, institutional performance), and strengthen risk management.
Finnish institutions: Implement recommendation. ICI FC: Facilitate the process.

Improvements to the internal M&E systems could be made, e.g. through the following actions:

- Continue the self-assessments but simplify the evaluation template.

- If the RBMF is improved (recommendation 3), the M&E system should also include the measurements of outcome in terms of adoption and utilisation levels. If the impact is realistically formulated, also measurements at that level are possible. At the design phase, the M&E system should be developed, and methods for measurements of outcome and impact must be devised.
- Risk management must also be undertaken regularly to ensure that emerging risks are considered, mitigated, or, if not possible, at least reported.

4.4 Effectiveness

4.4.1 Conclusions

Conclusion 8. The ICI practical "hands-on" approach and technical focus is good, but the level of capacity building is not always sufficient to achieve lasting results.

The support provided by the Finnish institutions is considered as high quality by the partners and their capacity building approach is highly appreciated. The visits and study tours to Finland were also considered beneficial, offering participants insights into the advanced practices and developments of Finnish institutions and companies, or in a few cases, participate in an in-depth training. However, not all showcased technologies and practices were considered applicable in the partner countries due to the different conditions.

Most outputs were (at least partly) achieved and the support has contributed to enhancing capacities but not always sufficiently. Not all staff acquired an adequate level of capacity to implement the new skills to the required standard. An extended use of the new systems is often required, allowing staff time to internalise and adapt them to local needs.

Conclusion 9. Adoption at institutional level takes time and is often hampered by institutional changes, political decisions, loss of trained experts, and other challenges.

The level of adoption of the introduced practices varies across projects. Several examples are provided of partner institutions adopting certain methodologies or aspects, but the institutionalisation of the introduced systems takes time and is often hampered by institutional and management changes, political decisions, loss of trained experts, and many other challenges.

Although some of these constraints are beyond the control of ICI projects, the question remains how institutional adoption can be strengthened within such limited timelines. The evaluation found that some practical measures to support and retain skills were conducted by some ICI projects that can be further build on.

4.4.2 Recommendations

Recommendation 11: Continue the practical "hands-on" capacity building approach and technical focus but provide prolonged training to key staff—see also recommendation 7 regarding clear focus of project support to get optimal results and recommendation 8 focusing on options for longer-term projects and in-country support.
Finnish institutions: Implement recommendation.

To increase the absorption rate and internalisation of the knowledge and capacity by partner institution staff, a more intensive and longer support to the same key experts is needed in many cases.

Recommendation 12: Support good practices to achieve and retain skills: a. Agreement at management level for staff to continue working on project activities. b. Support inter-organisational training—staff retention measures/incentives. c. Provide "homework" between missions and remotely monitor implementation. d. Provide remote ad-hoc technical advice.
Finnish institutions: Implement recommendation.

To ensure that the enhanced capacity and skills are retained within the partner institution and that capacity is transferred to other staff within the same organisation, the institutions should build on some good practices that were already introduced by some ICI projects. Although they do not guarantee that the skills will be retained, at least they will contribute to improved use of knowledge.

Recommendation 13: Identify and support options for further institutionalisation and up-scaling through other donor-supported initiatives or private sector activities, including PIF.
Finnish institutions: Implement recommendation. MFA/embassies: Facilitate the process.

In many projects, the institutions introduced new methods and technologies, including equipment. For the full institutionalisation of those measures, further support is often required. Through the integration of the project outputs in other, larger programmes, including PIF projects, the project results can be further upscaled and institutionalised.

4.5 Sustainability

4.5.1 Conclusions

Conclusion 10. Positive signs of sustained use of introduced concepts, systems or technologies exist, but sustainability of main results is not yet achieved in many projects.

Although positive examples were found on sustained use of introduced concepts or systems, the project evaluations also indicate clear differences regarding the level of institutionalisation. Several factors contributed to increased sustainability, at the level of Finnish institutions, partner institutions and partner country government. A strong sense of ownership, financial capability and adequate human resources within the partner institutions and commitment from the partner country government are key enablers. In some countries, the government invested in project related equipment and supported further sector development, building on the project results. However, this is not the case for other projects, especially those still under implementation.

Conclusion 11. Numerous challenges undermine sustainability, particularly related to institutional, political, financial, and human resources factors—though these vary by country.

Apart from promising developments, several issues undermining sustainability were identified. These are mostly related to institutional aspects and political decisions. Weak institutional capacity—due to limited human resources, finance, equipment/conditions, management culture—as well as restructuring processes are major factors, hampering sustainability. These factors are more prevalent in some countries than others.

4.5.2 Recommendations

Many of the earlier recommendations apply with respect to: comprehensive contextual and institutional analysis (recommendation 1), adequate risk analysis (recommendation 4), high level decision-makers' involvement and commitment (recommendation 6), focused approach (recommendation 7), prolonged capacity building on key areas/resource persons (recommendation 11), support to good practices (recommendation 12), and enhanced collaboration and upscaling with support from other projects/institutions (recommendations 5 and 13).

Recommendation 14: Ensure during project design that basic preconditions for project success and sustainability exist.
Finnish institutions: Implement recommendation.

Many of the earlier mentioned recommendations are related to enhancing sustainability. Most importantly, a comprehensive contextual analysis must be conducted at the design phase to identify the prospects for sustainability. For some countries that experience continued institutional challenges, the rationale for (further) ICI support could be questioned if certain preconditions for sustainability do not exist.

4.6 Impact

4.6.1 Conclusions

Conclusion 12. The projects have contributed to improved working processes, results and recognition of the institutions but the level of impact varies.

The projects contributed to increased efficiency and higher quality of services, enabling partner institutions to provide more accurate and timely information. But the institutional impact and the level of integration and provision of better services vary across the projects. As some projects are still on-going, it is difficult to measure the impact at institutional level but other projects have integrated the improved knowledge and skills into their working processes.

The assumption that impact is greater for longer-term projects (those with previous phases) is not confirmed for all projects. Impact depends on various external factors and preconditions at the partner institution level that enhance the continued absorption of knowledge. This evaluation indicates that the assumption holds true for projects with favourable conditions but not for those facing institutional and other challenges. In fact, some newly started projects show higher institutional impact than some that have been supported over a longer period.

Conclusion 13. Some projects contributed to disaster risk reduction and improved environmental management but no major impact on gender equality was found.

In some cases, wider impact has been reported that contributed to risk reduction and improved environmental management. Practical examples were provided in some projects. However, it should also be noted that the ICI projects are relatively small and the contribution to wider impact is expected to be limited. Much depends on the consolidation, continuation and upscaling of the supported results in the future.

The impact on gender equality and reduction on inequalities at partner institution level or beyond is not clear.

Conclusion 14. Apart from Vaisala and Econet, interactions with the Finnish private sector have not resulted in clear business opportunities. The collaboration between FMI and Vaisala (through ICI, PIF and other projects) is considered successful and contributes to increased impact.

Although the projects facilitated interactions with the Finnish private sector, this does not seem to have generated major business contracts yet, except for Vaisala and a contract of Econet with an Uzbek mining

company. The high costs and advanced equipment from Finnish manufacturers often do not match the specific needs in the partner countries.

The cooperation between FMI and Vaisala is considered beneficial by both parties. The ICI projects provide a platform for Vaisala to demonstrate their equipment while FMI takes care of the installation, training and optimisation. Through other Vaisala related projects (PIF, WB or other donors) FMI continues to play an important role in capacity building. It is therefore considered a win-win situation, leveraging business opportunities for both partners.

4.6.2 Recommendations

Most of the recommendations above apply. Impact will be enhanced by adequate relevance and proper design, a high level of coherence and aid effectiveness, an efficient implementation process, achievement of meaningful results and outcomes, and good prospects for sustainability.

Recommendation 15: Support the implementation of complementary ICI-PIF projects, which could reinforce each other and contribute to higher impact.
Finnish institutions: Implement recommendation.

A clear understanding of the partner institution's capacity to absorb knowledge and integrate this in their operational processes, contributing to improved service delivery, is crucial to the project's success and impact. As indicated in recommendation 1, projects must assess the institutional conditions at an early stage, continue monitoring the situation, and adapt the implementation strategies accordingly.

Regarding the ICI projects' impact on leveraging business opportunities, the implementation of complementary ICI-PIF projects appears promising and should be further supported.

4.7 Regional approach versus country-level projects

Conclusion 16. A regional project can have some administrative and strategic benefits, but certain preconditions must be in place for it to be successful.

A regional project can reduce the administrative work, not only for MFA but also for the implementing institution, as certain activities could be shared and commonly undertaken for different countries. In addition, a regional approach can also contribute to improved cooperation between countries. However, certain preconditions are required, including contextual similarities, common needs, political willingness, and almost identical levels of institutional capacity. It is inevitable that a regional project must match the intervention support to the specific needs and skills of each participating country and partner institution. This also contributes to several other complications in the design of regional projects as the specific needs of each institution have to be considered, including the design of RBMFs, risk analysis, and specific tailored activities and budgets.

Recommendation 17: The common needs as well as the specific conditions, requirements and skills of each participating country and partner institution must be well assessed and a SWOT (strengths, weaknesses, opportunities, and threats) or cost-benefit analysis undertaken before a decision on the regional project is taken.
Finnish institutions: Implement recommendation. MFA: Ensure that the decision is based on a thorough analysis.

The assumed advantage of each specific regional project, compared to different country-level projects must be well analysed before designing the project. The administrative benefits should not override important considerations with respect to expected impact.

5 Lessons learned

The questions posed in the ToR regarding the lessons learned at ICI programme level, were already answered in the previous chapters. The following section presents some major other lessons learned that might be considered in the planning of further ICI support programmes.

Relevance

Lesson learned 1. The ICI projects are relevant and if required preconditions for success and sustainability are in place and if good practices are applied, the ICI projects can provide added value to MFA's development cooperation instruments.

The evaluation shows that the projects are relevant and cost-efficient, and achieve results in specific technical niche areas that are usually not covered by MFA's bilateral or multilateral support. The specific capacity building approach through peer-to-peer technical specialists contributes to improved capacities of highly specialised staff in the partner institutions. As the projects are relevant to the policy priorities of the partner countries and MFA, especially with regards to climate change and environmental sustainability, and as they support the provision of fundamental services, they have potential for contributing to wider impact.

Efficiency/cost-effectiveness

Lesson 2. The ICI projects are reasonably efficient, but their relative short duration and intermittently provided inputs limit the level of internalisation of the capacity built. Prolonged, continued support to the same experts is expected to contribute to increased cost-effectiveness.

The set-up of the ICI projects, based on peer-to-peer capacity building has strengths with respect to its efficiency, simplicity and straightforward technical support approach. But it also has limitations compared to other cooperation development instruments that usually have a longer presence and continued support in the partner countries, which makes it easier to supervise and facilitate the capacity building and internalisation process. While the nature of the ICI projects should be maintained, a longer presence in-country and continued capacity building to the same experts could enhance cost-effectiveness. This would possibly require additional resources and a longer project duration.

Effectiveness

Lesson 3. While the ICI practical "hands-on" approach and technical focus contribute to increased capacity of partner institution staff, adoption of the introduced systems and practices at institutional level is complex and is often hampered by institutional changes, political decisions, turnover of trained experts, and other challenges.

While partner institutions are generally highly receptive and positive about the introduced systems and the strengthened capacity, the full adoption and institutionalisation of the practices usually take time as systems need to be tested and also require approval from higher level decision makers. Furthermore, in various countries several institutional challenges exist that can undermine the achievement of results. This also highlights the need for integrating a certain level of flexibility in the ICI project planning approach.

Sustainability

Lesson 4. A strong sense of ownership, financial capability and adequate human resources within the partner institutions, as well as commitment from the partner country government are key enablers for project sustainability.

In some countries the governments invested further in the sector supported by the project. The institutions are characterised by a strong sense of ownership and adequate financial and human resources to sustain or further develop the project results.

However, in other countries several challenges exist, contributing to weak institutional capacity of the partner agency or parent institution. The likelihood of sustainability in such cases is seriously reduced. A good contextual and institutional analysis at design phase can possibly help identifying the prospects for success.

Impact

Lesson 5. The ICI projects can act as a catalysing force, contributing to increased impact through linking up with- or adoption of the approach and introduced systems by larger programmes.

Although the ICI projects contribute to strengthening services that are considered highly relevant within the national context, their contribution to wider impact remains limited. Usually, ICI projects introduce some specific approaches or systems that for optimal use would require further investments and up-scaling. Several examples were provided in the evaluation of ICI projects acting as a catalysing force, triggering further support through other development cooperation programmes, funded by the EU, WB, or other donors, including MFA through its support to PIF projects. The ICI projects could also play a complementary role alongside the PIF project, providing, for example, training support.

Lesson 6. The ICI projects can leverage private sector support but the Finnish products are often considered technically too advanced or not well adapted to the local conditions in the partner countries and too expensive.

Only few examples of ICI projects leveraging business opportunities were observed, mostly related to Vaisala and a few to Econet. Although several networking events were facilitated by the ICI projects with the Finnish private sector, they did not result in concrete commercial contracts. The reported reason was that many Finnish companies are not well geared towards doing business in development countries that have different needs and conditions. Finnish equipment is often considered technically too advanced and relatively expensive. In addition, it appears difficult to adapt the equipment to the required needs, for example in terms of size. Consulted stakeholders also expressed concerns about maintenance. For example, in Central Asia, Russian made equipment has been the norm for many applications, and maintenance can be easily done in-country, whereas for other high-tech equipment this would be more difficult.

This does not imply that further efforts are not needed, but probably closer cooperation among Finnish actors including MFA/Team Finland and further analysis in which contexts it is relevant to have those efforts could be useful. There are huge differences between the countries and the options for leveraging business opportunities vary.

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In addition to the references listed above, the evaluation team consulted project-specific documentation made available during the evaluation process.

Annex 1: Terms of Reference

The department of Asia and Oceania is conducting an evaluation on ICI cooperation in Central Asia (Uzbekistan, Tajikistan, Kyrgyzstan), Vietnam, Nepal and Indonesia. All together this includes 12 ICI projects that have been implemented by Finnish Meteorological Institute (5 projects), Geological Survey of Finland (4 projects), Finnish Environment Institute (3 projects) and Natural Resource Institute Finland (1 project)[7]. Many of the ICI projects started already in 2010/2011 and have been on-going for several phases but others are more recent (2019/2023) and in their first phase. The list of projects is included in Annex 1. The common feature of the projects is that they are all part of the ICI cooperation instrument.

1. Background to the evaluation

1.1. The Institutional Cooperation Instrument (ICI)

The Ministry for Foreign Affairs (MFA) has used the Institutional Cooperation Instrument (ICI) as one of the development cooperation instruments since 2007. In ICI projects, relatively small investments aim to accomplish well-focused short-term project interventions.

ICI projects are capacity development interventions in which state-owned Finnish institutes co-operate with their counterpart institutions in partner countries (MFA: ICI norm 3/2010, 26.4.2010). The Finnish institutes implementing ICI projects are experts in their respective fields.

The motion to begin an ICI project is first expressed by the partner country (MFA: ICI norm 3/2010, 26.4.2010). In this way, the cooperating country has ownership of the ICI project. The length of an ICI project has usually been limited to approximately three-four years but there can be several phases. There is an objective that after a relatively short project period, the cooperating agency should be able to continue the developed functions by itself. ICI project activities do not imply a continuous presence in the partner country as for other technical cooperation project but, rather, consist of several weeks of capacity development activities in the destination country and in Finland, and small equipment purchases.

In addition to the development goals, the objective of the ICI has been to support Finnish government agencies to act in a developing country. In the assignments for ICI projects no tendering procedure is needed. The need expressed by the developing country agency is, however, an important precondition for the project. (MFA: ICI norm 3/2010, 26.4.2010.)

The Department for Development Policy (KEO) in the Ministry for Foreign Affairs (MFA) of Finland takes the main responsibility for managing the ICI as an instrument of development cooperation with relevant and appropriate management documents and instructions. The MFA's Regional Departments are responsible for assessing, approving, financing and monitoring of ICI projects and for project-level management in the Ministry. Finnish embassies support the Regional Departments, especially in assessing ICI project proposals and project documents and in monitoring progress.

The Finnish institute has the responsibility for project planning and implementation in cooperation with the partner country agency. This entails ensuring that the project is implemented in accordance with the approved project document. The Finnish Institute also has the final responsibility for the capacity development and ensuring that the project is relevant regarding capacity development needs and that the objectives and activities of the project are meaningful.

The Facilitation Consultant (a consulting company contracted by KEO-10 to support all ICI projects) supports the Ministry in ensuring that the projects and project documentation meet the normative and qualitative requirements set for ICI projects and development policy and cooperation in general. The Facilitation Consultant also provides support services to the Finnish agency in project planning, implementation and results reporting.

1.2. Results of previous evaluations

The projects in question have not been previously evaluated.

[7] One project is jointly undertaken by the Geological Survey of Finland and the Finnish Environment Institute.

The Department for Asia conducted an ICI project evaluation in 2021, which looked at five projects in Afghanistan, Bhutan, India and Nepal.

Evaluation of ICI projects in Afghanistan, Bhutan, India and Nepal 2021: https://um.fi/documents/384998/0/Evaluation+of+ICI+projects+in+Afganistan%2C+Bhutan%2C+India+and+Nepal_Final+Report_rev_11082021+%282%29.pdf/34a9bdb1-f264-116a-b6be-ccf2ad1d6493?t=1632134898745

The conclusions from this evaluation were that the capacity building in these projects was relevant to the needs of the country and embedded in existing policy priorities. The ownership of the partner organization was strong and all projects contributed significantly to strengthen the competencies of the partner organizations although the target group was relatively small in the partner organizations. The ICI projects contribute more clearly to development impacts if they support basic services of partner country agencies that result in immediate benefits for the population and if they cater to the strong and sustained priorities of the partner country agency. The ICI projects are more likely to be effective and sustainable if they extend over more than one phase. The evaluation recommended for MFA to continue funding ICI projects in cases where they have proven to be relevant and effective but to improve the results-based monitoring and reporting. Longer term sustainability should be also enhanced. The MFA should require and support more rigorous initial analysis on ways to integrate the Human rights based approach (HRBA) and Finland's four Cross-Cutting Objectives into ICI project design.

On the level of the entire instrument, the ICI was chosen as a case study in the evaluation of complementarity in Finland's development policy and cooperation.

Complementarity In Finland's development policy and cooperation: case study on complementarity in Institutional Cooperation Instrument (2014).

Four ICI projects were also evaluated in Tanzania in 2020: Final and ex-post evaluation of three ICI projects in Tanzania 2020.

Finnish Meteorological Institute's FNEP project in Nepal has been evaluated twice of which the latest evaluation in 2021, and therefore is not evaluated as part of this evaluation.

2. Rationale, purpose and objectives of the evaluation

The evaluation will provide decision-makers and stakeholders with objective and impartial information that can be used for monitoring accountability, learning and decision-making.

Many of the ICI projects have been on-going for several phases and have never been evaluated. Most of the ICI projects are implemented by three actors; Finnish Meteorological Institute, Geological Survey of Finland and Finnish Environment Institute.

The purpose of the evaluation is to evaluate the projects, based on the OECD DAC evaluation criteria, especially on effectiveness, impact, and sustainability, and identify lessons learnt on the provided support through the Asia ICI programme that can be used for improving the cooperation and provide an input to a more comprehensive evaluation of the development cooperation instrument that will be conducted in the future. The evaluation combines a summative and formative evaluation.

All projects will be assessed according to the OECD evaluation criteria, but given the available resources for the evaluation, only a few selected projects, at least one for each main Finnish institution (Finnish Meteorological Institute, Geological Survey of Finland and Finnish Environment Institute) will be evaluated in a more comprehensive, detailed manner.

At the level of the ICI Asia programme, the key objective of the evaluation is to determine the long-term sustainability and impact of supported capacity building interventions and investments.

With respect to the formative evaluation, the evaluators will also assess if-and how MFA and the ICI-consultant could support ICI projects in a more efficient way. Furthermore, the evaluation will also identify the advantages and disadvantages of implementing separate country level ICI projects versus combined regional level ICI projects as perceived by the involved Finnish institutions. In addition, the evaluators will assess factors, which might not have been considered in the original design of the projects but which are important policy aspects for the Government of Finland, especially if the projects and ICI Asia have leveraged opportunities and market access for Finnish actors and Finnish private sector, and how effective this has been. This includes opportunities for the private sector to access Public Investment Fund (PIF) funding from MFA or prospects for the institutions to access other financing sources in addition to ICI

funding. The evaluation will identify possible other linkages between the ICI projects and other Finnish actors (e.g. universities, CSOs, others) and assess the advantages and disadvantages as perceived by the stakeholders.

3. Issues to be addressed (evaluation questions)

The final evaluation criteria and questions (and the methodology) to best reach these evaluation purposes will be finalised in the inception report of this evaluation, in a participatory process between ASO, the evaluation reference group, and the evaluation team. While the evaluation questions indicate the priority issues under each criterion, the evaluation team will not limit the evaluation to these questions only.
The following evaluation criteria and questions guide this process and reflect what ASO considers priority issues for this evaluation.

Evaluation criteria	Evaluation questions
Relevance	1. How relevant were the projects in view of the capacity development needs of the partner country agencies?
Coherence, Coordination and aid effectiveness	2. To what degree were the projects linked, coordinated, compatible and synergetic with other interventions and agencies in the partner countries? (both Finnish and other development cooperation) 3. To what degree did the partner country agencies have responsibility and ownership of the projects?
Effectiveness	4. How well did the projects reach their objectives? What were the most important results (both intended and unintended)?
Efficiency	5. Were the intended results and processes feasible and cost-effective? Explain why or why not.
Impact and cross-cutting objectives	6. In what ways have the projects affected the work of the partner country agencies? (both in intended and unintended ways, and directly or indirectly related to the developed capacities) 7. What kind of wider impacts have the projects had in relation to other stakeholders and beneficiaries? 8. Did the projects have any impact on the Finnish institutions or private sector in terms of leveraging opportunities?
Sustainability	9. Have the results and capacity in partner country agencies – both in terms of human and technical capacity – been sustainable?

4. Scope of the evaluation

The evaluation will cover the projects and project phases as indicated in the attached table. The evaluation will primarily focus on the current phase of the projects but also take into account previous phases, especially to put questions of effectiveness, sustainability and impact into perspective. The selected projects that will be evaluated in a more comprehensive manner will also analyse the previous phases in

grater detail. The last year to be evaluated is 2024. Based on the project evaluations, lessons learned for the ICI Asia programme will be determined[8].

5. General approach and methodology

The data collection methods and analysis that can respond to these Terms of Reference shall be developed in detail in the inception report.

The evaluation should draw on mixed methods for data collection and analysis (both qualitative and quantitative). The evaluation shall demonstrate how triangulation of methods and multiple information sources are used to substantiate findings and assessments. Whenever applicable, sampling principles and methods for selecting interviewees and/or survey participants and their effect on the reliability and validity of the evaluation must be elaborated clearly and separately.

The approach and working modality of evaluation will be participatory, ensuring the equal and fair inclusion and participation of the full range of evaluation stakeholders, including beneficiaries/rights-holders. This means that, for example during interviews in ICI agencies in Finland and abroad, women, young people, people with disabilities, from different minorities and other groups that could potentially be marginalized or discriminated are equally heard.

It should be noted that part of the material provided by MFA is only available in Finnish. Only MFA-approved secure translation software that ensures and protect the confidentiality of the MFA materials may be used.

As the evaluation is covering several countries and projects, it is foreseen that fieldwork will be conducted partly by national experts and/or international experts residing in the evaluated countries.

In addition to a detailed methodological plan, the inception report will present a work plan and an evaluation matrix. The inception report should also include the construction of a theory of change.

The evaluation must be gender and culturally sensitive and respect the confidentiality, protection of source and dignity of those interviewed.

6. Management of the evaluation

The evaluation is commissioned by ASO, and it will be responsible for the overall management of the evaluation process. ASO will work closely with other units/departments of the MFA and other stakeholders in Finland and abroad.

This evaluation is managed through the Framework Agreement for Decentralized Evaluations and Reviews (FADER).

There will be one Management Team responsible for the overall coordination of the evaluation. This consists of the ASO development policy adviser, the evaluation Team Leader and the FADER Service Coordinator.

A reference group for the evaluation will be established and chaired by ASO. The use of a reference group is a key step in guaranteeing the transparency, accountability and credibility of an evaluation process and plays a crucial role in validating the findings.

The reference group's mandate is to provide advisory support and inputs to the evaluation, e.g. through participating in the planning of the evaluation and commenting on the consultant's deliverables.

The members of the reference group will include: ASO Development policy Advisors, ASO Development cooperation specialists managing the individual projects and KEO Development policy specialist managing ICI Instrument.

The tasks of the reference group are to:

- act as a source of knowledge for the evaluation;
- participate in the planning of the evaluation (providing input to the ToR, identifying key external stakeholders to be consulted during the process etc.);
- participate in the relevant meetings (e.g. start-up meeting, meeting to discuss the evaluation plan, debriefing and validation meetings after the field visits);
- comment on the deliverables of the consultant (i.e. inception report, draft final report, final report) to ensure that the evaluation is based on factual knowledge about the subject of the evaluation

[8] The evaluation does not comprise a comprehensive evaluation of the ICI development cooperation instrument and neither a comparative analysis of different types of development cooperation instruments.

and

- play a key role in disseminating the findings of the evaluation and support the implementation, dissemination and follow-up on the agreed evaluation recommendations.

The evaluation team will be managed by the Team Leader and partly this will take place from distance. The Team Leader will not visit all the countries. This requires careful planning to ensure that a common, consistent approach is used in order to achieve comparability of the data gathered and the approach used in the analysis. The Team Leader will develop a set of clear protocols for the team to use and convene regular online team meetings to discuss the approach. During the process, particular attention should be paid to strong inter-team coordination and information sharing within the team.
The evaluation team is responsible for identifying relevant stakeholders to be interviewed and organising the interviews. The MFA and embassies will not organise these interviews or meetings on behalf of the evaluation team but will assist in identifying people and organisations to be included in the evaluation.
All the deliverables such as inception report, field work plans and final report have to be approved in written by ASO development policy adviser.

7. Evaluation process, timelines and deliverables

The evaluation must result in a draft evaluation report submitted to ASO no later than 1st of February, 2025.

Evaluation phase	Deliverable	Deadline
Start-up	- Team Leader (TL) contracted	20.11.2024
	- Start-up meeting	20.11.2024
	- Team members contracted	20.12.2024
	- Final TOR with evaluation questions and a timeline submitted to ASO	17.12.2024
	- TOR approved by ASO	20.12.2024
Inception phase	- Draft Inception Report submitted to ASO	20.01.2025
	- Inception meeting	27.01.2025
	- Final Inception Report submitted to ASO	29.01.2025
	- Inception report approved by ASO	31.01.2025
Implementation phase	- Data gathering and analysis	03.02.2025-14.03.2025
	- Participatory workshop on recommendations with the reference group (ICI institutions invited)	Mid March
Reporting and dissemination phase	- Draft evaluation report submitted to ASO	31.03.2025
	- Feedback on draft evaluation report received	11.04.2025
	- Final evaluation report submitted to ASO	18.04.2025
	- Final evaluation report published	23.04.2025
	- Dissemination seminar held	24.04.2025

During the entire evaluation process, particular attention should be paid to effective, efficient and pragmatic coordination and information sharing within the team and with the key evaluation stakeholders, especially with the evaluation reference group. Apart from the accelerated initial evaluation phases and the short turnaround times for commenting on draft reports, the evaluation will follow the current MFA and FADER evaluation standards.

8. Quality assurance

The inception report must detail how quality is assured in this evaluation.

9. Expertise required

The evaluation team will consist of:

- 1 international expert, nominated as a Team Leader (FADER level 2)
- 1 additional international expert (FADER level 3)
- 1 emerging evaluator (FADER level 4)
- 1 local expert in each country (FADER level 5)

The expertise requirements for the Team Leader are:

- FADER minimum requirements for level 3
- Expertise focused on at least one of below sectors:
    - Public sector development and capacity building
    - Natural resources and climate change
    - Economic, social and environmental sustainability

The expertise requirements for the evaluation team members are:

- FADER level 3 minimum requirements
- Experience and familiarity with Finnish development policy and cooperation
- Strong knowledge of substance:
    - Climate and climate change
    - Air quality
    - Meteorology and hydrology
    - Geology
- Expertise focused on:
    - Public sector development and capacity building
    - Public-private partnerships
    - Inter-institutional support
    - Science and technology
    - Natural resources and climate change
    - Economic, social and environmental sustainability

10. Budget

The estimated cost of this evaluation will be a maximum of 200 000[€] (VAT excluded).

11. Mandate

The evaluation team is entitled and expected to discuss matters relevant to this evaluation with pertinent persons and organisations. However, it is not authorised to make any commitments on behalf of the Government of Finland or the Ministry. The evaluation team does not represent the Ministry for Foreign Affairs of Finland in any capacity.

All intellectual property rights to the result of the Service referred to in the Contract will be the exclusive property of the Ministry, including the right to make modifications and hand over material to a third party. The Ministry may publish the end result under Creative Commons license in order to promote openness and public use of evaluation results.

Annex 1:

Projects to be evaluated

Finnish Meteorological Institute				Uzbekistan	Tajikistan	Kyrgyzstan	Vietnam	Nepal	Indonesia	cooperation first started
FUME FMI-Uzhydromet Meteorology Project	2022-2025	2 000 000 EUR	66700713	x						2011 (FINUZ)
FINTAJ III Finnish-Tajikistan Meteorology Project, Phase III	2023-2026	1 000 000 EUR	67102208		x					2014
Promoting Modernisation of Air Quality Observation and Management Systems in Urban areas of Vietnma PROMOAIR	2020-2024	600 000 EUR	76909199				x			2020 first phase
Promoting Modernisation of Hydrometeorological Services in Vietnam PROMOSERV 3	2019-2024	650 000 EUR	76909174				x			2010 phase I started
Enhancing BMKG Capacity on Weather Climate and Air Quality Forecast and Warnings to Better Serve the Indonesian Society (INDFIN)	2023-2025	500 000 EUR	73804481						x	2023 first phase

Geological Survey of Finland

Strengthening the Mastering of Natural Resources for National Welfare in the Kyrgyz Republic, Phase II	2020-2024	905 000 EUR	67302618			x				2011 (WEI, Wider Europe Initiative Kazakhstan, Kyrgyzstan and Tajikistan)
Strengthening the Mastering of Natural Resources for National Welfare in Uzbekistan	2022-2024	1 100 000 EUR	66700714	x						2021 (part of WEI planning but did not join in the end)
Managed aquifer recharge to ensure sustainable groundwater availability and quality under ongoing climate	2018-2023	600 000 EUR	76909175				x			2011

change and fast economic development in Vietnam- VierMAR										
Towards Arsenic Safe Groundwater in Nepal	2020-2024	650 194 EUR Joint project with SYKE with total budget of 1 M EUR	66014288					x		2019

Finnish Environment Institute (SYKE)

Development of Tajik surface Water Monitoring by Quality Management and Collaboration (TJK Water quality II)	2020-2025	750 000 EUR	67302627		x					2011 FinnWaterWEI
Consolidating institutional capacities for national surface water quality monitoring in the Kyrgyz Republic (KGZ-Water III)	2021-2024	850 000 EUR	67302627			x				2011 FinnWaterWEI
Towards arsenic Safe Groundwater in Nepal	2020-2024	349 806 EUR Joint project with GTK with total budget of 1 M EUR	66014288					x		2019

Natural Resource Institute Finland (LUKE)

Capacity building for value chains of wood products industries in Vietnam	2020-2024	450 000 EUR	76909208				x			2019

Annex 2: Evaluation framework

The evaluation matrix is framed for project level evaluation and therefore the questions refer to a single project. The findings were aggregated for analysis at ICI level.

Evaluation Question	Indicators (judgement criteria)	Data collection methods
Relevance		
1. To what extent is the project aligned with- and responds to the development objectives/priorities of the partner country?	a) Extent to which the project objectives are in line with policy priorities of the partner country government	• Review of project documents • Review of country development policies • Interviews with government (parent level) and partner institution representatives
2. To what extent is the project aligned with- and responds to the development policies of MFA Finland (including HRBA and CCOs, and more recently benefits for Finnish actors)?	a) Degree to which the project responds to Finland's development policies and integrate HRBA and CCO strategies in the project design. b) Extent to which collaboration opportunities with other Finnish actors are integrated in the project design and strategy.	• Review of project documents. • Review of Finland's development policies. • Interviews with MFA regional staff, embassies ICI FCs and institutions. • Interviews and FGDs with partner institutions.
3. To what extent does the project respond to the conditions and capacity development needs of the partner agency?	a) Extent to which the project matches with partner capacity development needs assessments and plans (or if absent capacity needs as perceived by partner executives).Extent and quality of capacity needs identification process before and during implementation.	• Review of project documents. • Review of partner capacity building plans and project documentation, including self-assessments. • Interviews with Finnish and country partner managers and relevant staff, and MFA and ICI FCs. • Optional (if feasible), survey amongst trained staff.
4. To what extent is the project design coherent and are the objectives and the intervention approach logically structured within the Results-Based Management Framework?	a) Quality of conceptual design, especially RBMF vertical and horizontal logic and intervention strategies to attain the objectives.	• Review of project documents. • Review of RBMF and overall project design. • Interviews with MFA ICI FCs, Finnish and partner institution managers.
Coherence, coordination and Aid effectiveness		
5. How coherent is the project with the Country Programme and other MFA supported initiatives, and other Finnish interventions and agencies in the partner countries?	a) Extent to which project objectives are in line with- or directly reflected in the Country Programmes. b) Linkages, mechanisms of coordination and degree of compatibility with other Finnish supported initiatives, relevant to the intervention.	• Review of project documents. • Review of Country programmes and project documents. • Interviews with MFA regional staff, embassies ICI FCs and ICI institutions.

Evaluation Question	Indicators (judgement criteria)	Data collection methods
		• If feasible, interviews with other Finnish institutions and supported projects executives.
6. How coherent is the project with other initiatives, e.g. linkages, coordination, compatibility and synergy with other relevant interventions and agencies in the partner countries?	a) Linkages, mechanisms of coordination and degree of compatibility with other initiatives (not supported by Finland), relevant to the intervention.	• Review of project documents. • Interviews with other donor agencies, coordination networks and relevant institutions. • Interviews with MFA regional staff, embassies ICI FCs and ICI institutions.
7. To what degree do the partner country agencies and higher-level authorities and decision-makers have responsibility and ownership of the projects?	a) Level of influence of partner institution in the design and implementation of the project. b) Level of knowledge of the project and support by managers and higher-level decision-makers (parent institutions/ ministry).	• Review of project documents and plans. • Interviews with MFA, embassies ICI FCs and ICI institutions. • Interviews with partner institution management and technical staff. • (If feasible) interviews with higher-level authorities (parent institution).
Efficiency		
8. What is the progress against the work plan target and time schedule (implementation progress)?	a) Compliance with- and degree of deviations from the work plan: time schedule (delays), costs (inputs and resources), level of achievement of outputs.	• Review of annual plans and progress reports. • Review of self-assessments. • Interviews with Finnish institution and partner institution management.
9. To what extent are the results and processes feasible and cost-effective?	a) Balance between resources used/costs involved and 'value' of outputs (value for money).	• Review of progress reports, physical outputs and financial reports. • Interview with Finnish institution and partner institution management.
10. To what extent is the project well managed and are M&E systems and risk analysis processes adequately designed and implemented?	a) Amount and type of facilitation and support provided by MFA and ICI FC. b) Management processes put in place (including stakeholder/board meetings) and degree of implementation. c) Quality of M&E system (including baseline and outcome measurements). d) Quality of risk management framework and degree of implementation of measures to	• Review of project materials and reports. • Interviews with MFA regional staff, embassies, ICI FCs and ICI institutions. • Review of self-assessments. • Review of M&E system and outputs. • Review of risk management materials.

Evaluation Question	Indicators (judgement criteria)	Data collection methods
	mitigate environmental and other risks.	
Effectiveness		
11. What are the main results (planned and unplanned) and to what extent have capacity strengthening efforts been adopted and contributed to the provision of improved services?	a) Main achievements reported and as perceived by institutions and extent to which they match the expectations. b) Quality of capacity development provided as perceived by partner institution. c) Level of adoption/application of taught knowledge and skills by partner professional staff. d) Changes in the partner institution's performance, way of working (including approach to gender equality and reduction of inequalities) and quality of services as a result of the project.	• Review of ICI project materials and reports. • Interview with Finnish institution project managers. • Interviews and FGDs with partner institution management and trained staff. • Review of self-assessments. • (If feasible) survey with trained staff.
Sustainability		
12. How sustainable are the results and approaches, in terms of institutional, technical, human and financial capacities, socio-economic conditions, governance and environmental/ climate resilience risks and potential trade-offs?	a) Staff turnover rate and measures taken to retain and transfer knowledge and skills gained during the project within the institution. b) Degree of institutionalisation of new skills into partner institution's work routine and extent to which strengthened competencies and systems are still operational, supported and used. c) Arrangements with other stakeholders for continued implementation and up-scaling. d) Level of recognition and support of higher level (parent institution) decision makers, including financial arrangements to sustain project results (e.g. operational costs, maintenance and replacement of equipment, and implementation of strengthened skills and systems). e) Key factors enabling or inhibiting sustainability.	• Review of project documents. • Review of partner agency materials: admin/human resources/finance, MoUs/contracts, annual work plans and progress reports, and communication. • Interviews with Finnish and partner agency management, Human Resources and trained staff. • Review of self-assessments. • (If feasible) interviews with higher-level authorities (parent institution).
Impact		
13. In what ways has the project affected the work of partner country agencies both directly and indirectly, including intended and unintended effects, with regard to developed capacities, (incl. human rights, gender equality,	a) Changes in the partner institution's demand of services related to the project, and overall recognition of its expertise. b) Degree of increased coordination and up-scaling of project-related interventions and outputs.	• Review of partner agency reports. • Interviews with Finnish and partner agency management, and trained staff. • (If feasible) interviews with higher-level authorities (parent institution).

Evaluation Question	Indicators (judgement criteria)	Data collection methods
reduction of inequalities, climate resilience, and low-emission development)?		• Interviews with relevant other national or international organisations.
14. What are the wider (indicative) impacts of the project on other stakeholders and beneficiaries in the partner country including aspects of HRBA and CCOs?	a) Contribution of the partner institution's services and products to the country's development benefits (including HRBA, climate resilience and low emission development related aspects).	• Interviews with MFA regional staff, embassies, ICI FCs and ICI institutions. • (If feasible) interviews with higher-level authorities (parent institution) and main users of the partner agency's services. • Interviews with relevant other national or international organisations.
15. To what extent did the project have an impact on the Finnish institutions or Finnish private sector in terms of leveraging business opportunities and other linkages?	a) Arrangements and contracts of the partner institution with other Finnish actors and the private sector for the purchase of equipment or provision of specific services. b) Extent to which the projects leveraged other business or market opportunities for Finnish institutions and private sector.	• Review of project reports and partner institution materials. • Interviews with MFA regional staff, embassies, ICI FCs and ICI institutions. • Interviews with Finnish institutions and companies.

Annex 3: Findings of previous evaluations

A number of ICI-related evaluations have been commissioned by MFA[9]. Although these evaluations had different focus areas, they all integrated an assessment of the results of the selected ICI projects, and also analysed the lessons learned of the ICI as a development cooperation instrument. The evaluation team reviewed the following evaluations:

- *Complementarity in Finland's Development Policy and Co-operation – A Case Study on Complementarity in the Institutional Co-operation Instrument (Bäck et al., 2014).* The objective of this case study was to evaluate the ICI, and specifically to assess its complementarity with other aspects of Finland's development co-operation.
- *Mid-Term Evaluation Finland's Development Cooperation in Eastern Europe and Central Asia, 2014-2017. Wider Europe Initiative, Phase II (WEI-II), (Olesen et al., 2016).* The objective was to provide evidence of the performance of the WEI -II that was implemented in the Kyrgyz republic and Tajikistan under the Green Economy Partnership Programme and Democracy Support Projects. ICI was one of the implementation channels.
- *Final evaluation of three Institutional Cooperation Instrument projects in Vietnam (Danish Management A/S, 2018).* The purpose of this evaluation was to provide objective information to MFA about the effectiveness, efficiency and sustainability of ICI projects, and to give guidance on the use of this instrument in the transition phase in Vietnam from bilateral development cooperation to wider commercial, political and cultural relations.
- *Final and ex-post Evaluation of three Institutional Cooperation Projects in Tanzania (Caldecott et al., 2020).* The evaluation intended to inform MFA of the lessons learned and the potential role of ICI projects in the Country Strategy for Tanzania 2020-2024.
- *Evaluation of ICI Projects in Afghanistan, Bhutan, India, and Nepal (Palenberg et al., 2021).* The objective was to obtain evidence-based information on the results of five ICI projects and to learn and inform decisions about ongoing and similar future projects.

The findings and recommendations of these evaluations are summarised in the following sections, except for the Tanzanian evaluation, which is considered least relevant for this evaluation and the Asian context.

The comparison of the findings of the evaluations is complicated by the fact that the evaluation studies used different evaluation criteria and even the OECD-DAC evaluation criteria were not consistently interpreted. In addition, the structure of the reports, especially with respect to conclusions, lessons and recommendations varied substantially. In order to be able to compare the results, the findings were somewhat re-arranged to fit the evaluation criteria used in this evaluation. Some of the findings of especially the earlier evaluations might not be entirely applicable anymore. The main findings of each evaluation are described in the following sub-chapter.

Main findings of previous evaluations

The evaluations can be analysed from two interrelated angles, e.g. the project level, and the ICI development cooperation instrument level.

- The project level evaluation focuses on the analysis of the OECD-DAC evaluation criteria and the lessons that are particular for those projects (and contexts).
- The ICI level analysis focuses on the ICI programme set-up and implementation—complementarity with other development cooperation instruments, efficiency and cost-effectiveness of the planning, facilitation, and management approach, and relative strengths and weaknesses.

[9] In addition, the evaluation reviewed the *Evaluation on Development Cooperation Carried Out by the Department for Russia, Eastern Europe, and Central Asia, including the Wider Europe Initiative (Webber, et al., 2021) and* the study *Participation of Finnish Public Sector Institutions in the Implementation of Development Policy and Cooperation: Opportunities and challenges (Uusikylä et al., 2023)*.

Project level findings

Relevance: The ICI projects responded well to the needs of the partner institutions and relevant partner country priorities and policies, although their contribution was for most projects expected to be limited due to their small size, short duration and relatively technical nature. They were also aligned to Finland's development policies, but the ICI support was not always integrated in the Country Programmes/Strategies. In terms of design, many ICI projects did not sufficiently take into consideration the broader organisational and political context, did not undertake a proper stakeholder- and/or risk analysis, or had some weaknesses in their conceptual design (RBMF). Apart from climate sustainability, CCOs and HRBA were mostly not mainstreamed in the projects.

Coherence and Aid effectiveness: No duplication of efforts was found between the ICI projects in the evaluated countries, and the ICI approach is complementary to other instruments. However, there has been limited interaction between the ICI projects and with other forms of Finnish development cooperation. The interaction and synergies with other development cooperation initiatives varied but was generally limited. Overall, ownership at the partner institutions is high but weak at the higher parent (ministerial/decision-making) level and with other stakeholders. The complementarity study considered the relationship between Finnish agencies and partner organisations somewhat unbalanced in terms of decision-making processes and perception of the partner institution's role.

Efficiency: The evaluations found that the projects have used their limited resources efficiently, which can be partly attributed to the fact that the interventions focused on specific technical support activities, which are relatively easy to manage. The collaboration with ICI partners has been smooth. Staff from the Finnish agencies were recognised for their technical and scientific expertise and also demonstrated didactic skills and motivation. Some ICI projects struggled initially because of lack of inter-cultural awareness and insufficient understanding of the situation at the partner country agency and its operating context. In addition, projects had some issues with the project planning and design process and experienced inadequate country-specific support. The facilitation by the ICI consultant was good but the role was considered (too) limited and staff rotation in MFA and other factors affected the continuity and consistency in project administration, supervision and instructions. All evaluations mentioned that despite improvements over time, M&E, reporting and information management remained relatively weak. Evidence-based M&E of results was hampered by a lack of baselines and emphasis being put on administrative and budgetary aspects.

Effectiveness: ICI projects were generally effective in terms of expected outputs and achieved targets and contributed to strengthened competencies and job performance of, however, a relatively small group of targeted specialists in the partner country agencies. Due to weak M&E and lack of a clear institutional analysis, results at the outcome level in terms of organisational and institutional changes and effects were not well documented. Some projects struggled with the short project duration of only up to three years. Projects in fragile contexts showed lower performance.

Impact: The evaluations concluded that ICI projects were strong in terms of strengthening technical capacities and research systems but found less convincing evidence on the wider development impact. Through the provision of strengthened basic services by the supported agency for which there is sustained demand, the projects contributed indirectly to wider impact, but on the other hand, due to the small interventions and short time span of the projects the impact was also considered relatively limited. In Vietnam, due to prevailing risks, the impacts were said to be largely unachieved. With respect to CCOs and HRBA, the effects are considered very limited as these aspects were not mainstreamed in the design. Several projects are likely to indirectly contribute to climate resilience, and to a lesser extent low-emission development.

Sustainability: The evaluations showed mixed findings. Although trained staff and institutions continued to apply their new skills and tools, the sustainability of new or improved systems varied due to staff changes and issues of organisational setup and management, including ownership at the higher (ministerial) level. Factors that reportedly drive sustainability are the continued existence of a rather small group of trained

specialists and the degree of support they have within the partner country agencies, longer projects with continued priority, and sense of ownership at the higher levels.

Relevant lessons and recommendations for ICI Asia instrument level

Based on the above listed findings the following lessons can be drawn for the ICI Asia:

4. The ICI approach is **relevant** to the needs of the partner institutions, the partner country's priorities and Finland's development cooperation policies. However, the contributions of the ICI projects are relatively small and in terms of design several weaknesses are detected. The following improvements are suggested by the evaluations:
    a) Better risk- and stakeholder analysis and consideration of the broader organisational and political context that will contribute to embedding the support in the institutional set-up and increased ownership and support at the higher levels.
    b) Improved risk analysis and conceptual strategic design, including the RBMF.
    c) Better integration of CCOs and HRBA in the project design.
    d) Improved linkages and integration in the Country Programmes.
5. In terms of **coherence and aid effectiveness**, there is no duplication between ICI projects, but improved interaction and synergies with other Finnish development instruments and other donors' supported initiatives should be pursued, as well as involvement of the higher senior decision-making level and other stakeholders to increase ownership.
6. Although **efficiency** of the projects is relatively good, the facilitation process by MFA can be improved to ensure that project planning and design are adequately conducted and well aligned with the country-specific context. The evaluations rated the facilitation by the ICI consultant to be good but considered that his/her role could be enlarged. Improvements of information systems and M&E are needed, especially regarding the analysis of outcomes.
7. **Effectiveness** is good with respect to achievement of specific outputs and targets, but not clear at outcome level. Through improved conceptual design, M&E (including baselines) and institutional analysis, the effects at institutional level must be better measured.
8. Through the provision of strengthened basic services the projects contribute to wider **impact**. But due to the small interventions and short timespan the expectations should be realistic. Although many projects are likely to contribute to climate resilience, in general CCOs and HRBA are not mainstreamed, and the impact in those areas remains limited.
9. **Sustainability** can be improved by supporting longer-term projects with continued priority, and by creating a sense of ownership at the higher levels.

One of the emerging questions of this evaluation was also to assess the extent to which the ICI has leveraged opportunities for Finnish actors for other funding sources and has supported market access of the Finnish private sector. The evaluations provided some examples of this in terms of companies providing equipment or specific services.

Evaluation criteria	Complementarity in Finland's Development Policy and Cooperation (2014)	Mid-term Review WEI, Phase II Kyrgyzstan and Tajikistan (2016)	Final evaluation of three ICI projects in Vietnam (2018)	Evaluation of ICI Projects in Afghanistan, Bhutan, India, and Nepal (2021)
Relevance The extent to which the programme is consistent with- and responds to the partner's needs, country priorities and Finland's policies.	ICI projects responded to needs of partner organisations and sectors that were national priorities in the recipient countries. But their contribution in recipient countries was limited due to the small size, short duration and relatively technical nature.	The programme was found highly relevant in relation to government priorities in the target countries and to the needs of the beneficiaries (although in an indirect manner), as well as to the objectives of Finland's development policies.	The ICI projects responded well to the needs of the partner institutions and relevant Vietnamese policies and strategies. They also supported the Country Strategy for Development Cooperation with Vietnam.	The projects responded to capacity development needs of the partner country agencies and had convincing rationales linking them to development objectives of the partner countries and Finland's development policy. The projects also responded to the external context of the projects.
Adequacy of design, strategizing the objectives and issues logically in the intervention approach.	Many ICI projects did not sufficiently take into consideration the broader organisational and political context. Factors that would favour or hinder the uptake of the capacity development efforts were not sufficiently considered. CCOs mostly focused on environment and climate sustainability. HRBA was considered important, but partner organisations were hesitant to take them on due to lack of political support, resources and expertise.	The WEI-II programme strategy is not fully serving its purpose. Theories of Change with explicit programme/project strategies and well-underpinned causal relations and realistic assumptions should be applied at programme level and included in project documents.	No adequate attention was paid to proper stakeholder assessments and risk analysis. Apart from climate sustainability, CCOs and HRBA were not mainstreamed in the projects. Evidence of any socio-cultural analysis that could have informed the project design on HRBA, gender equality, and non-discrimination was not found.	The HRBA and CCOs were not mainstreamed in project design.
Coherence and aid effectiveness Coherence with Country Programme and other MFA support (internal).	The ICI acted largely in isolation from other forms of Finnish development cooperation and was not integrated in the Country Strategy Plans.	The projects complement other relevant donor-funded projects. They are based on previous regional projects in Central Asia, have simple but flexible management and cooperation	The ICI projects were in line with the Country Strategy. Overlapping of ICI projects has been avoided but there has been very limited interaction between them or other MFA support.	No duplication of efforts was found in any of the five projects.

		arrangements and pursue clear and relatively practical targets.		
Coherence and coordination with other initiatives (external)	ICI established good links with multilateral cooperation but was limited with other bilateral assistance and triangular cooperation.	There has been some collaboration with other donor-funded projects. But regional coordination has been difficult.	The involvement of Vietnamese and international stakeholders was not very effective.	Three projects sought and realised synergies with other efforts but also suffered lost opportunities
Aid effectiveness. Implementation of commitments to promote ownership, alignment, mutual accountability, harmonisation, and management for development results	The relationship between Finnish agencies and partner organisations was somewhat unbalanced. Although needs and priorities of partner organisations were taken into consideration, most of the decision-making was performed in Finland. Partner organisations appeared as recipients of external technical assistance that did not reflect their active role in the implementation.	The projects strengthen aid effectiveness through strong national ownership and active collaboration with other relevant WEI-II projects and other donors' projects/ programmes.	Ownership of the partner institutions is high but weak at the higher parent (ministerial) level (senior officials) and with other relevant stakeholders.	Overall, projects were designed, managed, and governed with strong participation and ownership from the partner country agencies. Lasting partnerships were established. But ownership at higher-level was limited in some cases as executives in the ministry made decisions without consulting the project.
Efficiency. Have the activities transformed the available resources into the intended results in an economical and timely manner? Quality of management and administrative arrangements.	No data at project level to assess cost-effectiveness. MFA staff viewed the costs to be high. At ICI level: guidance was improved but not sufficiently practical and user-friendly. FC was cost-effective, but largely underutilised. M&E, reporting and information management were weak. The reports had emphasis on administrative and budgetary aspects.	The ICI modality is relatively efficient in securing consistent capacity building between peer institutions with similar professional profiles and mandates. Capacity building has advanced largely as planned. Some delays were encountered which affected implementation and the procurement process of equipment and materials. Staff turnover also caused delays even although this had been identified as a potential risk early on. The UN (United Nations) projects have	The projects have used their limited resources efficiently and collaboration with ICI partners has been smooth. But insufficient resources were allocated to the preparation/mobilisation of new cooperation, especially for country-specific support. The ICI consultant's support was good but the role is limited and staff rotation in MFA and other factors affected the continuity and consistency in project administration, supervision and instructions. Programmatic accountability and learning are	Staff from the Finnish agencies were recognised for their technical and scientific expertise and also demonstrated didactic skills and motivation. Some ICI projects struggled initially because of lacking inter-cultural awareness and know-how and of insufficient understanding of the situation at the partner country agency and its operating context. All projects had to adapt their planned activities—and some of their objectives—because needs and circumstances at the partner country agencies changed during implementation. ICI project reporting

		lower overheads and fee rates than ICI projects. MFA programme management has worked well including support by ICI consultant. However, ongoing reduction of the involved staff in Helsinki and Astana is a cause of concern.	limited because of few self-evaluations and external evaluations.	was detailed regarding activities but lacked reliable baselines and evidence-based M&E of results. The arrangements do not fully exploit the potential for learning.
Effectiveness. To what extent have the outputs and direct effects furthered the achievement of the project purpose (outcome).	ICI projects were effective in terms of expected outputs, with little deviation from their initially intended timeline and budget amendments. Results at the outcome level in terms of organisational and institutional changes and effects were not well documented (and not clearly planned in the project document, which lacked a clear assessment of the existing institutional capacity and an indication of how the newly acquired skills (and equipment) were likely to be imbedded in the existing institutional setup and ultimately improve performance).	Overall, the Green Economy ICI projects (meteorology, geology and water management) have performed well. Implementation is smooth, the main objective, capacity building, has advanced largely as planned.	The projects achieved good results—most of the expected (though partly loosely defined) results as well as some impressive unintended results. ICI is considered a useful instrument for internationalisation by the Finnish institutions but, so far, only FMI—together with Vaisala—have been successful to develop further business in Vietnam.	All projects reached their direct ICI targets and contributed to significantly strengthened competencies and job performance of, however, a relatively small group of targeted specialists in the partner country agency. The projects also contributed to new and improved systems. Some projects struggled with the short project duration of only up to three years. Chances for success of ICI projects are lower in fragile contexts.
Impact. Contribution (positive or negative) to higher level, potentially transformative effects	ICI projects were strong in terms of strengthening technical capacities and research systems, but less convincing on how broader capacity development was to be achieved. There was evidence that many ICI partner organisations served the public	At the mid-term stage, impact prospects appear promising for most WEI-II projects. As a side-benefit for Finland, the ICI projects, have created visible Finnish presence in, and increased Finnish knowledge about, the Central Asian sub-	Despite the positive results, due to the limited scope and limited direct contacts with the Vietnamese society, some risks prevail and wider impacts remain unachieved	Three projects showed plausible contributions to increased agency performance and indirectly also to development impacts because they helped to strengthen the basic services of partner country agencies for which there was sustained demand and support.

	well but impact is limited due to small interventions and short timespan of the projects.	region, part of the larger neighbouring Eurasian Region.		
CCOs and HRBA	Cross-cutting themes and objectives that were addressed related mainly to the environment and climate sustainability as many ICI projects were implemented in these sectors.	Are well covered when relevant. Gender equality was actively pursued but it is difficult to assess to what extent gender balance in numbers (e.g. course and study tour participants) is translated into equal opportunity in practice. The same applies to equal opportunity for the poor. The Green Economy ICI projects all support climate sustainability.	The projects have (selectively) promoted CCOs (mostly climate resilience) but commitment of some key stakeholders was not strong.	The HRBA and CCOs were not mainstreamed in project design, and no significant contributions to gender equality or non-discrimination are expected by any project. Three projects are likely to indirectly contribute to climate resilience, and one to low-emission development.
Sustainability. The extent to which the achievements are likely to be continued, based on financial, economic, social, environmental, and institutional capacities	Favourable factors: partner organisations usually provided their own human and financial resources and have relative staff stability. But many ICI projects were not adequately embedded in the organisational setup and management of partner organisations.	This depends on adequate financing of the counterpart institutions to maintain improved service capacities. Problems in recruiting competent staff and limited resources to maintain the new equipment is a challenge. Securing additional funding from the government is unlikely, and most project partner institutions aspire to raise incomes by selling products and services. Despite these challenges, the sustainability prospects appear relatively good since the projects involve vital public sector institutions.	The increased capacities of the partner institutions are sustainable with few individuals leaving their jobs and the institutions applying the new skills and tools in other assignments. But ownership at the ministerial level and among other stakeholders is less evident and prevailing risks might affect the sustainability.	In most partner agencies, the core group of trained professionals was still operational but smaller in size and at risk of further attrition. The sustainability of new or improved systems varies and is in some cases limited, and continued support is required to keep them operational. Sustained agency performance seemed more likely for longer projects and when reflecting a continued priority in the partner country. The primary factor driving sustainability is the continued existence of a rather small group of trained specialists and the degree of support they have within the partner country agencies.

Annex 4: Case study: Syke – TJK Water Quality II

Development of Tajik surface Water Monitoring by Quality Management and Collaboration

Project title	Development of Tajik surface Water Monitoring by Quality Management and Collaboration (TJK Water Quality II)
Country	Tajikistan
Finnish institution	The Finnish Environment Institute
Duration	1.7.2021–30.6.2025
Budget	EUR 750,390
Partner institution(s)	The Committee of Environmental Protection (CEP) and two laboratories under it: Laboratory for Central Agency for Pollution Control (CAC) and Surface Water Laboratory of the State Agency for Hydrometeorology (Hydromet laboratory).
Impact	Tajik authorities use reliable surface water monitoring data in national and international reporting and in informing citizens
Outcome	Beneficiary organisations' laboratories analyse surface water quality according to ISO 17025 and provide improved access to and availability of water quality information for decision-makers and general public.
Outputs	1. Beneficiary organisations produce and distribute more reliable surface water monitoring data on selected parameters according to ISO 17025. 2. Beneficiary organisations apply new management practices and collaborate actively between each other. 3. Beneficiary organisations provide more comprehensive surface water quality data input and access to the data for end-users and other core stakeholders. 4. Beneficiary organisations provide as well as facilitate understanding of improved surface water quality information and its significance to stakeholders and general public.
Previous projects/phases (title, duration, main focus)	Capacity building on surface water quality monitoring in Tajikistan, 2015–2018 (as part of FinWaterWEI II). The purpose of the project was to increase the capacity of the two laboratories (CAC and Hydromet laboratory) that they will be able to carry out water quality monitoring in line with the international monitoring standards. The worked focused on increasing monitoring capacities on the five key parameters.
Remarks	The project was originally planned to end in 2023, but it started when the COVID-19 pandemic was still on-going and the travel restrictions in 2021 and 2022 caused delays in the project implementation. In addition, there were also sick leaves of key persons in both partner institutions which caused further postponements of planned missions and work. Therefore, in June 2023, the project requested a non-cost extension of the project duration until 30 June 2025, and the MFA accepted this in October 2023.

Relevance	
EQ1. To what extent is the project aligned with–and responds to the development objectives/priorities of the partner country?	
a) Extent to which the project objectives are in line with policy priorities of the partner country government	Sources used: National Development Strategy of the Republic of Tajikistan for the period till 2030; The National Water Strategy of the Republic of Tajikistan for the period up to 2040.

- The project focus on capacity development for water quality monitoring is assessed as highly relevant within Tajikistan's development goals, as outlined in both the National Development Strategy of the Republic of Tajikistan for the period until 2030 and the National Water Strategy of the Republic of Tajikistan for the period up to 2040.
- By enhancing the country's ability to monitor water quality effectively, the project directly contributes to Goal 5 of Tajikistan's National Development Strategy, which aims to ensure sustainable management of natural resources, including water. Through advanced monitoring techniques and related training, the project empowers local institutions and personnel to collect accurate data on water, and thus, is particularly aligned with Objective 5.2 for improving environmental monitoring and reporting systems. The project also strengthens compliance with national and international standards, ensuring that water resources across Tajikistan meet health and environmental regulations.
- The project directly aligns with Chapter 4 of Tajikistan's National Water Strategy, emphasising the establishment of robust state monitoring systems. By enhancing technical capacities (Chapter 5) and promoting compliance with health and environmental standards (Chapter 7), the project facilitates informed decision-making in water management. It also contributes to Chapter 8's objectives of improving policy frameworks and governance structures, fostering long-term sustainability in water resource management practices (Chapter 6). By equipping stakeholders with essential skills, the project enhances institutional resilience and governance in water management, promoting

public health and environmental integrity and laying a foundation for continued advancements in water quality monitoring and management in Tajikistan.	
EQ2. To what extent is the project aligned with–and responds to the development policies of MFA Finland (including HRBA and CCOs, and more recently benefits for Finnish actors)?	
a) Degree to which the project responds to Finland's development policies and integrate HRBA and CCO strategies in the project design.	Sources used: Government Report to Parliament on Finland's development policy (2016); Report on Development Policy Across Parliamentary Terms (2021); Theories of Change and Aggregated Indicators for Finland's Development Policy (2023).
• The project was designed and planned, as well as mainly implemented, under the previous development policy guidelines (MFA, 2016 & 2021a) and ICI Manual (2012 v.7), and it is well in line with the policy priorities "climate change, biodiversity and sustainable management and use of natural resources" (MFA, 2021a). This Priority Area includes e.g. sustainable management, use and protection of water resources as well as access to sustainable use of safe and affordable drinking water and improvements in sanitation and hygiene. • MFA Finland's Theory of Change for the Priority Area "Climate and Natural Resources" includes two outcome areas related to water; Outcome 1 (forests and biodiversity) covers sustainable management and use of water bodies, and Outcome 5 focuses on drinking water and sanitation services. Outcome 5 is particularly relevant to the targets of the Sustainable Development Goal 6, and this project contributes to its target 6.3. Improve water quality, wastewater treatment and safe reuse. • The project document discusses human rights (right to water) and a HRBA (gender equality, non-discrimination, accountability, transparency), identifying that it strengthens the capacities of Tajik authorities (duty-bearers) in surface water monitoring and in producing reliable environmental data to ensure sustainable and safe management of surface water bodies and well-being of citizens (rights-holders). Issues of accountability and transparency are especially linked to the project's Output 4 (communication and sharing information). In addition, linkages between water quality monitoring and climate resilience, as well as low emissions development (emissions in surface waters) are highlighted. These issues are followed up in the progress reports, and gender disaggregated data is provided. Furthermore, the project carried out a gender equality survey in 2024 (see EQ14).	
b) Extent to which collaboration opportunities with other Finnish actors are integrated in the project design and strategy.	Sources used: Project document; Stakeholder interviews/FGD in Finland.
• The project document states that the plan is to seek synergies in capacity development for field work and data management with GTK's ICI project. This joint capacity building in sampling is expected to benefit Tajikistan in meeting national requirements of reporting to the International Atomic Energy Agency. • FMI's FINTAJ project is also implemented in Tajikistan, and FMI's partner institution is Tajikhydromet. Syke's other key laboratory partner is the Surface Water Laboratory, which is part of Tajikhydromet. The project document does not mention FMI's FINTAJ project, probably because synergies with its activities, unlike with GTK's, were not identified. • Other Finnish actors, such as the private sector are not mentioned in the project document, but the project was designed and planned before the current development policy guideline that emphasises benefits for Finnish actors.	
EQ3. To what extent does the project respond to the conditions and capacity development needs of the partner agency?	
a) Extent to which project matches with partner capacity development needs assessments and plans (or if absent capacity needs as perceived by partner executives).	Sources used: Stakeholder interviews/FGD in Finland and Uzbekistan; Progress reports.
• The project utilised the information and experience gained during the previous phase of the project. The first phase of the project started with a needs assessment, preceded by a fact-finding mission. • For the preparation of the second phase of the project, Syke conducted a mission to Tajikistan in 2019. During this mission, there were several meetings with the CEP and the two key laboratories to discuss their needs. A local consultant supported the process, which was important due to the language barriers. Other donors were also met during the visit, confirming the message presented by CEP and the laboratories: surface water quality monitoring and related capacities had received little attention, revealing a clear niche for the theme. • The first Finnish expert mission to Tajikistan—after the easing of COVID-19 related travel restrictions—aimed to compile timely information on the situation within the partner institutions. The condition of the laboratories was assessed and the suitability of Hydromet's new laboratory building for chemical and microbiological work was audited. During the mission, next steps of the project and main activities were discussed and mutually agreed. • According to the interviewees, the project responded well to the needs by providing laboratory equipment and capacity development.	

EQ4. To what extent is the project design coherent and are the objectives and the intervention approach logically structured within the Results-Based Management Framework?	
a) Quality of conceptual design, especially RBMF vertical and horizontal logic and intervention strategies to attain the objectives.	Sources used: Project document; Results-based framework; Progress reports.
• The results framework is well developed, with relatively clear outputs, outcome and impact. The expected results were set at a fairly realistic level, considering the results achieved in the previous project, although some of them have also turned out to be quite ambitious (e.g. communication and sharing information). • The RBMF includes both quantitative and qualitative indicators, with baseline and target values established. Progress toward the target values have been monitored and reported.	
Coherence and aid effectiveness	
EQ5. How coherent is the project with the Country Programme and other MFA supported initiatives, and other Finnish interventions and agencies in the partner countries?	
a) Extent to which project objectives are in line with–or directly reflected in the Country Programmes.	Sources used: Finland's Country Strategy for the Central Asian Countries of Kyrgyzstan, Tajikistan and Uzbekistan 2021–2024 (2021); Finland's Country Programme for the Central Asian Countries of Kyrgyzstan, Tajikistan and Uzbekistan 2021–2024 (2021).
• The project is very well in line with the Central Asian Country Strategy and Country Programme (2021–2024). The Country Programme includes the Outcome "enhancing the capacity of environmental administration to monitor and assess natural resources", which also covers the quality of surface water. Syke's water projects in Tajikistan and Kyrgyzstan are directly mentioned as inputs to the Country Programme.	
b) Linkages, mechanisms of coordination and degree of compatibility with other Finnish supported initiatives, relevant to the intervention.	Sources used: Project document; Stakeholder interviews/FGD in Finland.
• As mentioned earlier (see EQ2), the synergies in capacity development for fieldwork and data management with GTK's ICI project were planned. However, this plan did not materialise, as GTK's project was not implemented. • As discussed earlier (see EQ2), FMI's FINTAJ project was not mentioned in Syke's project document. However, it was mentioned in the interviews that FMI's and Syke's experts have had discussions about the cooperation with Tajikhydromet. • Related to the private sector actors, based on experiences from the previous project phase, it was concluded that both partner laboratories should use devices which can be maintained and serviced by local companies.	
EQ6. How coherent is the project with other initiatives, e.g. linkages, coordination, compatibility and synergy with other relevant interventions and agencies in the partner countries?	
a) Linkages, mechanisms of coordination and degree of compatibility with other initiatives (not supported by Finland), relevant to the intervention.	Sources used: Stakeholder interviews/FGD in Finland and Tajikistan; EU4SustinableCenralAsia–fact sheet; Website on Green Central Asia/Climate sensitive water resources management; Website on National Water Resources Management Tajikistan (FDFA/SDC).
• According to the interviews, in Tajikistan the focus of many projects has been on drinking water, while considerably less attention has been paid to surface water or groundwater, although these are also closely interconnected. • GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) has been and continues to be actively engaged in supporting regional cooperation in Central Asia. In 2020–2024, it launched the Green Central Asia Initiative (funded by the German Federal Ministry for Economic Cooperation and Development and Swiss Agency for Development and Cooperation. The initiative focused on dialogue related to climate, environment and security, and resulted in a Regional Joint Action Plan, which includes e.g. projects on climate-sensitive water and climate risk management. • The Climate Sensitive Water Management project (2023–2027), implemented by GIZ, focuses on climate-sensitive, integrated water resources management, international water law, and water diplomacy in Central Asian countries, including Tajikistan. It also provides support to improved water quality monitoring, especially through analysing methods that countries can use to monitor their groundwater.[10] A component of this project is also the Multi-Donor Action EU4SustainableCentralAsia: Joint Action and Coordination on Water, Energy and Climate change 2024–2028 (co-financed by EU and the German Federal Ministry for Economic Cooperation and Development). • The Swiss Agency for Development and Cooperation is currently implementing the third phase of the National Water Resources Management Tajikistan project (2022–2026) in the Syr Darya river basin, focusing on improving rural livelihoods through efficient and integrated management of water resources. • Syke's and CEP's ICI project has engaged in discussions and information sharing with the above-mentioned donors and other projects, but not direct cooperation, largely due to limited opportunities, since all projects were already on-going with their own plans and results set. It seems that there has been no overlap, since the ICI project maintained a clear focus on surface water monitoring. • During the evaluation mission's visit in Tajikistan, it was noted that GIZ had very recently provided Tajikhydromet's central laboratory with a device for hydrobiological measurements. The ICI project has also supported the central	

[10] See https://www.giz.de/en/worldwide/131936.html

laboratories in taking their first steps in hydrobiological measurements (e.g. through a visit to Uzbekistan). GIZ is also planning to deliver mobile laboratories (vans) for the regions next summer, at least to support shallow water and groundwater monitoring.

EQ7. To what degree do the partner country agencies and higher-level authorities and decision-makers have responsibility and ownership of the projects?

a)	Level of influence of partner institution in the design and implementation of the project.	Sources used: Stakeholder interviews/FGD in Finland and Tajikistan; Progress reports.

- As discussed earlier (see EQ3), during both the first and second phase of the project, discussions about the needs were held with the CEP and the two laboratories. Stakeholder interviews confirmed that the representatives from the CEP, heads of the laboratories, and department heads were involved in these discussions.
- Information on various needs seem to have been collected quite regularly during implementation. For example, interviews with central and local laboratories to identify and prioritise needs (including required skills) were conducted using a questionnaire during the first expert mission. Additionally, needs assessment were carried out, for instance related to the metal analyser, information and communication technology (ICT), and laboratory utensils for both central and local laboratories.
- The development of the water quality database—which was created during the first phase and further developed during the second phase—included several rounds of feedback from laboratory staff. Suggested improvements were taken into account when updating the database.
- Study tours on hydrobiological methods to Uzbekistan, i.e. peer learning from a neighbouring country was suggested by the partner institutions. The first tour was conducted in November 2023, and the second is planned for spring 2025.

b)	Level of knowledge of the project and support by managers and higher-level decision-makers (parent institutions/ ministry).	Sources used: Stakeholder interviews in Tajikistan.

- Although there have been some changes in management (e.g. the current Director of the CAC started two years ago), they were well acquainted with the project.
- At the beginning of the first phase, the management was especially interested in and emphasised the need for laboratory equipment and utensils, but they quite quickly came to appreciate the value of capacity development.
- In the interviews, it was clearly stated that both the equipment and capacity development were highly appreciated. It was mentioned that while other projects had provided some equipment, they had not included capacity development, making the project's approach new for them.
- It is noted that one of the key persons at the management level (a Focal Point), the First Deputy Director of the CEP, could not be interviewed, because she left her position just a couple of weeks before the evaluation mission visited Tajikistan.

Efficiency

EQ8. What is the progress against the work plan target and time schedule (implementation progress)?

a)	Compliance with–and degree of deviations from the work plan: time schedule (delays), costs (inputs and resources), level of achievement of outputs.	Sources used: Progress reports; Stakeholder interviews/FGD in Tajikistan and Finland.

- The project started when the COVID-19 pandemic was still ongoing, and related travel restrictions in 2021 and 2022 caused delays in implementation. The first expert mission to Tajikistan was only possible in June 2022. In addition, procurement processes took more time than expected due to the embargo caused by the Russian invasion of Ukraine, as well as the high inflation rate in Tajikistan. In autumn 2022, a high number of Russians fled to Tajikistan, causing a severe shortage of hotel accommodation and high prices of flight tickets between Tajikistan and European countries, which led to the postponement of the planned expert mission until spring 2023.
- Especially at the beginning of the project, the partner institution also confused the ICI project with a technical assistance project, which caused some misunderstandings in the implementation process, until a better understanding of the project's nature was established.
- In spring 2023, expert missions were postponed due to unforeseen commitments by CEP and sick leave among key personnel in both partner institutions. The mission to Uzbekistan was postponed from spring to autumn due to organisational changes in Uzbekistan.
- Due to the delays in implementation, the project requested a non-cost extension of its duration until June 2025 in June 2023, and MFA accepted this request in October 2023.
- According to the latest progress report (the progress until November 2024), none of the four outputs have yet been fully achieved. There are altogether 17 targets under the outputs, of which nine targets had reached at least 80% or more (three targets had been fully reached, and one of them clearly exceeded its target set). Three target values remained below 50% level.
- Although it is difficult to assess how well the project can progress during its last months of implementation, it is likely that not all outputs will be achieved. Challenges have included the limited participation of local laboratory staff in database development and in training, which affects the achievement of Outputs 1 and 3. Achieving Output 3 (focused on the database) depends on resolving a server-related issue. There have been several attempts to keep the database operational under CEP's server, but it was moved back in spring 2024 to the server of the ICT service

provider. As of mid-February 2025, during the evaluation mission to Tajikistan, it was still hosted on the ICT service provider's server. There have also been challenges related to the Output 4 (providing water quality information to stakeholders and public). For example, setting up web pages sharing water quality information has not found to be as relevant as initially foreseen in the planning phase.

EQ9. To what extent are the results and processes feasible and cost-effective?

a) Balance between resources used/costs involved and 'value' of outputs (value for money).	Sources used: Progress reports; ICI Manual (2023).

- According to the last progress report (June–November 2024), the total budget was reduced EUR 23 791 due to under spending in 2023 (the unused funds could no longer be transferred to 2024).
- Until the end of November 2024, the project had spent 82% (EUR 592 232,61) of its total budget. The major part (52%) of the budget has been used for the fees of Finnish experts. Around six Finnish experts have been regularly and a few more occasionally involved in the implementation of the project.
- The total costs allocated to capacity development so far amount to around 57% of all costs, while the partner institutions' share (study tours, equipment, and administration) is 22%. The subcontracting costs (interpretation services, local coordinator, and ICT consultant services) form 8% of the total costs.
- The cost-effectiveness at this point is assessed to be at satisfactory level keeping in mind that there is still implementation time left.
- The cost structure is well in line with the current ICI project's budget rules (2023), where at least 60% of costs should focus on capacity building, and the costs directly benefitting the partner country should be at minimum 20% of the total costs, and subcontracting costs should not be more than 15%.

EQ10. To what extent is the project well managed and are M&E systems and risk analysis processes adequately designed and implemented?

a) Amount and type of facilitation and support provided by MFA and ICI FC.	Sources used: Stakeholder interviews/FGD in Finland.

- The project has received support from the MFA and ICI facilitators (e.g. related to the RBMF), and this support was considered important and valuable.
- The ICI manual was updated and the ICI facilitator also changed during the implementation, which meant that the project needed to be implemented in a kind of "hybrid mode", i.e. some issues according to the old instructions and some according to the new ones. In addition, MFA's Desk Officer responsible for monitoring the project has changed several times during the project's implementation.

b) Management processes put in place (including stakeholder/board meetings) and degree of implementation.	Sources used: Stakeholder interviews/FGD in Finland and Tajikistan; Progress reports.

- The project has a local consultant acting as a liaison officer/coordinator. This support has turned out to be even more important than initially considered, since the first focal point/coordinator at CEP had health problems leading to their non-attendance in the project. Furthermore, the next focal point had many other tasks due to her position as the First Deputy Director at CEP.
- The MoU between the partners define that the project board should meet one or two times per year or on demand. The board meetings have taken place as agreed. The kick-off meeting and the first project board meeting were hold on-line due to the COVID-19 pandemic in December 2021. Since the pandemic restricted the project implementation also in 2022 (first exert mission to Tajikistan took place in June 2022), the second board meeting took place in November 2022 in Helsinki (linked with the study tour to Finland). In 2023 and 2024, two board meetings per year were held, either as hybrid or on-line meetings. The latest board meeting took place online in January 2025.
- In the third board meeting it was agreed that there would be monthly online meetings between the implementing partners. However, in practice, only a few of these meetings took place. There were frequent last-minute cancellations and scheduling problems on the Tajik side to due to high-level urgent requests. The project coordinator/liaison officer has had regular weekly meetings with the Syke team.

c) Quality of M&E system (including baseline and outcome measurements).	Sources used: Project document; Progress reports.

- The RBMF includes both quantitative and qualitative indicators, the baseline and target values have been established and progress towards the targets monitored.
- The level of achievement of indicators has been reported in the bi-annual progress reports. The reports provide a cumulative target value as a percentage for each of the indicator in its summary table. Additionally, annual targets and their status as percentages, as well as short explanations for the percentages, are also provided. Although the scoring system used (percentages) to assess indicator achievement is an estimate, it seems to be used logically and quite realistically across the progress reports.

d) Quality of risk management framework and degree of implementation of measures to mitigate environmental and other risks.	Sources used: Project document; Progress reports.

- A risk assessment was conducted, and the risk assessment table was included in the project document. The progress reports have regularly discussed the risks, e.g. if there were signs that a risk might materialise and what kind of mitigation actions had been taken. In addition, the risk table has also been updated.

Effectiveness

EQ11. What are the main results (planned and unplanned) and to what extent have capacity strengthening efforts been adopted and contributed to the provision of improved services?

a) Main achievements reported and as perceived by institutions and extent to which they match the expectations.	Sources used: Progress reports; Stakeholder interviews/FGD in Finland and Tajikistan.

- Receiving laboratory equipment and utilises (e.g. metal analyses instruments, pH meters, spectrophotometer, pipettes etc.) and strengthening knowledge and skills of laboratory staff to use provided equipment for water quality analyses following international level standards (ISO 17025), as well as the resulting improved performance in services were strongly emphasised as the main achievements in the interviews.
- As discussed earlier (see EQ8), none of the four outputs have been fully achieved yet. Out of the 17 targets under the outputs, nine targets had reached at least 80% or more.

Output 1 Producing and distributing surface water monitoring data:

- Central laboratories have made good progress (80% of the target value reached) towards applying ISO principles. The trained experts can act as trainer of trainers (ToTs) for local laboratories, which is needed to reach the target of enabling selected local laboratories to apply ISO principles. Good progress has also been made related to the target that the quality assurance of current metal analyses is in use.
- ToTs for carrying out measuring of five basic parameters has been completed, and the target that these measurements would be in use at 1–2 local and central laboratories is close to be reached. The latest progress report notes that there are some uncertainties if the field meters are yet in use in the local laboratories. The evaluators were not able to visit local laboratories, but according to the discussion at the central level and phone interviews to regions (Khujand, Tursunzoda) the received meters, such as pH meters, are in use. For example, in the case of Khujand, they are reporting monthly to Hydromet and using international standards in the process.
- The project has exceeded its target regarding metal analyses of surface water. Originally the target was to assess the related needs and create a plan for how these specific needs would be addressed. In addition to these targets, the project has been able to procure the metal analysers and provide the needed training.
- The project is close to reach its target related to hydrobiological analyses (i.e. recognising specific needs, preparing a plan to meet these, and benchmarking with methods used in Uzbekistan). In discussions with stakeholders in Dushanbe, the peer learning opportunities with Uzbekistan were appreciated. However, it was also mentioned that if the Uzbekistan side does not receive any funding for the capacity strengthening, they are providing, they may be less motivated to provide further support.

Output 2 Applying new management practices and collaboration:

- Management level trainings, including participants from three local laboratories, have been provided (e.g. on chemistry quality assurance procedures, management procedures in accordance with ISO 17025). The chemistry quality assurance training also included participants from the National University of Tajikistan (e.g. Faculties of Biology, Chemistry, and Medicine). In addition, the results of the gender equality survey were presented and discussed at the management seminar. To achieve the targets related to management procedures, some further discussions and guidance (e.g. on audits, and communication) are likely needed.
- The documentation of the quality management system (preparing standard operating procedures (SOP)) has not progressed as fast as expected, and discussions on this issue were ongoing during the evaluation mission's visit in February.

Output 3 Surface water quality database:

- The database for surface water quality was developed with the support of an ICT service provider during the previous project phase. It has been further developed during the second phase, incorporating feedback from users.
- When visiting the central laboratories and discussing about the use of the database, at least four staff members of Hydromet's laboratory were entering the data into the database. Staff at CAC have also been entering data, but they have faced challenges: due to staff turnover, not all staff members possess the needed knowledge and skills to use the database, and the laboratory has encountered problems with internet access. Some local laboratories have received training on the database, and the computers needed, but they are not able to use the database yet due to a lack of internet connections.
- There have been several attempts to keep the database operational on CEP's server, but it was moved back in spring 2024 to the server of the ICT service provider. As of mid-February 2025, during the evaluation mission to Tajikistan, it remained hosted by the ICT service provider. Based on discussions with stakeholders in Tajikistan, the database has been updated, but the reasons for its operational problems under CEP's server remained unclear, for instance whether due to technical or security-related matters requiring additional work from CEP's side.
- Thus, while good progress has been made related to this output, achieving it fully will require resolving the server and internet access issues.

Output 4 Communication on surface water quality:

- The output has progressed especially during the year 2024. The environmental communication workshop in Dushanbe was organised as well as the side event at the 3rd Dushanbe Water Decade Conference (including the preparation of brochure and roll-ups). The communication workshop also included students and young volunteers. A draft of the communication plan for promoting public awareness on surface water quality has been prepared and discussed.
- In stakeholder interviews conducted in both Finland and Tajikistan, this output was identified as relatively challenging. Due to changes in CEP management, the communication component was not emphasised during implementation as much as it had been during the planning phase of the project. Surface water quality issues are not very well known among stakeholders, including journalists, and there is varied understanding of what is meant by surface water quality. Since the issue is not that familiar, more awareness raising and capacity strengthening were reported to be needed e.g. among journalists. Surface water quality also involves some sensitive issues (e.g. revealing that quality of water might not be at a good level; or tracking and verifying sources of water pollutants), and therefore, publishing publicly available information is a complex task.
- The project also includes a target to set-up webpages for sharing water quality monitoring information. However, this has turned out to be less relevant as initially envisaged during the planning phase, since webpages are not considered as an effective means of communication due to lack of internet access by many citizens. Social media would have been a more effective channel, but this would have required alternative formats for presenting information and additional resources..
- Therefore, it is assessed that even though progress has been made under this output (and activities will continue until the end of the project) it is very likely that the output will not be fully achieved.

b)	Quality of capacity development provided as perceived by partner institution.	Sources used: Stakeholder interviews/FGD in Tajikistan.

- The participants both at the management and technical levels were highly satisfied with the quality of the capacity development. The training events were seen as highly relevant and valuable, and Finnish trainers as dedicated, high-level experts who provided support also outside of training events (e.g. through video calls). The support provided by the local coordinator/liaison officer was also appreciated. Moreover, it was also mentioned that when the interpretation services have been needed, the interpreter has been very good. In addition, the study tours to both Finland and Uzbekistan were considered very useful, since they provided insightful information on how processes—such as sampling and analysis—are carried out in those countries.
- It was also mentioned that additional capacity development would be needed, especially considering the local laboratories, where staff turnover was mentioned to be higher compared to central ones. There are no training institutes who currently provide this type of professional training for technical staff, as provided by the project. Needs related to the communication and sharing the information on water quality monitoring were also mentioned.

c)	Level of adoption/application of taught knowledge and skills by partner professional staff.	Sources used: Progress reports; Stakeholder interviews/FGD in Tajikistan; Observations during the evaluation mission.

- The received equipment (such as the metal analyser, the spectrophotometer, etc.) are in use for water quality analyses based on the progress reports as well as the evaluators' visits to the central laboratories and discussions with staff. For example, the person nominated as responsible for metal analyses showed and explained the use of the analyser. Staff noted that international standards (ISO) are followed in the monitoring process. The technical staff of both laboratories were also confident in their ability to train others, including the evaluator, in the use of the received new equipment ("we might not be able to use the full potential of all equipment, but we are able to teach what has been taught for us"). Some processes are still underway, for instance, at CAC, the new pH meter had been received and was awaiting calibration. In addition, the spectrophotometer is in use, but not yet connected to a computer.
- The evaluation mission did not visit the local laboratories but based on phone discussions with the laboratories in Khujand and Tursunzoda, they were regularly using the equipment received and related knowledge and skills.
- The database seemed to be in use in Hydromet's laboratory (it was shown to the evaluators, and the roles were explained—technical staff entered the data, and the head of the department, who had the administrative rights, accepted and forwarded the data). In the CAC laboratory, it was reported that the database has some technical problems which have not yet been solved, and as a result, it is currently not in use. They also reported problems with internet access.

d)	Changes in the partner institution's performance, way of working (including approach to gender equality and reduction of inequalities) and quality of services as a result of the project.	Sources used: Stakeholder interviews/FGD in Tajikistan.

- Several interviewees, representing technical staff and management level, stated that the capacity development has clearly improved their performance in surface water quality monitoring. It was mentioned that their knowledge and skills now meet international standards level, referring to ISO 17025. This marks a clear change, since before they used old Soviet-era equipment and procedures.

- It was discussed that CEP, which has a role in controlling the protection of water recourses, needs information and evidence from the laboratories to demonstrate possible violations of standards and for imposing sanctions on polluters. As an example, the CAC laboratory described a case in which they were able to identify the source of emissions, determining that the amount of damage was around one million somoni (around EUR 83 000).
- It was also mentioned that it is important that CEP can now rely on the results of the analyses, i.e. information and evidence provided are more reliable.
- Changes related to gender equality and reduction of inequalities did not come up in the discussions.

Sustainability

EQ12. How sustainable are the results and approaches, in terms of institutional, technical, human and financial capacities, socio-economic conditions, governance and environmental/ climate resilience risks and potential trade-offs?

a) Staff turnover rate and measures taken to retain and transfer knowledge and skills gained during the project within the institution	Sources used: Completion report of the project's first phase; Progress reports, Stakeholder interviews/FGD in Tajikistan; Observations during the evaluation mission.

- There have been changes in personnel at all levels—including technical staff in the laboratories, the head of the CAC laboratory, and within in CEP. These changes have been highlighted in the project reports. The completion report of the first phase notes the need to repeat some training due to staff turnover in the laboratory, and the progress reports of the second phase also mention the personnel changes, especially in the local laboratories and within CEP. The same information was raised in interviews, e.g. the focal point of the project in CEP has changed five times during the phase I and II (the latest change in February 2025).
- In the interviews, it was mentioned that trained technical staff are capable of training new staff members. However, it was also noted that having a next phase of the project would be important since it could provide further training especially for local laboratories.
- It was noted that the current project has tried to include the representatives from local laboratories and has succeeded some extent. However, in some cases these laboratories have not received an invitation letter from CEP, and thus, have not been able to participate in the training events.
- Having the standard operation procedures (SOPs) and laboratory audition reports are supported by the project, but the progress has been slower than expected. It was observed, however, that at least the provided equipment seem to include written guidance of their use.

b) Degree of institutionalisation of new skills into partner institution's work routine and extent to which strengthened competencies and systems are still operational, supported and used.	Sources used: Stakeholder interviews/FGD in Tajikistan; Progress reports.

- As mentioned earlier (see EQ11) the new skills and equipment are in use in the routines established within the laboratories. As also discussed earlier, staff turnover has impacted the institutionalisation of these improvements. The project aims to prepare central laboratories for ISO 17025 accreditation and the establishment of elements such as standard operational procedures will support the institutionalisation of the new skills.
- Although several interviewees mentioned that now the systems are close to, or they are already following, international standards (referring to ISO), a couple of interviewees also pointed out that ISO 17025 is not yet formally accepted in Tajikistan, and most of the other laboratories use other standards.

c) Arrangements with other stakeholders for continued implementation and up-scaling.	Sources used: Stakeholder interviews/FGD in Tajikistan.

- Arrangements with other stakeholders did not come up much. During the visit to the Hydromet laboratory, they showed a recently received mobile device for water quality testing (including e.g. hydrobiological, photometer, turbidity measurement options, and software to store and analyse the data). The equipment had been provided by GIZ, and the online training was organised in March 2025. There were no participants from the CAC laboratory in that training (however, it was not clear if they have received a similar device).

d) Level of recognition and support of higher level (parent institution) decision makers, including financial arrangements to sustain project results (e.g. operational costs, maintenance and replacement of equipment, and implementation of strengthened skills and systems)	Sources used: Stakeholder interviews in Tajikistan/FGD and Finland.

- The importance of the project and the appreciation of the results—such as improved performance of laboratories in surface water quality management—were highlighted in the interviews. However, remains uncertain whether CEP will provide enough resources for the laboratories, for example, to buy the necessary chemicals and reagents for analyses after the project has ended. The project itself has also requested that budget allocations be made for the laboratories. The situation is more challenging for the CAC laboratory.
- In the case of the database, it remained unclear why hosting it on CEP's server has been so challenging. The evaluation mission got the impression that it is probably not only a question about the technical problems—such as security concerns, which can be solved but may require additional work from CEP's side—but also question about CEP's commitment. There have been discussions that CEP would have a person responsible for the database, who would use the information provided by the database, for instance, for reporting. This has not yet taken place. During the interviews it was noted that using the data requires understanding of the different parameters included

in the database, and it might be that CEP requires more processed or analysed information rather than just raw parameters.	
e) Key factors enabling or inhibiting sustainability.	Sources used: Stakeholder interviews/FGD in Finland and Tajikistan, Progress reports; President of Tajikistan's webpage; 3trend news agency's webpage.

Factors enabling sustainability:

- The project has used a local consultant as a coordinator/liaison officer, whose support for implementation has been important. The first consultant started in the beginning of the first phase implementation, and continued until autumn 2024, thus having a long-term perspective on cooperation between the institutions. In addition, she could also provide practical support for the laboratories.
- The project has used experts which have been fluent in Russian language, enabling them to train partners without an interpreter. Additionally, when using an interpreter, the quality of interpretations was reported to be very good. However, it was noted that it is also important to get some materials in Tajik language, even though the terms used in the laboratories are usually derived from Russian language.
- The project has also emphasised cooperation between laboratories. There are some signs of increased cooperation, e.g. the CAC laboratory on its own initiative provided an extra spectrophotometer training session for the Hydromet laboratory. In addition, technical staff from the laboratories mentioned that they can consult each other in case they have questions or challenges they cannot resolve on their own.
- The procurement of laboratory equipment that can be maintained and repaired by local service providers has also been a focus.

Factors inhibiting/ slowing down sustainability:

- Staff turnover in both central and local laboratories means that new staff members need to be trained. The project has trained trainers, and this was acknowledged in interviews. However, several interviewees also noted the need to continue the project to provide further capacity development. It was also noted that, due to low salaries, technical staff often leave if they find better-paid jobs. Most of the technical staff' are women, since men are expected to be able to earn enough to support their families—for example, one male staff member was also working as a school-teacher.
- There has also been staff turnover at the management level, especially within CEP. New personnel are not necessarily aware of the issues related to surface water monitoring and resources needed for such monitoring.
- In general, IT skills in Tajikistan are low. The project has supported to some extent capacity development also in this area, since the data from the equipment is usually transferred to computers, requiring basic skills in tools like Excel.
- It was mentioned that having more technical staff with backgrounds in chemistry, biology, or ecology would support the monitoring processes.
- Surface water quality monitoring can include sensitive issues, such as identifying sources of emissions. It was noted, that from the beginning of 2025, a presidential decree declared a moratorium on all types of inspections of business entities until January 1, 2027[11]. According to interviews, laboratories are still able to monitor the quality of surface water, but they can no longer carry out control visits to companies without obtaining official permission. Although such moratoria are not new in Tajikistan, this highlights the context in which surface water monitoring takes place.
- It was also noted that working conditions in the two central laboratories are very different. The Hydromet laboratory now works in the new building with good conditions. The CAC laboratory in turn, operates in a very old building, which also affects the type of analyses that can be carried out. The project has, for example, provided an air conditioner which is used during wintertime to warm up the laboratory space, so that the staff are able to work there.

Impact

EQ13. In what ways has the project affected the work of partner country agencies both directly and indirectly, including intended and unintended effects, with regard to developed capacities, (incl. human rights, gender equality, reduction of inequalities, climate resilience, and low-emission development)?

a) Changes in the partner institution's demand of services related to the project, and overall recognition of its expertise.	Sources used: Stakeholder interviews/FGD in Finland and Tajikistan.

- As discussed earlier (EQ11d), improved water quality monitoring is appreciated and needed for CEP to effectively control the protection of water resources. For example, the CAC laboratory has shown that it is able to carry out analyses in a reliable and effective way, such as identifying a source of emissions.
- It is noted that the CAC laboratory cannot provide commercial services, as this would present a conflict of interest related to its current role. Hydromet also has a role to provide services for the public sector but, to some extent, tis permitted to provide services for other actors.

[11] See https://www.president.tj/event/news/49449, https://en.trend.az/casia/tajikistan/4003944.html.

b) Degree of increased coordination and up-scaling of project-related interventions and outputs.	Sources used: Progress reports; Stakeholder interviews/FGD in Tajikistan.
• The CAC laboratory, on its own initiative, provided extra spectrophotometer training session for the Hydromet laboratory. In addition, the technical staff of the laboratories mentioned that they can consult each other in case they have questions or challenges they cannot resolve on their own. • There are regional working groups discussing monitoring issues, and people who have been involved in the project, are actively participating and responding to the questions raised in these discussions.	
EQ14. What are the wider (indicative) impacts of the project on other stakeholders and beneficiaries in the partner country including aspects of HRBA and CCOs?	
a) Contribution of the partner institution's services and products to the country's development benefits (including HRBA, climate resilience and low emission development related aspects).	Sources used: Stakeholder interviews/FGD in Finland and Tajikistan; Mining and Metallurgical Forum and Exhibition, Tajikistan's webpage; World Resource Institute's website.
• Being able to provide reliable surface water monitoring data and information is essential in the context of Tajikistan, where, for example, the mining industry is an important sector.[12] The mining sector, and especially critical minerals, are important in tackling climate change, but it also impacts water supplies.[13] • The project carried out a gender equality analysis, and the results were discussed in the management seminar and in the board meeting. Gender equality was considered well implemented in the project activities and in the organisations taking part in the project. It also turned out that the partner institutions have a specific procedure for processing disputes, so called dispute resolution mechanism, but this was not widely recognised. While it is difficult to assess definitively, the project may have created more awareness on gender equality and the dispute resolution mechanism.	
EQ15. To what extent did the project have an impact on the Finnish institutions or Finnish private sector in terms of leveraging business opportunities and other linkages?	
a) Arrangements and contracts of the partner institution with other Finnish actors and the private sector for the purchase of equipment or provision of specific services.	Sources used: Stakeholder interviews/FGD in Tajikistan and Finland.
• No arrangements or contracts with Finnish actors/private sector for purchasing equipment or specific services were identified. • It is noted that Hydromet is also cooperating with FMI and has connections to Vaisala, but this cooperation relates to meteorological services.	
b) Extent to which the projects leveraged other business or market opportunities for Finnish institutions and private sector.	Sources used: Stakeholder interviews/FGD in Tajikistan and Finland.
• It is noted that consideration of business opportunities was not included when designing and planning the project. • When preparing the purchase of the metal analyser, the project considered the possibility of buying it from Finland, but the idea was abandoned due to the technical specifications and maintenance requirements. • The project has avoided to purchase too high-tech devices which cannot be maintained in Tajikistan. Finnish solutions and products are often too advanced, if they have not been developed for the context of developing countries.	

[12] See https://miningmetalstj.com/en/news/tajikistan-s-mining-industry-surges-with-18-growth-in-early-2024/.

[13] See https://www.wri.org/insights/critical-minerals-mining-water-impacts.

Annex 5: Case study: FMI – PROMOSERV III

Promoting Modernization of Hydrometeorological Services in Viet Nam

Project title	Promoting Modernization of Hydrometeorological Services in Viet Nam, phase III (PROMOSERV III)
Country	Vietnam
Finnish institution	Finnish Meteorological Institute
Duration	2019–2024
Budget	EUR 650,000
Partner institution(s)	Viet Nam Meteorological and Hydrological Administration (VNMHA)
Impact	Improved weather- and weather-related safety and commercial services to Vietnamese stakeholders and society at large
Outcome	Improved capacity of VNMHA to fully utilize new, major investments and to deliver weather, weather related safety and commercial services
Outputs	1. Enhanced weather- and weather-related safety services of VNMHA 2. Increased customer-oriented services of VNMHA 3. Improved institutional management capacity and processes of VNMHA
Previous projects/phases (title, duration, main focus)	**Promoting Modernisation of Hydrometeorological Services in Viet Nam (PROMOSERV)** **Phase I** (2010–2012), with an objective of "increased capacity of the National Hydro-Meteorological Service in the reduction of natural disaster risks and adaptation to climate change of the Vietnamese society" was among the first ICI projects launched when the ICI instrument was introduced. It was also one of the first donor-funded initiatives for the partner institution. Phase I was technical, and focused on introducing modern meteorological tools, weather radar technologies, and early warning services, as well as aimed to build foundational capacity to strengthen NHMS's (National Hydro-Meteorological Service of Vietnam) forecasting and climate adaptation capabilities. At the time, the partner institution's work was manual, and they operated only a few radars from different companies that could not integrate or share data. Phase I played a crucial role in establishing a working relationship between FMI and the partner institution and laid the groundwork for Vaisala's concessional credit (CC) project. The objective of **phase II** (2013–2016) was "increased capacity of the NHMS to produce new and improved weather services and products to public and private user and utilise currently existing infrastructure more efficiently." It built upon the progress of phase I, enhancing NHMS's ability to deliver new and improved weather services and products for both public and private users. It further strengthened NHMS's service delivery capacity, upgraded observation technologies and data management systems, and introduced advanced tools such as a national lightning detection network and the SmartMet forecasting software. Notably, phase II incorporated a gender perspective by organising NHMS's first gender equality workshop—which was described as a success. Due to overly ambitious planning within the Vietnamese context, a non-cost extension was granted to allow the completion of planned activities.
Remarks	The name of the local partner has changed a few times during the years since PROMOSERV I. During phase I and II, the partner institution was called the National Hydro-Meteorological Service of Vietnam (NHMS). During phase III, the partner's name was Meteorological and Hydrological Administration of Viet Nam (VNMHA). PROMOSERV III mainly worked with the forecasting centre of VNMHA, the National Centre for Hydrological and Meteorological Forecasting (NCHMF).

Relevance	
EQ1. To what extent is the project aligned with–and responds to the development objectives/priorities of the partner country?	
b) Extent to which the project objectives are in line with policy priorities of the partner country government	Sources used: Law on Meteorology and Hydrology, Vietnam; The Strategy for the Development of Vietnam's Meteorology and Hydrology Sector until 2030, with a Vision for 2045; National Strategy for Climate Change (2022).

- The PROMOSERV III project outcome and outputs are highly relevant to the national policies outlined in the "Law on Hydrometeorology" and the "Development Strategy of Hydrometeorology Sector in Vietnam". The strategy focuses on strengthening institutional and policy frameworks, modernising observation and forecasting systems, and improving data management. It aims at promoting the commercialisation of meteorological and hydrological services, enhancing human resource capacity through scientific advancements and international cooperation, and increasing public awareness and engagement in meteorological and hydrological issues.
  - SmartMet contributes to the achievement of the forecasting and warning targets under the strategy, e.g. by improving daily weather forecast reliability and enhancing storm and flood forecasting capabilities. Additionally, through its capability to visualise weather phenomena, it contributes to the achievement of the communication targets under the strategy.
- The project also contributes to the "National Strategy for Climate Change" that underscores the critical role of weather forecasting and early warning systems in reducing damage from natural disasters and extreme weather events driven by climate change. It calls for significant investment in modernising and expanding meteorological, hydrological, and disaster monitoring networks and technologies.

EQ2. To what extent is the project aligned with–and responds to the development policies of MFA Finland (including HRBA and CCOs, and more recently benefits for Finnish actors)?	
c) Degree to which the project responds to Finland's development policies and integrate HRBA and CCO strategies in the project design.	Sources used: Government Report to Parliament on Finland's development policy (2016); Report on Development Policy Across Parliamentary Terms (2021); Theories of Change and Aggregated Indicators for Finland's Development Policy (2021 & 2023); Report on International Economic Relations and Development Cooperation (2024); Finnish Institute of International Affairs climate briefing webinar; Ministry for Foreign Affairs' statement to quality board.

- The objectives were in line with Finland's development policy 2016, most directly with its Priority Area 4 "Food security and access to water and energy have improved, and natural resources are used sustainably", by improving weather forecast capacities in Vietnam that can improve food security. Although designed before, the project also complied with the following policy (MFA, 2021a) which highlighted the commitment to reducing vulnerability to extreme weather and natural disasters. It emphasised weather and climate services, along with early warning systems, as essential tools for strengthening preparedness, crisis resilience, and adaptive capacity. It encouraged leveraging Finland's expertise and international experience to support these goals.
- MFA's Theory of Change (2020 and 2023) Outcome Area 3 "Vulnerability of all people to extreme weather events and natural disasters has decreased and their resilience to them increased" was also reflected. Specifically, the project supported the achievement of Outputs 1) "Partner countries' capacity to generate effective and timely weather and climate services and early warnings has improved"; and 2) "The capacity of individuals and communities to prepare for and to take early action under the threat of extreme weather events and natural disasters has improved".
- In line with the current policy, "Report on International Economic Relations and Development Cooperation" (2024), the project contributed to Vietnam's preparedness for extreme weather events and highlighted Finland's expertise in early warning systems for weather, reinforcing its reputation as a leading provider of high-tech solutions and strengthening its global profile.
- The project was human rights sensitive, as it applied human rights principles in process but did not have explicit rights-related objectives. By enhancing the capacity of the VNMHA to provide essential public services, it aimed at indirect positive contribution to the human rights of Vietnamese population.
- The project design fully integrated the Finnish CCO of climate resilience, as enhancing Vietnam's weather and climate services was a core objective. Gender equality was considered through a gender equality workshop (the workshop was first held successfully in PROMOSERV II), encouraging women's participation into project activities and collecting gender disaggregated monitoring data. Non-discrimination and the reduction of inequalities were acknowledged in the design, primarily through the intention to improve access to weather information that will be crucial for vulnerable populations but received the least explicit focus.

a) Extent to which collaboration opportunities with other Finnish actors are integrated in the project design and strategy.	Sources used: Stakeholder interviews/FGD in Finland; Project document; Progress reports; Evaluation on ICI Vietnam (2018); Completion report.

- PROMOSERV III project plan maintained its focus on fostering collaboration with the Finnish private sector by promoting Finnish technology and expertise. The ICI Vietnam (2018) evaluation found that the weather services of NHMS to end-users located in flood-prone areas needed further development, as customer satisfaction surveyed in 2017 indicated high dissatisfaction. The project aimed to establish new partnerships, notably by introducing a Finnish company ICEYE's satellite flood mapping capabilities to Vietnamese authorities—directly addressing the need raised by the customer satisfaction survey. However, these plans did not materialise due to COVID-19 (more details in EQ 8a, 15b).

EQ3. To what extent does the project respond to the conditions and capacity development needs of the partner agency?

b) Extent to which project matches with partner capacity development needs assessments and plans (or if absent capacity needs as perceived by partner executives).	Sources used: Evaluation on ICI Vietnam (2018); Stakeholder interviews/FGD in Finland and Vietnam; Project document.

- The evaluation confirmed the findings of the 2018 Final Evaluation of ICI projects in Vietnam, highlighting that PROMOSERV I and II effectively strengthened NHMS's capacity in priority areas. A VNMHA representative noted that phase I fully aligned with NHMS's needs, while all phases contributed to its modernisation.
- Between 2020 and 2024, VNMHA's annual work plans consistently emphasised strategic themes of enhancing forecast accuracy for public safety; strengthening disaster prevention and management; upgrading technology and infrastructure; and building staff capacity for operational efficiency. Therefore, the project was strongly aligned with the partner's development needs.
- At the start of each phase, FMI consulted the annual work plans and with multiple stakeholders within VNMHA to better understand their needs. FMI's understanding of the partner's needs also improved over time, as the cooperation between the two organisations extended over several years.
- Some project components, such as gender equality workshops and teamwork/networking activities, were less directly linked to VNMHA's development plans. Although collaboration improvements were not part of the plans, FMI identified the need due to VNMHA's internal coordination challenges. Addressing this issue proved beneficial and was appreciated by the Vietnamese partner.

EQ4. To what extent is the project design coherent and are the objectives and the intervention approach logically structured within the Results-Based Management Framework?

b) Quality of conceptual design, especially RBMF vertical and horizontal logic and intervention strategies to attain the objectives.	Sources used: Stakeholder interviews/FGD in Finland; Project document; Results-based management framework.

- The project follows the standard ICI structure with one outcome and three output statements, but the RBMF is somewhat misaligned.
  - The outcome statement, "Improved capacity of VNMHA to fully utilize new, major investments and to deliver weather, weather-related safety, and commercial services," is more accurately an output, as capacity should not be the final outcome but rather its practical application. The logical progression from improved capacity to the intended impact (enhanced weather and weather-related safety and commercial services) is unclear, as achieving impact depends on VNMHA actively applying its improved capacity. The evaluation team understands that in ICI projects, outcome-level capacity improvements typically encompass broader structural changes within the partner institution rather than just enhanced knowledge and skills, which is why improved capacity is often framed as an outcome.
  - Conversely, the output statements appear to be formulated at a higher, outcome-oriented level. For instance, Output 1 "Enhanced weather and weather-related safety services of VNMHA" describes service delivery, which aligns more with an outcome than an output. However, the indicators associated with the outputs are situated appropriately at the output level.
- The results framework does not include assumptions for all indicators, and some of the assumptions are not linked to the risk management framework, such as availability of the TV station—that later turned out to be a risk that materialised and hindered the realisation of Activity 2.2 "Working with media".
- Overall, the RBMF has improved across phases. According to FMI, Phase I was a learning experience, emphasising the need to focus on fewer, more targeted topics and to set goals that remain within the project's control.

Coherence and aid effectiveness

EQ5. How coherent is the project with the Country Programme and other MFA supported initiatives, and other Finnish interventions and agencies in the partner countries?

c) Extent to which project objectives are in line with– or directly reflected in the Country Programmes.	Sources used: Stakeholder interviews/FGD in Finland; Project document (phase III); Cooperation between Finland and Vietnam (2016–2020) (Transition Strategy).

- PROMOSERV III was developed during the Transition Strategy for Vietnam (2016–2020) and was well aligned with it. The strategy focused on water, forestry, science, technology and innovation, energy and cleantech solutions, and education. Overall, PROMOSERV activities have been in line with the Transition Strategy by consistently promoting Finnish companies through demonstrations of their technology that can improve the partner institution's work, as well as creating opportunities for Finnish companies to enter the Vietnamese market.

d) Linkages, mechanisms of coordination and degree of compatibility with other Finnish supported initiatives, relevant to the intervention.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Project document; Evaluation on ICI Vietnam (2018); Progress reports.

- PROMOSERV II and III were directly linked to the CC project by Vaisala. In PROMOSERV II, VNMHA was trained on the lightning detection system using Vaisala's global lightning data to prepare for the nationwide lightning detection system to be implemented under the CC project. Additionally, FMI demonstrated the SmartMet system, which was about to be rolled out through the CC project. Phase III focused on the utilisation of the SmartMet system deployed by the CC project. It was reported that FMI and Vaisala exchanged information on both projects frequently and adapted activities (if needed) according to developments in the other project.
- The complementarity between PROMOSERV II and III and the CC project proved beneficial, as the technical assistance and capacity building provided by PROMOSERV facilitated the smooth integration of the new CC-funded infrastructure into VNMHA's daily operations.
- During phase III, collaboration was also sought with PROMOAIR to share meteorological data from VNMHA for integration into the SILAM model introduced in PROMOAIR. However, this cooperation faced challenges (see PROMOAIR report in Annex 13). Additionally, PROMOSERV III and PROMOAIR held a joint final seminar.
- According to the progress reports, training materials for the SmartMet Workstation in PROMOSERV III were developed in collaboration with the FINKMET2-ICI project in Kyrgyzstan and, to some extent, with the FERSAD-ICI project in Sudan, as these projects had similar activities. Another collaboration was the product development process, where training sessions in Sudan informed similar trainings conducted for VNMHA.

EQ6. How coherent is the project with other initiatives, e.g. linkages, coordination, compatibility and synergy with other relevant interventions and agencies in the partner countries?

b) Linkages, mechanisms of coordination and degree of compatibility with other initiatives (not supported by Finland), relevant to the intervention.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Project document; Evaluation on ICI Vietnam (2018); Progress reports; Completion report.

- The 2018 evaluation of ICI projects in Vietnam concluded that PROMOSERV II successfully avoided overlap with the WB-funded VN-HAZ project while fostering positive synergies. PROMOSERV II prepared the partner institution for the upcoming VN-HAZ project, and phase III further built upon this foundation.
- FMI consistently sought information on other donor-funded projects to ensure PROMOSERV's compatibility with existing and upcoming initiatives. This approach was particularly appreciated by VNMHA, which noted that FMI was one of the few actors that systematically mapped ongoing projects and adapted its plans accordingly so that the partner could get the full benefits of the projects. In contrast to other donors who introduced their systems without considering compatibility with existing infrastructure.
- SmartMet, FMI's tool, is designed to integrate data from multiple sources. However, according to FMI, there have been challenges due to incompatible systems introduced by other donors during the implementation of PROMOSERV. Sometimes VNMHA staff lack access to the necessary technical details and struggle to retrieve data from certain proprietary systems, hindering seamless integration and effective use of the platform.
- According to FMI, donor coordination has improved but still requires better alignment of efforts. FMI actively engaged in donor coordination efforts, including initiating roundtable discussions in the early stages of phase II with the WB to gather key actors and discuss upcoming projects. This initiative was recognised as a positive step by the ICI Vietnam evaluation. According to FMI the donor panel subsided due to COVID-19 and has not resumed, which is a setback for the donor coordination.
- While FMI's approach to complementing other projects likely avoided duplication and enhanced synergies, it also introduced risks related to dependency on external project outcomes beyond FMI's control. For instance, an issue with data flow from the central data hub provided by VN-HAZ to SmartMet was reported. However, respondents provided different, even contradicting information on this topic.

EQ7. To what degree do the partner country agencies and higher-level authorities and decision-makers have responsibility and ownership of the projects?

c) Level of influence of partner institution in the design and implementation of the project.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Project document; Progress reports.

- At the beginning of the development of each phase, FMI and VNMHA discussed VNMHA's needs and FMI assessed which needs it could help to address. The content of the phases was jointly agreed upon.
- The evaluation team found various instances where VNMHA had influenced the project design and implementation:
  - Lightning data component in phase II was suggested by the NHMS and included in the project.
  - The idea for the gender equality seminar in phase III originated from feedback in an annual questionnaire, where a respondent from VNMHA highlighted the need for more gender training.
  - Topics for the two SOPs developed in phase III were proposed by VNMHA.

d) Level of knowledge of the project and support by managers and higher-level decision-makers (parent institutions/ ministry).	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Project document; Progress reports; Evaluation on ICI Vietnam (2018).

- According to FMI, the project has established good working relationships with experts from low to middle management, while also maintaining positive connections with higher-level decision-makers.
- PROMOSERV actively engaged with VNMHA management through management training and study trips to Finland. These visits allowed VNMHA leaders to observe FMI's work firsthand and engage in discussions with FMI management and stakeholders.
- The parent institution of VNMHA, MONRE (Ministry of Natural Resources and Environment) and VNMHA's management have been well informed about the project.
  - Although the evaluation team did not manage to meet with the MONRE as the Ministry was undergoing structural changes at the time of the evaluation, it can be concluded that it has been informed about the project, as MONRE plays a crucial role in project approval. It was also stated by VNMHA that MONRE's Deputy Minister has shown support for PROMOSERV, leading discussions on critical technical and system-related issues and ensuring that the necessary technical units take action to address them.
  - VNMHA explained to the evaluation team that their leadership oversees all activities, including ICI projects, and assigns a Project Management Unit to formally report on project progress to senior management, supporting institutional awareness of the project.
- Despite the support by the higher level, the project has faced challenges in relation to leadership turnover and delays in decision making.
  - During phase II, the project faced an unexpected setback when several director-level officials, with whom strong relationships had been built, retired simultaneously.

Efficiency

EQ8. What is the progress against the work plan target and time schedule (implementation progress)?

a) Compliance with–and degree of deviations from the work plan: time schedule (delays), costs (inputs and resources), level of achievement of outputs.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Email exchange; Project document; Progress reports; Results-based management framework; Completion report.

The project achieved over half of its targets but experienced several deviations from the original work plan due to external factors.

- Initially scheduled to conclude by the end of 2022, the project was granted a non-cost extension until the end of 2024 due to delays primarily caused by COVID-19 travel restrictions. Some activities were scaled down or postponed. Activities that could be conducted remotely were carried out online during the restriction period. However, online meetings were considered less effective than in-person trainings and, according to the completion report, had a negative impact on the project's results. The online trainings required additional resources for interpretation, and time difference limited effective working hours. The project activities faced also delays due to leadership changes as well as slow bureaucracy and decision making at VNMHA. The following delays and issues affecting implementation were reported:
  - The project aimed to introduce Finnish technology—ICEYE satellite flood mapping—with plans for ICEYE representatives to conduct demonstrations in Vietnam. However, COVID-19 disrupted these plans, and the collaboration with ICEYE did not materialise.
  - Product development did not fully reach its target. Trainings were organised, and NCHMF/VNMHA has basic knowledge on product development, but products were not made for selected customers.
  - The project had originally planned to train forecasters in TV presentation skills. However, this was revised when the TV studio—expected to be provided to VNMHA through other projects—was never delivered during project implementation. As a result, the focus shifted toward social media communication. A meeting on social media communications was held in 2024, but the actual training could not be conducted within the project timeframe.
  - VNMHA successfully established two SOPs as planned, and processes related to Quality Management Systems and auditing were introduced and discussed, but the internal audit originally planned was not carried out.
  - A gender equality workshop originally scheduled for autumn 2021 was delayed and eventually carried out in November 2023.
- COVID-19 and related travel restrictions led to budget deviations, as the FMI Project Manager spent more time on project activities than originally planned, travel costs of both institutions were reduced, and remote working increased the number of FMI expert working days.

EQ9. To what extent are the results and processes feasible and cost-effective?	
a) Balance between resources used/costs involved and 'value' of outputs (value for money).	Sources used: Stakeholder interviews/FGD in Vietnam; Project document; Progress reports; Final expenditure report; Financial reports; Completion report.

- It was noted various times in the interviews that while the budget was not large, the project was effective.
- Given that the project achieved most of its objectives—and some were overachieved—the resources have been well used in enhancing VNMHA's capacity.
- The final expenditure report concludes that the expenditure of PROMOSERV III was 100%. Realised capacity development costs (part A in the budget) accounted for 92.6% of the actual expenditure. Fixed assets represented 1.7% of the budget, while administrative costs in the partner country (workshop costs, technical costs, printing cost, administration costs, transportation costs etc.) accounted for 3.5% of the used budget. The rest was allocated to the contingency budget.
- Due to the disruption caused by COVID-19, project-related travel was significantly reduced. As a result, the budget was adjusted accordingly, and FMI ultimately utilised only three-quarters of the amount originally allocated for Finnish experts' travel.
- While the capacity building costs for Finnish experts were high—making up 82% of the realised budget for budget lines A1–A4 (with expert fees alone accounting for 65.7%)—the costs allocated to Vietnamese experts (budget lines A4–A8) were significantly lower, at just 10%. Only 12% of the total budget reportedly benefitted the partner institution directly (budget items A5–A7, B, and C), and the evaluation team's calculations based on the final expenditure report suggest this figure was 11% (likely due to rounding). This falls short of the minimum 25% mandated in the 2012 ICI manual. However, the completion report notes that this deviation had been agreed upon.
- Thanks to the remote trainings, the project kept moving. However, its cost effectiveness suffered as FMI's Project Manager and experts used more time in adapting work methods to online environments, while it was admitted that online trainings were not as effective as working face-to-face.

EQ10. To what extent is the project well managed and are M&E systems and risk analysis processes adequately designed and implemented?	
a) Amount and type of facilitation and support provided by MFA and ICI FC.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Progress reports.

- The Embassy of Finland in Hanoi maintained close engagement with project partners through both PROMOSERV and the CC project, facilitating collaboration and ensuring smooth logistical processes.
  - The Embassy was represented in the project board.
  - The Embassy facilitated securing visas for VNMHA staff traveling to Finland. According to the 2024 H2 progress report, visa processing was handled efficiently and without delays, even when VNMHA staff received travel permissions from MONRE at the last minute.
  - When FMI teams travelled to Hanoi, they regularly met with the Embassy, and the Embassy was invited to seminars and meetings and participated whenever possible, for example in the gender equality workshop. During a 2020 project management mission, MFA Desk Officer and the Embassy visited VNMHA.
- According to the ICI facilitator, the project received support in preparing its progress reports prior to their submission to the MFA. This topic did not come up in the partner institutions' interviews.

b) Management processes put in place (including stakeholder/board meetings) and degree of implementation.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Progress reports.

- Six project board meetings were held during the implementation period, as reported in the project completion report. Due to the COVID-19 pandemic and, in one instance, the absence of a VNMHA administrator, all meetings took place via online platforms or through email correspondence. Additionally, unofficial ad hoc meetings were organised when needed.
- Changes in leadership at both implementing institutions, as well as among the Embassy staff, led to several modifications in the composition of the project board.

c) Quality of M&E system (including baseline and outcome measurements).	Sources used: Results-based management framework; Progress reports.

- While the results framework includes baseline data, some baseline values were either missing or marked as "to be determined" but were never updated. For instance, the baseline for website visitors was meant to be defined at project start but was not incorporated into the framework. This implies that the results framework was not actively used as an M&E tool.
- The project collected gender disaggregated data, but for the indicator on staff trained (disaggregated by gender), baseline values should explicitly state "0 men, 0 women" if no prior training existed, rather than leaving the field blank. Also, achieved results reported on the results framework did not specify how many people were trained and what the share of each gender was.
- Feedback from trainings and seminars was collected, but these data were not linked to any indicators. If there would have been a qualitative indicator on the trainings conducted, these valuable insights could have been better utilised to track progress.

d) Quality of risk management framework and degree of implementation of measures to mitigate environmental and other risks.	Sources used: Stakeholder interviews/FGD in Finland; Risk framework; Results-based management framework; Progress reports.

- The risk framework was updated over the course of the project, but it was not referred to in the progress reports, indicating that it was not actively used to guide the decision making.
- The framework addressed mostly external risks, leaving out internal risks that could affect project execution. For example, although known to both partners, the complex bureaucratic structures of VNMHA were not reflected in the risk framework.
- Link between assumptions in the results framework and the risk matrix is weak. For example, the availability of the TV studio was listed as an assumption underlying Indicator "Number of VNMHA staff and media representatives trained in TV presentations" under Output 2, but was not identified as a risk in the risk matrix.
- The project engaged in communication with VN-HAZ and CC projects to avoid overlaps and duplication, which was an identified risk. This is a positive proactive approach that helped to minimise inefficiencies and improved coordination with other stakeholders.
- Some mitigation measures were weak, for example, "Non-cost extension for 2023–2024 has been granted" was listed as a mitigation measure, although it is rather a reaction, not a prevention strategy.

Effectiveness

EQ11. What are the main results (planned and unplanned) and to what extent have capacity strengthening efforts been adopted and contributed to the provision of improved services?

a) Main achievements reported and as perceived by institutions and extent to which they match the expectations.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Observations during the evaluation mission; Progress reports; Completion report.

- **Activity 1.1 Promoting technology: Common Alerting Protocol (CAP), using SmartMet Alert.** NCHMF can now issue three types of weather warnings—for typhoons, strong winds, and heavy rain—in CAP-format using SmartMet Alert. This exceeded the planned two warning types and marked the first-ever implementation of CAP-format warnings in Vietnam. More NCHMF staff were trained in CAP-format warning message production than were set as a target. The SmartMet Alert is in semi-operational use.
- **Activity 1.3 Advanced lightning detection training and studies.** A scientific study "Thunderstorm Activity and Extremes in Vietnam for the Period 2015–2019" on Vietnam's lightning characteristics was published in MDPI/Climate journal in 2022.
- **Activity 1.4 Advanced SmartMet-training and SmartMet seminars.** The SmartMet system was successfully deployed and integrated into daily operations at the national level, with a core group of trained users producing forecast products. However, the capacity stands currently at a basic level and is unevenly distributed across institutional levels. Technical issues continue to limit the system's full potential. Both institutions expressed the need for further training in using SmartMet for forecasting and problem solving.
  - The SmartMet system is now operational within the NCHMF, and a core group of trained staff—estimated at around 15–20 by VNMHA—has acquired a solid understanding of its technical use. The system has also been introduced to all six regional and two provincial centres where, according to VNMHA, it is currently used primarily for data visualisation rather than for generating or editing forecast products. There is a gap in capacity between the national and subnational levels.
  - According to VNMHA, NCHMF can now produce core weather forecast products, including warnings, forecasting bulletins, and reports using SmartMet, which are disseminated to end users such as VNMHA management, disaster preparedness authorities, national television, and other media outlets. While the system has improved forecasting capabilities, some technical challenges remain. These include connection problems and issues with the format of some products.

b) Quality of capacity development provided as perceived by partner institution.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Progress reports; Training feedback.

- The capacity development provided by FMI was well received by trained VNMHA staff, who expressed satisfaction with its quality. They particularly appreciated FMI's problem-based and practical teaching approach, where trainers first demonstrated, followed by hands-on practice, enabling staff to gain confidence and independence in using new tools and systems.
- The support has continued beyond formal training sessions, with ongoing remote assistance provided for technical issues. This support is primarily ad hoc, addressing specific challenges that VNMHA staff are unable to resolve independently.

c) Level of adoption/application of taught knowledge and skills by partner professional staff.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Progress reports; Observations during the evaluation mission; Completion report.

- The forecasters in the national centre, as well as in the regional and provincial centres have reached a basic operational capacity to operate the SmartMet system and create weather forecast products based on model forecast data. However, problem solving and software development skills—which would be a step further and were not in the plans—are lacking and NCHMF still depends on FMI's support to solve occurring issues.
- While the capacity building provided by FMI has been well received and effective, additional training is still needed in several areas to maximise the effective use of the system and support further capacity development.

- NCHMF staff has a solid understanding of the technical operation of the system but, as FMI sees it, require more training on how to translate the data into actionable weather forecasting.
- Continued support is required for addressing technical issues.

- NCHMF is developing products for end-users daily, but issues were raised, especially at regional centre level, related to the format of the SmartMet-generated products that must be manually modified to meet the specific requirements of end users in Vietnam.
- SmartAlert is in semi-operational testing phase, and warnings on weather hazards are sent to the Government.

d)	Changes in the partner institution's performance, way of working (including approach to gender equality and reduction of inequalities) and quality of services as a result of the project.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Progress reports; Completion report.

- The SmartMet system has enhanced the efficiency and productivity of forecasters in analysing numerical model products and observational data (radar, satellite, radio, sounding). The quality of forecast and early warning has increased and is closer to international standards.
- PROMOSERV has helped VNMHA to move towards a more centralised system where data is shared between national, regional, and provincial centres, enhancing weather forecast and early warning.
- According to Vietnamese stakeholders, the gender equality workshop conducted during phase II had a positive institutional impact. It was told to the evaluation team that following the first workshop, VNMHA leadership took actions to enhance women's progress within the organisation, leading to various follow-up initiatives. Reportedly, during PROMOSERV III the gender workshop, requested by VNMHA, attracted women from all provinces, who expressed enthusiasm and requested additional follow-up activities. VNMHA perceives the project as having contributed to raising awareness of female staff's roles within the organisation and promoting positive examples of gender equality, including work-life balance and a more balanced distribution of household responsibilities.

Sustainability

EQ12. How sustainable are the results and approaches, in terms of institutional, technical, human and financial capacities, socio-economic conditions, governance and environmental/ climate resilience risks and potential trade-offs?

a)	Staff turnover rate and measures taken to retain and transfer knowledge and skills gained during the project within the institution.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Progress reports; YouTube videos; Observations during the evaluation mission; Completion report.

- The project has not particularly suffered from staff turnover. VNMHA staff stated that many staff members have participated in training across different project phases and the CC project, contributing to knowledge retention within VNMHA.
- The evaluation team met a new forecaster who joined in 2023 and was trained to use SmartMet internally by colleagues, demonstrating that knowledge transfer is occurring within VNMHA.
- The National Centre has trained regional centres on SmartMet usage, demonstrating both a sufficient know-how and successful implementation of the "training of trainers" approach that the project cultivated.
- As an additional support activity, FMI has published training videos on SmartMet Workstation usage, available on YouTube for self-study and onboarding new staff. The videos further support self-learning and sustainability.

b)	Degree of institutionalisation of new skills into partner institution's work routine and extent to which strengthened competencies and systems are still operational, supported and used.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Observations during the evaluation mission; Progress reports.

- SmartMet is used as a daily tool at NCHMF, however, it was questioned whether the improved ways of working have been institutionalised yet. The results are sustainable under the condition that FMI is available to support VNMHA when problems with the system arise. Both implementing institutions have emphasised the need for a phase IV to consolidate existing technical know-how and translate it into improved forecasting capabilities.
- The partner institution has expressed a need for additional support for training on SmartMet server management, creating new products for users, and establishing links to websites, mobile apps, and web portals to broaden user access to products. Additionally, annual training and technology transfer for SmartMet and other forecasting products were requested to ensure the effective use of existing operational systems.
- The continuous technological development and increasing need for sophisticated knowledge, data and tools in hydrometeorology raises concerns about the long-term sustainability of training efforts, as current systems may soon require further improvements, necessitating continuous capacity building. VNMHA identified a need to upgrade three radar stations to dual-polarisation systems, and capacity building for the maintenance and repair of lightning positioning systems.

c)	Arrangements with other stakeholders for continued implementation and up-scaling.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Progress reports.

- The evaluation team was informed that a new MFA funded project is being planned to build on top of the results of PROMOSERV III. According to VNMHA, MONRE's Deputy Minister has showed interest and support to the project and been proactive in pushing the project approval from Vietnam's side forward.

- VNMHA is planning to connect the SmartAlert system to the World Meteorological Organization's (WMO) CAP Monitoring Advisory System-Asia (WMO's CMAS-A), integrating Vietnam's alerts with regional and global warning systems. While the original project plans included weather warnings as a CAP-format demonstration, VNMHA is planning to operationalise these warnings for international publication. Once this happens, it will be a significant step forward in the institutionalisation and sustainability of project outcomes.

d)	Level of recognition and support of higher level (parent institution) decision makers, including financial arrangements to sustain project results (e.g. operational costs, maintenance and replacement of equipment, and implementation of strengthened skills and systems)	Sources used: Stakeholder interviews/FGD in Finland and Vietnam.

- MONRE has been informed about and supported the project throughout its implementation. As noted under previous EQs, VNMHA reported that the Deputy Minister has been actively engaged and is strongly supportive of the idea of a follow-up initiative.
- MONRE and VNMHA are pursuing new donor-funded investment projects to continue the modernisation of VNMHA and build on top of the results gained through PROMOSERV.

e)	Key factors enabling or inhibiting sustainability.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Progress reports; Completion report.

- Enabling factors for sustainability
  - SmartMet and SmartAlert are actively used in daily operations at VNMHA and well received by staff.
  - PROMOSERV III has supported the development of SOPs for forecasting and a procedure for selecting participants to international missions to ensure that knowledge and technical expertise remain accessible even if staff turnover occurs.
  - Maintaining open communication channels beyond the project is a practical way to support sustainability, allowing for continued technical advice. However, this type of light consultancy is unlikely to continue long-term unless a new project framework is established to formalise support.
  - While no official SmartMet team has been established within VNMHA, despite FMI's recommendations, staff utilise a social media channel to exchange information and seek advice on SmartMet-related issues. Although not a dedicated SmartMet group, this informal knowledge-sharing platform contributes to sustainability by allowing users to troubleshoot and learn from each other.
- Challenges inhibiting sustainability
  - The fast-paced evolution of technology in the field of hydrometeorology presents a challenge for sustainability, as systems and capacity built today may soon require updates, replacements, and new rounds of training.
  - FMI proposed the establishment of a cross-organisational SmartMet Team to manage, coordinate, and support the system. However, this group has not been established by VNMHA.

Impact

EQ13. In what ways has the project affected the work of partner country agencies both directly and indirectly, including intended and unintended effects, with regard to developed capacities, (incl. human rights, gender equality, reduction of inequalities, climate resilience, and low-emission development)?

a)	Changes in the partner institution's demand of services related to the project, and overall recognition of its expertise.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Progress reports.

- Before PROMOSERV, VNMHA relied entirely on manual weather systems and had no experience with automatic weather stations, and its capacity was rudimental. Through the different project phases, FMI supported VNMHA to move from manual weather stations to automatic ones. They learned how to integrate and use modern forecasting tools, including SmartMet, SmartAlert and lightning forecasting systems, which are now routinely applied in daily forecasting and disaster risk reduction. The capacity has improved remarkably, and the level of training provided as well as questions asked has elevated. Efficiency and quality in forecasting have improved, allowing VNMHA to provide more accurate and timely early warnings. While VNMHA staff are now proficient in the technical use of SmartMet, they still require further training on how to interpret and apply its data effectively in forecasting.
- Transition to SmartMet through PROMOSERV III is important as it makes weather forecasting more useful for forecasters, who now can see images as opposed to numerical data. SmartMet is used extensively by forecasters in the national, regional and provincial centres and it is becoming a mainstreamed tool in the institution.
- VNMHA's capacity to produce higher quality services has undoubtedly increased during PROMOSERV, but the demand from the user side is difficult to estimate, as consultations with public were out of the scope of the evaluation.
- PROMOSERV has paved the way for other, larger investments projects, further strengthening VNMHA's institutional capacity and credibility in the field.
- A couple of interviewees mentioned a mindset shift of VNMHA towards sustainability and long-term thinking. PROMOSERV—and FMI's approach in general—prioritises system compatibility and sustainability. According to one interviewee, this approach has shifted VNMHA's mindset, making them more selective in accepting international partnerships. Another interviewee pointed out that VNMHA is increasingly prioritising quality over price and seeks deeper technical understanding of the technology before making decisions.

b) Degree of increased coordination and up-scaling of project-related interventions and outputs.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam.

- The National Centre has trained regional and provincial centres on how to use SmartMet and SmartAlert, expanding institutional capacity beyond Hanoi.
- There are plans for a new MFA funded project—a continuation of the CC project as well as PROMOSERV III.
- SmartAlert warnings are transitioning from operational testing to full implementation, with plans to connect to the WMO global warning system. The integration process was delayed due to the absence of a WMO representative from VNMHA, but with a new representative now in place, VNMHA expect to proceed with the process in 2025.

EQ14. What are the wider (indicative) impacts of the project on other stakeholders and beneficiaries in the partner country including aspects of HRBA and CCOs?

a) Contribution of the partner institution's services and products to the country's development benefits (including HRBA, climate resilience and low emission development related aspects).	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Progress reports.

- PROMOSERV III has effectively supported the VNMHA in utilising advanced technology provided by the CC project for nationwide monitoring, forecasting, and early warning. This enhanced capacity has contributed to disaster risk reduction by improving the accuracy and timeliness of weather predictions. VNMHA reported that:
  - The weather radar network and SmartMet significantly contributed to forecasting and early warning, particularly in severe weather conditions. During transitional periods in 2020 and 2023, the radar network supported forecasts for widespread hailstorms across Northern Vietnam and other regions.
  - During the 2020 flood season, the network accurately provided reliable warnings for 14 storms, (including one no. 9 typhoon), tropical depressions, and prolonged heavy rainfall events, including a 41day continuous rain period in Central Vietnam. While the radar network was essential in detecting these weather events, so was VNMHA's capacity to process the data through SmartMet and provide the forecast and warnings.
  - The enhanced forecasting capacity proved invaluable during multiple strong storms affecting Central Vietnam from 2018 to the present, including Typhoon Yagi in 2024, the strongest storm in 70 years in Northern Vietnam.
- The project's gender equality initiatives are seen to have positive contributions to women's careers in VNMHA by the VNMHA staff. The evaluation team was told that, following the first gender equality workshop in phase II, VNMHA leadership adopted measures to enhance women's roles in the institution, though further details on specific actions are lacking. It was reported that awareness of career development and work-life balance among female employees has increased. One VNMHA staff member reported being inspired by the Finnish example of shared household responsibilities, leading to her husband's greater participation in household chores.
- According to VNMHA, initially the inclusion of a gender component in the phase II project plan raised questions among ministries in Vietnam as they had difficulties to understand its relevance. Today, gender equality is no longer questioned within the Vietnamese stakeholders, as it has become known as a priority for Finland. Unlike other countries and projects that do not integrate gender considerations, Finland's consistent emphasis on gender equality has established it as an expected and accepted element of cooperation.
- According to VNMHA, the project had not only a positive impact on the staff's technical skills but also improved their level of English and contributed positively to their career development. It was reported by VNMHA that many staff members who had been involved in PROMOSERV projects have been later promoted—though these promotions cannot be directly attributed to the project, it played a positive role in their professional growth.

EQ15. To what extent did the project have an impact on the Finnish institutions or Finnish private sector in terms of leveraging business opportunities and other linkages?

a) Arrangements and contracts of the partner institution with other Finnish actors and the private sector for the purchase of equipment or provision of specific services.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Project document.

- PROMOSERV I and II laid the ground for the CC project with Vaisala that provided VNMHA with five new weather radars and three upgraded radars, a nationwide lightning detection network, and the weather production system SmartMet.
- During PROMOSERV III, VNMHA has started planning a new project supported by Finland.

b) Extent to which the projects leveraged other business or market opportunities for Finnish institutions and private sector.	Sources used: Stakeholder interviews/FGD in Finland and Vietnam; Progress reports; Evaluation on ICI Vietnam (2018).

- PROMOSERV as a whole has played a pivotal role in building long-term cooperation between VNMHA and FMI, fostering trust and enhancing FMI's reputation and promoting Finnish technology and expertise at both the institutional and ministerial levels. Through this collaboration, FMI has positioned itself as one of the best in its field, reinforcing its credibility within Vietnam's hydro-meteorological sector. Additionally, through PROMOSERV (and other ICI projects) FMI has gained visibility among development partners in Vietnam, leading to FMI's engagement with international donors, such as the WB, for whom FMI implemented training components on numerical weather prediction (NWP) and weather model training in the VN-HAZ project.
- Furthermore, PROMOSERV has strengthened FMI's partnerships with the private sector, such as Vaisala, notably supporting Finnish exports and providing valuable references that enhance Finnish competitiveness in the global

market, including for private sector actors. PROMOSERV I and II helped to promote Vaisala's technology, leading to successful sales. The projects demonstrated how an ICI initiative can open doors for Finnish private sector engagement in another country. Once this opening is made, it is easier for companies to generate additional business as customers become more familiar with their technology and products.

- Due to COVID-19, the engagement with the private sector in phase III fell short. PROMOSERV III had planned to continue introducing new technology, such as ICEYE's satellite flood mapping technology, but COVID-19 prevented this from happening as was planned due to travel restrictions.
- The timing of PROMOSERV before the CC project was beneficial. It ensured that VNMHA had prior knowledge of Vaisala and its technology, making the transition into the CC project smoother. Training on software and instruments was provided by Vaisala withing the CC project for a limited period, but with PROMOSERV III in place, VNMHA had ongoing support for more advanced training on any remaining questions. This was appreciated by Vaisala, who also benefits from the client being able to get most out of the investment, increasing customer satisfaction.

Annex 6: Case study: GTK – NR II KGZ

Strengthening the Mastering of Natural Resources for National Welfare in the Kyrgyz Republic, phase II

Project title	Strengthening the Mastering of Natural Resources for National Welfare in the Kyrgyz Republic, phase II
Country	Kyrgyzstan
Finnish institution	Geological Survey of Finland
Duration	2020–2024 (initially 2022)
Budget	EUR 904,191
Partner institution(s)	Kyrgyz Geological Survey (KGS). The contract was signed with the Department of Geology and Subsoil Use (DGSU) under the Ministry of Mineral Resources, Ecology and Technical Supervision. The DGSU was renamed as KGS in July 2023 under the Ministry of Natural Resources, Ecology and Technical Supervision (MNRETS). All duties of DGSU were transferred to KGS.
Impact	KGS (previously DGSU) has consolidated its position as important expert organisation in digital geoinformation production and distribution at national level according to the national program of digital transformation "Taza Coom" of the Kyrgyz Republic
Outcome	KGS (previously DGSU) has advanced capacity in production and distribution of geoinformation for observations of environmental impacts of climate change and sustainable use of groundwater and mineral resources
Outputs	1. KGS experts have enhanced skills and knowledge on producing and assessing groundwater resources and observations of environmental impacts. 2. Strengthened skills in digitalisation, data management and sharing. 3. Increased international and regional networking. 4. Good governance practices strengthened via project implementation.
Previous projects/phases (title, duration, main focus)	Preliminary phase covering the period 2009–2010 during which a project document for cooperation entitled “Geo-Sector Information Management System Development and Capacity Building in Central Asian Countries” was prepared and within the Wider Europe Initiative implemented in the period September 2011–August 2014 with Kazakhstan, Tajikistan, and Kyrgyzstan. The project introduced modern and safe storage procedures for old geoscientific information, trained local experts for running the procedures, encouraged regional and inter-project cooperation and established a Central Asian geo-portal for publishing of the information. “Strengthening the Mastering of Natural Resources for National Welfare in the Kyrgyz Republic, (phase I)”; 2014–2019; EUR 1,629,000. The project covered three outputs: 1) Climate change and modern techniques by applying modern techniques like satellite images, remote sensing, geophysics and hydrogeological methods; 2) Strengthening of the geoinformation chain and distribution including digital products and modern information management, intranet applications, the Central Asian geo-portal and GIS training for experts related to geohazards; and 3) Regional aspects and administration including improved cooperation between SAGMR (State Agency on Geology and Mineral Resources) head office and selected expeditions, inter-agency and inter-project cooperation, marketing and promotion, literal project management and presentations on better governance practices.
Remarks	

Relevance	
EQ1. To what extent is the project aligned with–and responds to the development objectives/priorities of the partner country?	
c) Extent to which the project objectives are in line with policy priorities of the partner country government	Sources used: National Development Policies Kyrgyzstan; Extractive Industries Transparency Initiative report 2018–20; Project document; Stakeholder interviews/FGD in Kyrgyzstan and Finland; Self-assessment.
• The project aligns with Kyrgyzstan’s priorities by enhancing institutional capacity in the geological/geophysical and hydrogeological sectors. • The national economy of Kyrgyzstan is highly dependent on minerals production and processing. According to the Extractive Industries Transparency Initiative report 2018–2020, the total exports of the extractive sector were equal to USD 1.2 billion in 2020, which contributed to 61% of total exports. Government revenues from the extractive sector were equal to approximately USD 340 million in 2020, which accounted for 13.2% of total govern-	

ment revenues. To facilitate the mining industry and also as a source of revenue, the government needs to provide detailed geographic information to the mining sector but is largely dependent on outdated technologies. Accessibility and utilisation of digital geoinformation brings added value to the organisation by means of cost-efficient working procedures and source of income. It also facilitates data analysis and modelling.

- At the same time, Kyrgyzstan has serious problems of inefficient use and pollution of water resources, land degradation and improper agricultural practices. Uncontrolled drilling of boreholes is taking place. The increasing amount of melt water forms a risk in respect of possible toxic contaminations. The importance of water and sustainable management of water resources are widely acknowledged in the National Development Strategy of the Kyrgyz Republic (2018–2040), in the "Unity, Trust, Creation" Development Program of the Kyrgyz Republic (2018–2022), and the Green Development Programme 2019–2023. The need for using reliable data to provide a solid basis for planning preventive measures to protect human health, water ecosystems and their biodiversity is emphasised.
- The relevance of the project has been confirmed by high level decisionmakers, including the Vice Minister-Director of the Kyrgyz Geological Service under the MNRETS.

EQ2. To what extent is the project aligned with–and responds to the development policies of MFA Finland (including HRBA and CCOs, and more recently benefits for Finnish actors)?

d)	Degree to which the project responds to Finland's development policies and integrate HRBA and CCO strategies in the project design.	Sources used: Project document; stakeholder interviews/FGD in Finland and Kyrgyzstan; Progress reports; Completion report.

- The project was well aligned with Finland's development policy objectives that were applicable when the project was designed, e.g. (i) food security, access to water and energy; (ii) sustainable use of natural resources; and (iii) improving the economies of developing countries to secure new jobs, livelihoods, and prosperity. Through improved methodologies for assessments of groundwater resources and environmental impacts, the projects aim at contributing to sustainable use of groundwater and mineral resources. These are perfectly in line with the Finnish development objectives of providing access to safe water. The project is well aligned to MFA's Theory of Change for Priority Area Climate and natural resources, Outcome 5 Water.
- With respect to the HRBA, the project document considers the project to be human-sensitive and, in some parts, even human rights progressive. The project document stipulates that all work conducted in the project shall obey the human rights principles. The project document acknowledges that the geo sector has traditionally been male-dominated, and that Kyrgyzstan suffers from high gender inequalities with women largely being excluded from decision-making. The project therefore aimed at encouraging and supporting female experts to participate in the project activities and trainings and to take more responsible positions regarding the project tasks.
- With regards to non-discrimination the project document also states that during the project implementation the duty-bearers, both trainers and trained people will ensure that no imbalances or possible discrimination of groups of people occurs. According to the project document, non-discrimination will be monitored via discussions, especially during self-assessments. Experts positioned outside Bishkek region will also be included. The project will promote access to information via organising seminars and workshops, regular communication in internet.
- The project is also expected to directly contribute to climate sustainability.
- During implementation, these HRBA and CCO related intentions were followed where possible and practical. The project did not directly contribute to the reduction of inequalities, but equality was considered in all project activities. Interpreters were regularly used in all of the training sessions and meetings to ensure that all participants can follow the discussions regardless of their English skills. Women were involved in all training groups except geophysics and the geoportal due to absence of female experts that could participate in these activities.

e)	Extent to which collaboration opportunities with other Finnish actors are integrated in the project design and strategy.	Sources used: Project document; Stakeholder interviews/FGD in Kyrgyzstan and Finland; Annual workplans; Progress reports; Completion report.

- The project document states that the project aims at promoting Finnish products and services provided by Finnish companies in the fields of environment and water management, exploration, and mining by organising seminars together with Finnish Water Forum and Mining Network in Finland. However, the document does not further explain the strategies for doing this, other than referring to study tours or seminars.
- Indeed, during implementation, seminars were organised together with Finnish Water Forum and Mining Network in Finland in which thirteen companies presented their products and services, and a visit to FinnMateria trade fair was conducted where six Finnish mining/water/environment sector companies presented their business. In addition, a Climate Conference in Bishkek was organised in 2023 jointly with FMI and Syke.

EQ3. To what extent does the project respond to the conditions and capacity development needs of the partner agency?	
c) Extent to which project matches with partner capacity development needs assessments and plans (or if absent capacity needs as perceived by partner executives).	Sources used: Project document; Stakeholder interviews/FGD in Kyrgyzstan and Finland; Annual workplans; Progress reports; Completion report.

- The project responds well to the partner capacity development needs. According to a high-level official in KGS, "GTK stands out for its focus on the specific needs of the partner institution. It is easy to communicate and collaborate with GTK."
- The previous project (phase I), aimed at enhancing the capacity of the SAGMR – now KGS[14] and its selected Expeditions to manage the complete chain of information production (collection, analysis, dissemination, increasing awareness) for groundwater topics, environmental risks related to geohazards and natural resources. Strengthening of the institutional capacity of SAGMR (later SCIESU-DGSU-KGS) provided it with better tools for responding to different requirements set by the society as well as governmental institutions and mining companies. However, the project's objectives were quite ambitious and despite some positive results, KGS still only had modest ways of monitoring water quality and carrying out geophysical measurements and hydrogeological resource modelling. Therefore, the design of the second phase, aimed at further strengthening the capacities and enhancing impact and sustainability, were well justified.
- Although no capacity development needs assessments and plans were conducted, consultations with the stakeholders and self-assessment reports confirm that the current project is relevant to KGS' capacity needs. It builds on the results of the previous phases and addresses the areas that need further attention, including the further digitisation of geoinformation and capacity strengthening for groundwater monitoring techniques. The project directly responded to the technical and human resource needs of Kyrgyz geological and hydrogeological institutions by providing essential training, field visits, and equipment such as water loggers, GIS software, and geophysical tools.
- For example, hydrogeologists considered the use of water loggers a great improvement from the traditional approach whereby they had to manually measure groundwater levels and temperature, often with inconsistencies. They were heavily reliant on local observers to send data via WhatsApp, which lacked precision. The loggers support continuous monitoring of groundwater levels and temperature.
- Also, the geophysicists highly appreciated the project for its direct alignment with their needs. The two project phases were seen as complementary, with the latter building upon the previous one. In phase I, they were provided with the Elrec Pro instrument for geophysical surveys, which greatly enhanced their fieldwork capabilities, even though the equipment was difficult to use in the rough mountainous terrain. Additionally, they were supplied with licenses and training for Res2DInv and Res3DInv software for geophysical surveys. As they had been using an earlier version of the software, Res1DInv before the project, these tools matched their evolving technical needs. In 2023, the project purchased Oazis Montaj, a geophysical software suite used for processing, filtering, and interpreting survey data. The participants found this so beneficial that they decided to extend the license themselves. This software allowed them to generate detailed, high-quality geophysical data, which was crucial for their surveys.
- In addition, the further capacity building on digitisation and use of open-source GIS software QGIS (instead of ArcGIS) was considered highly relevant to the needs of the organisation and in line with the government policies.
- The lectures and excursion of managed aquifer technique (MAR) were considered interesting, but hydrogeologists did not find this directly applicable to the situation in Kyrgyzstan, although they commented that in the future, due to climate change it might become more relevant for the southern part.

[14] Originally, the project document was signed with the State Agency of Geology and Mineral Resources of the Kyrgyz Republic (SAGMR). In August 2016, the SAGMR merged with the State Committee of Industry, Energy and Subsoil Use of the Kyrgyz Republic (SCIESU). All the duties of SAGMR were transferred to SCIESU, which in 2021 was then changed to the State Agency for Geology and Subsoil Use (SAGSU) under the Ministry of Energy and Industry. These functions were later transferred to the Department of Geology and Subsoil Use under the Ministry of Mineral Resources, Ecology and Technical Supervision of the Kyrgyz Republic (DGSU). In July 2023, the DGSU was renamed as KGS. All duties of DGSU were transferred to KGS which is under the Ministry of Natural Resources, Ecology, and Technical Supervision. The project partner institution changed four times during its implementation.

EQ4. To what extent is the project design coherent and are the objectives and the intervention approach logically structured within the Results-Based Management Framework?	
c) Quality of conceptual design, especially RBMF vertical and horizontal logic and intervention strategies to attain the objectives.	Sources used: Results based management framework.
• The RBMF is reasonably well developed with clear outputs and impact defined at the adequate level. However, the following observations are made: o The Outcome refers to improved capacity only and not the intended use of that capacity at the end of the project (the expected change/effects of capacity building). o The vertical logic of the intervention structure is not very clear. The outputs essentially duplicate (elements of) the outcome, referring to strengthened capacity in specific areas. Consequently, many output indicators are put at the same level as the outcome indicators or even duplicate them. o The number of output indicators is very large with some reflecting minor activity levels, for example "number of hand-outs prepared". Such targets could be set for activities in an annual workplan but should not be reflected at the more strategic level of the RBMF. • Output 4 basically refers to project management and administration. Conceptually, this is not supposed to be part of the RBMF as an Output that contributes to the achievement of the objectives. It is rather a means to support the project implementation in all its activities. Obviously, it should be planned and monitored but separately from the project's conceptual (logical) framework.	
Coherence and aid effectiveness	
EQ5. How coherent is the project with the Country Programme and other MFA supported initiatives, and other Finnish interventions and agencies in the partner countries?	
e) Extent to which project objectives are in line with–or directly reflected in the Country Programmes.	Sources used: Country Programme and Strategy for the central Asian countries of Kyrgyzstan, Tajikistan and Uzbekistan (2021–2024); Results based management framework; Project document; Stakeholder interviews/FGD in Finland.
• The project is coherent with—and directly reflected in Finland's Country Strategy for the central Asian countries of Kyrgyzstan, Tajikistan, and Uzbekistan (2021–2024). The project falls under the strategy goal 4.3 Climate change mitigation/adaptation and sustainable management of natural resources. The development cooperation projects funded by MFA promote the Finnish development policy approaches especially in the fields of water management, sustainable use of natural resources and climate change mitigation and adaptation. GTK's ICI projects in the region are directly referred to in the strategy: "The Geological Survey of Finland will focus on improving living standards and conditions for local people through its projects in Kyrgyzstan, Tajikistan, and Uzbekistan. The projects support the strengthening of the domestic economic growth and prosperity of the countries through sustainable use of natural resources and creation of safer living environment."	
f) Linkages, mechanisms of coordination and degree of compatibility with other Finnish supported initiatives, relevant to the intervention.	Sources used: Project document; Stakeholder interviews/FGD in Kyrgyzstan and Finland; Annual workplans; Progress reports; Completion report.
• The main development cooperation support provided by MFA in Kyrgyzstan was through the ICI programme. In addition to GTK, FMI and Syke also implemented ICI projects with respectively Kyrgyz HydroMet (both FMI and Syke) and Department of Environmental Monitoring under MNRETS (Syke). • The institutions collaborated in some activities, such as the joint organisation of a conference on Environmental Cooperation between Finland and Kyrgyzstan "Climate change and sustainable management of natural resources" in Bishkek in 2023. The Kyrgyz project representative also participated in a climate resilience seminar in Uzbekistan which was organised by GTK and FMI in 2022. • GTK, FMI and Syke state that they keep close contact with each other, but apart from the above-mentioned seminars no other forms of collaboration were reported. Although these institutions work in different projects, the sectors are quite related. GTK and Syke both work on monitoring of water quality, although one focusing on groundwater and the other on surface water. FMI is working on meteorology, which is also related to the work of the other institutions with respect to environmental monitoring, including water. Although more structural collaboration could be beneficial, this is challenging because of the limited resources of these projects, their specific technical focus area, and the complex national institutional framework in which they operate, which do not easily enhance cooperation and sharing of data.	

EQ6. How coherent is the project with other initiatives, e.g. linkages, coordination, compatibility and synergy with other relevant interventions and agencies in the partner countries?	
c) Linkages, mechanisms of coordination and degree of compatibility with other initiatives (not supported by Finland), relevant to the intervention.	Sources used: Project document; Stakeholder interviews/FGD in Kyrgyzstan and Finland; Annual workplans; Progress reports; Completion report.
• The British Geological Survey implemented a project in 2019–2021 focusing on providing training on data management and GIS as well as generating digital catalogues. Where appropriate, the GTK and the British Geological Survey projects worked in close collaboration to avoid duplication. • The project complemented other donor-led initiatives in the sector, including those by the EU, Swiss Development Cooperation, United Nations Development Programme (UNDP), and Korea International Cooperation Agency (KOICA). UNDP and KOICA are currently supporting food security projects in Batken province by drilling new wells to ensure access to clean drinking water. To support these efforts, the Kyrgyz Complex Hydrogeological Expedition (KCHE) demonstrated the water loggers purchased through the project to the donors, requesting further funding to acquire additional loggers.	
EQ7. To what degree do the partner country agencies and higher-level authorities and decision-makers have responsibility and ownership of the projects?	
e) Level of influence of partner institution in the design and implementation of the project.	Sources used: Stakeholder interviews/FGD in Kyrgyzstan and Finland.
• The respondents indicated that the design of the project was done in a participatory manner, building on the previous phase (further support to digitisation, training on open-source GIS software QGIS, geoportal), and with more focus on hydrogeological monitoring. At the end of phase I, they saw the need for improved hydrogeological monitoring and even discussed the use of loggers at that time.	
f) Level of knowledge of the project and support by managers and higher-level decision-makers (parent institutions/ ministry).	Source used: Stakeholder interviews/FGD in Kyrgyzstan and Finland, especially at high level MNRETS.
• The Vice Minister of MNRETS has in-depth knowledge of the project. In the position of Director of KGS, he was closely involved in the planning and implementation of the project. He also participated in a study tour to Finland. He had clear ideas about the project and the areas that would have to be strengthened in a possible next phase. • The project participants both at the management and technical levels recognised the project's value, but the level of knowledge and sense of ownership seems to vary depending on the departments. • In addition, bureaucratic challenges and lack of clear mandates hindered full ownership. The restructuring of institutions/departments in charge for water management and geological services has created uncertainty, affecting the implementation and limiting the application of acquired skills. Already during the project time, the activities related to geohazards had to be changed as this aspect was moved to the Ministry of Emergency Situations. The geohazard group is working with studies related to natural hazards and climate change issues such as observations on outburst floods of glacial lakes, landslides, and exogenous geological processes.	
Efficiency	
EQ8. What is the progress against the work plan target and time schedule (implementation progress)?	
b) Compliance with– and degree of deviations from the work plan: time schedule (delays), costs (inputs and resources), level of achievement of outputs.	Sources used: Project document; Stakeholder interviews/FGD in Kyrgyzstan and Finland; Annual workplans; Progress reports; Completion report.

• The project officially started in July 2020, but due to the COVID-19 pandemic, GTK's first visit (inception mission) to Kyrgyzstan took only place in May 2022. The pandemic delayed the implementation of most outputs and therefore a no-cost extension was granted until the end of 2024.
• Many of the planned activities were undertaken but some activities had to be cancelled due to various reasons:
  ○ As part of organisational restructuring, KGS' activities related to geohazards, such as the prediction of landslides, moved to the Ministry of Emergency Situation. This meant that the training of satellite image interpretation and mass movement were excluded from the project.
  ○ The Geoinformation Centre in Ivanovska could not be established as staff from the previous Northern Geological Expedition in Ivanovska were moved to Bishkek.
• The activities related to the digitisation of maps had to be halted. The government did not provide permission to digitise the 1:200 000 scale mineral deposit maps as the information was classified as confidential. Currently, only three people are allowed to work with these data.	

EQ9. To what extent are the results and processes feasible and cost-effective?	
b) Balance between resources used/costs involved and "value" of outputs (value for money).	Sources used: Project document; Stakeholder interviews/FGD in Kyrgyzstan and Finland; Annual workplans; Progress reports; Completion report.
• The original project budget as indicated in the project documents of 2019 and 2022 was EUR 904,191. However, due to COVID-19 pandemic, some of the MFA funds for the project expired and as some of the planned activities could not be implemented (as explained above) the overall project budget was reduced with EUR 121,980 to EUR 782,211. Eventually, the project spent EUR 728,046 (93% of the budget), leaving a balance of EUR 54,165.	

- A breakdown of the costs is provided in the table below. Approximately 61% of the total costs reflected GTK expert fees and together with related other costs (travel, accommodation, and allowances) the total costs for the GTK experts amounted to almost 74%. Another 11% was used for study tours/visits of the partner agency staff and 9% for purchase of equipment. The remaining costs comprised some sub-contracted work and administrative aspects in the partner country.

Table Breakdown of costs

Cost item	Costs	Budget	Balance	Percent of total costs
Cost of GTK (experts)	*538,386*	*544,056*	*5,670*	*73.9%*
Fees (706.7 w/days)	443,645	425,642	-18,003	60.9%
Travel costs	52,210	67,034	14,824	7.2%
Accommodation	28,195	36,001	7,806	3.9%
Per diem	14,336	15,379	1,043	2.0%
Cost of Partner agency	*78,825*	*111,052*	*32,227*	*10.8%*
Travel costs	48,168	68,657	20,489	6.6%
Accommodation	19,037	29,672	10,635	2.6%
Per diem	11,621	12,723	1,103	1.6%
Subcontracted work	*28,704*	*34,301*	*5,597*	*3.9%*
Admin in parter country	15,313	16,739	1,426	2.1%
Fixed assets	66,818	71,063	4,245	9.2%
Contingency	0	5,000	5,000	0.0%
GRAND TOTAL	**728,046**	**782,211**	**54,165**	***100.0%***

- Considering that the ICI approach focuses much on peer-to-peer capacity building and coaching, the relatively high contribution of fees seems justified and generally in line with the ICI guidelines.
- However, quite a large number of experts (26) have been involved in the project, some with very limited number of days. In total, 706.66 working days were used. While this gives an average of 27 days per expert, the distribution is highly skewed. The project manager used 280 days (40%), five other experts used over 45 days each (total of 289 days, or 41%), whereas the rest varied from as little as 0.1 day to 19 days. These figures show that most inputs were provided by six experts, but that still quite a large number of experts were involved in other activities, including presentations on geoscientific topics during KGS' experts visits to Finland.
- The cost-effectiveness is not easy to determine as it is still too early to measure the final outcome and sustainability of the results. But similar to other ICI projects, the overheads and administrative costs seem small and the project appeared efficient in producing tangible outputs, even though not all of them were fully achieved.
- However, one question that could be raised regarding cost-effectiveness is whether the design of the project, covering various different aspects and actors was not over-ambitious considering the available budget and if the resources could have been more efficiently used through increased focus on fewer areas. The idea of the project was to improve KGS' capacity to manage the complete chain of information production (collection, analysis, dissemination, increasing awareness) for groundwater topics, mineral resources, and environmental risks. Although the project is relevant to the capacity needs of KGS in all the supported areas, it addresses multiple aspects that involve different technical departments/units (geophysicists, hydrogeologists, geoinformation, IT, including thematic and regional expeditions), which usually have few interlinkages but which are now organised around ground water monitoring and modelling. Only for the creation of the pilot aquifer structure model in Orto-Alysh groundwater reservoir, geophysical and hydrogeological work was jointly undertaken. The pilot is logical given the project's objectives, and it was a good experience, showing the value of a collaborated approach. But the project also supported many other activities, and on the other hand, there is no indication that this strategy will be continued, especially as the hydrogeologist will now move to another ministry. At the same time, all consulted "sections" (geologists/geophysicists, hydrogeologists, IT, mapping), still mentioned the need for more training and support in their particular areas. The question is therefore if the funds have not been too dispersed for achieving long lasting results and if cost-effectiveness could have been higher with a more focused support to fewer areas.

EQ10. To what extent is the project well managed and are M&E systems and risk analysis processes adequately designed and implemented?

e) Amount and type of facilitation and support provided by MFA and ICI FC.	Sources used: Stakeholder interviews/FGD in Finland.

- The MFA Focal Point was changed several times during the project implementation and also the ICI FC was replaced. Together with the fact that basically no activities were undertaken during the COVID-19 period, by the end of 2022 the project document was updated. A major change was made in the RBMF which initially covered nine outputs under three result areas, called Work Packages. Those three main results were in a somewhat rephrased form changed into outputs in the updated project document. The original nine outputs were then integrated into the main activities.

• It is understood that the embassy also provided support when necessary. The facilitation of the ICI FC was considered useful. The main role of the ICI FC has been to support and approve the progress reports. But as mentioned above, also some support was provided in the design of the updated RBMF.		
f)	Management processes put in place (including stakeholder/board meetings) and degree of implementation.	Sources used: Board meetings minutes; Project document; Stakeholder interviews/FGD in Kyrgyzstan and Finland; Progress reports; Completion report.
• GTK's project manager remained the same for the entire project duration, but KGS's manager was replaced in 2022. • The board meetings were implemented as expected. Seven meetings were conducted following the biannual schedule and three additional project board meetings were held to discuss issues that arose between the biannual meetings such as the expiry of part of the budget. In total, ten board meetings have been conducted, one in 2021, two in 2022, three in 2023, and four in 2024. Half of the meetings took place in Kyrgyzstan, four were organised in Finland and one was conducted remotely. The meetings typically reviewed the project progress, discussed the next period's plan and budget, and took decisions about upcoming matters and missions. The reviewed minutes are all extremely short, and do not provide any details on the results of the discussions and decisions taken. However, Annex 7 of the completion report lists the board meetings and main decisions taken. • GTK's board members remained mostly the same, but for KGS there have been numerous board member changes during the project due to organisational restructuring, issues related to permission to travel to Finland and sick leaves. However, despite these changes, project management has been satisfactory.		
g)	Quality of M&E system (including baseline and outcome measurements).	Sources used: Results based management framework; Annual workplans; Progress reports; Completion report; Stakeholder interviews/FGD in Kyrgyzstan and Finland.
• The usefulness of the M&E system depends on the quality of the RBMF. As some weaknesses in the RBMF were found, especially with regards to the outcome level, they are also reflected in the M&E system. • As with most other ICI projects, no specific M&E system was put in place, but the level of achievement of RBMF output indicators was followed up and reported in the bi-annual progress reports. As many indicators referred to simple quantitative activity-level achievements, such as number of expert training days, the reporting was straightforward. But for other indicators the capacity level of the partner agency staff had to be assessed. This was usually done by GTK staff, at the start of the project (baseline), halfway and at the end. • The outcome level had two indicators, one related to digital aquifer monitoring and modelling, and the other referring to the capacity to produce digital geoinformation. As this level was not very different from the outputs, it was relatively easy to monitor progress. For the first indicator, the work done for the aquifer structure model in Orto–Alysh pilot site was adequate to reach the target of 1–2 models created. For the second indicator, referring to increased capacity, the same method was used as explained for the output baseline and monitoring whereby GTK experts rated the skills of KGS experts in producing digital materials. • The impact indicators were also easy to measure as they referred to number of client organisations using KGS' commercial expert services, and cooperation with other government organisations. Nonetheless, the completion report did not specify the results for the first indicator. • With respect to HRBA and CCOs, the progress reports mostly repeated the same information as the text of the project document. But with respect to monitoring the participation of KGS staff in the trainings and other activities, the reports were gender disaggregated.		
h)	Quality of risk management framework and degree of implementation of measures to mitigate environmental and other risks.	Sources used: Risk framework; Annual workplans; Progress reports; Completion report; Stakeholder interviews/FGD in Kyrgyzstan and Finland.
• A risk assessment was conducted at design phase and risk framework was prepared in the project document. Although the framework itself was not updated, the progress reports referred to the actual risks that affected the project implementation during that period in the section 7 "Problems encountered & risks update". Interestingly, some of the risks that were already identified in the project document and even in earlier phases of the project, such as the confidentiality of mineral deposits data and the high staff turnover, actually affected the project implementation and results. This shows that either the likelihood and possible impact of the risks were not adequately assessed at the design phase, and/or that the expected mitigating measures were not as effective as expected.		
Effectiveness		
EQ11. What are the main results (planned and unplanned) and to what extent have capacity strengthening efforts been adopted and contributed to the provision of improved services?		
e)	Main achievements reported and as perceived by institutions and extent to which they match the expectations.	Sources used: Project document; Annual workplans; Progress reports; Completion report; Self-assessment reports; Stakeholder interviews/FGD in Kyrgyzstan and Finland.
• In terms of achieved outputs, the evaluation shows mixed findings, with some outputs showing better results than others. As mentioned under EQ8, not all planned activities could be implemented and especially the work on the geoinformation side has been challenging, affecting the achievements of Output 2. • Output 1. KGS staff has enhanced skills and knowledge on producing and assessing groundwater resources and		

observations of environmental impacts. This Output concerned the capacity improvement of the KGS experts to conduct hydrological feasible studies for groundwater monitoring, modelling, and management.

- A pilot study area was identified (Orto-Alysh aquifer), which is an important water source for Bishkek, not too far located from the capital. Capacity building was conducted through classroom lectures of groundwater modelling followed by the on-the-job training in groundwater monitoring and geophysical fieldwork. The project procured computers, groundwater well monitoring equipment (10 loggers) and two water level measurement sticks with a capacity to measure up to one hundred meters deep. Only five of the ten loggers were installed due to safety concerns as the wells are not properly secured[15]. Geophysical measurements were carried out twice. The monitored groundwater well data and interpreted geophysical data were used for the creation of the hydrogeological 3D structure model of the groundwater reservoir. Using the equipment and software provided by the project, they were able to map underground water flow, aquifers, and water storage capacity. This non-invasive method allowed for monitoring the health of aquifers and identifying potential contamination sources that could affect water quality.
- Hydrogeologists participated in field visits to Finland, where they had hands-on experience with MAR technologies. They also attended a workshop in Uzbekistan. According to the KCHE, the reported training of hydrogeologists from the southern branch did not take place, but this was disputed by GTK that reported their involvement in the MAR training in Bishkek.
- Four geophysicists of the Kyrgyz Geophysical Expedition participated in the project, of whom two are still active—one based in the southern office and the other in the northern office. As described under EQ3, they were trained in the use of equipment and several software packages for conducting geophysical surveys. The introduction of Oazis Montaj, a geophysical software suite used for processing, filtering, and modelling, was particularly considered useful.

- Output 2. Strengthened skills in data management and sharing. This Output focused on the digitisation of geological, geophysical, and hydrogeological maps and reports; the use of satellite data; and the improvement of the geoportal. As KGS' activities related to geohazards, such as prediction of landslides, moved to the Ministry of Emergency Situation, the training of satellite image interpretation and mass movement was excluded from the project.
  - Training was provided on open-source GIS software QGIS and GTK provided assistance with designing necessary databases. It was noted that many of the intended technicians were not fully involved in the training as they were provided with other tasks at that time. Although according to the ministry they have replaced ArcGIS with QGIS, it is not clear to what extent the Geoinformation Centre's staff is actually (capable of) using the software as their work is mainly related to scanning tasks and their skills are basic. The trained persons were from another department.
  - The planned digitisation of the 1:200 000 scale mineral deposit maps was not conducted as the government classified these maps as confidential data and did not provide permission to the project to work on them.
  - The development of the established Central Asian Geoportal continued. The Geoportal cooperation between Central Asian countries was expanded with Uzbekistan joining the portal. In 2024, 46,651 visitors accessed the Kyrgyz pages. According to the progress reports and consulted staff the content was updated, the functions of the portal were improved, and a more user-friendly publication platform was established. However, a review of the portal indicates that some information is still outdated, including even the institutional aspects.
- Output 3. Increased international and regional networking. This Output basically concerns the participation in regional workshops, conferences and seminars and the production and distribution of promotion materials. The project also promoted Finnish products and services provided by Finnish companies in the field of environment and water management, exploration, and mining by organising seminars together with Finnish Water Forum and Mining Network in Finland. Furthermore, the project supported a visit to the FinnMateria trade fair.
- The extent to which these outputs contributed to the achievement of the Outcome (KGS has advanced capacity in production and distribution of geoinformation for observations of environmental impacts of climate change and sustainable use of groundwater and mineral resources) varies. Obviously, the issues related to Output 2 have affected the capacity of KGS in important areas of digitisation, GIS, and interpretation of satellite imageries. Although the capacity of hydrogeologists and geophysicists has been improved, the real Outcome, i.e. the use and adoption of the increased knowledge and introduced technologies is further discussed under indicator c).

f)	Quality of capacity development provided as perceived by partner institution.	Sources used: Stakeholder interviews/FGD in Kyrgyzstan; Self-assessment reports; Completion report.

- Since 2022, 46 individuals (including hydrogeologists, geophysicists, and IT specialists) have been trained through the project. The consulted stakeholders acknowledged the high level of capacity building provided by GTK. The training sessions and equipment provided were tailored to their needs, marking a significant advancement in the technical proficiency of staff within the sector. The training was practical and conducted in an accessible manner, ensuring clarity despite the use of translation services. However, the self-assessment and consultation with stakeholders also indicated that there is need for more and longer training sessions. Hands-on and on-the-job training has been considered the most effective and relevant capacity building method.

[15] Contrary to the progress reports and completion report, which mention that 10 loggers were installed and used, the consulted hydrogeologists confirmed that only five were installed and currently in use. The remaining five were reserved for training.

- The study tours to Finland were deemed highly beneficial, offering participants insights into the advanced practices and developments in the geophysical and hydrogeological sector there. However, not all showcased aspects are considered applicable to the situation in Kyrgyzstan.
- The provided equipment, such as water loggers, groundwater contact meter, and Oasis Montaj software were highly appreciated by the team for their functionality. The KCHE demonstrated the water loggers purchased through the project to other donors (UNDP and KOICA, drilling boreholes in Batken province to ensure access to clean drinking water). The introduction of the QGIS open-source software was also considered useful as KGS cannot afford to continue paying for the licenses of the commercial packages.

g)	Level of adoption/application of taught knowledge and skills by partner professional staff.	Sources used: Progress reports; Completion report; Self-assessment reports; Stakeholder interviews/FGD in Kyrgyzstan and Finland.

- The level of adoption and use of the taught knowledge and skills varies and has mostly been affected by the institutional insecurity due to the ongoing government reorganisation and inadequate funding to sustain some of the expertise and equipment.
- The legal status of KCHE is still pending certification by the Ministry of Justice and in addition, it is in the process of being transferred from the Ministry of Natural Resources to the Ministry of Water Resources and Agriculture. Currently, KCHE does not even have an official office space. Consequently, the trained hydrogeologists have not been in the position to utilise their acquired skills. The installed loggers have not been checked since September 2024. The team has not been able to download, analyse, or produce reports from the loggers, as there is currently no demand for these data.
- Since the project ended, no further collaboration between hydrogeologists and geophysicists have taken place. This lack of collaboration may hinder the comprehensive analysis of hydrogeological/geophysical issues and the further development of 3D structure models of other groundwater reservoirs. However, GTK considers that the cooperation can continue in a new Central Asian EU-Team Europe Initiative water project (EU4 Sustainable Central Asia: Joint Action and Coordination on Water, Energy and Climate Change), which will be coordinated by GIZ. GTK will be involved as a partner.
- On the positive side, geophysicists from the southern part of the Kyrgyz Geophysical Expedition (KGE) indicated commitment from their side to sustain the skills and tools acquired. The participants took the initiative to prolong the license for Oazis Montaj and are planning to purchase a modern ABEM Instrument for geophysical surveys in 2024. This purchase is a direct response to the limitations of the Elrec Pro, provided by the project during the first phase, which has proven impractical for field use. The KGE has a constant demand for its services, especially from private companies, including mining firms, which helps support the financial sustainability of the organisation, allowing it to operate independently. The geophysicists can therefore more easily apply the taught knowledge skills and equipment provided by the project.
- While the updating of the Kyrgyz' part of the geoportal is continuing, concerns were raised on the digitisation and GIS skills. It was pointed out that, with the 18 staff members, it would take at least six years to fully digitise the archived materials. However, only three staff members currently have full access to the archived materials due to the strict confidentiality rules. And they are not fully equipped. Half of the scanners provided by the project in the previous phase are outdated and no longer in use. Besides, they require manual formatting of scanned materials, which is time-consuming. In contrast, modern scanners on the market can automatically format and edit the scanned files, which would make the process much more efficient.

h)	Changes in the partner institution's performance, way of working (including approach to gender equality and reduction of inequalities) and quality of services as a result of the project.	Sources used: Progress reports; Completion report; Self-assessment reports; Stakeholder interviews/FGD in Kyrgyzstan and Finland.

- While stakeholders acknowledge that the introduced technologies and knowledge by the project in both phases have been extremely useful for increasing the efficiency and effectiveness of many of the technical operations, the improved performance at institutional level has been compromised by the institutional restructuring issues. As said above, the adoption of introduced technologies and skills have improved the functioning of the KGE and demand for its services. But for other areas this is less visible. According to high level decision-makers, further digitisation is highly necessary as KGS generates income primarily from licensing mining companies (especially those involved in coal and gold mining). If potential mineral deposits are identified, the Geological Service could receive dividends from mining companies. As per government directives, the Kyrgyz Geological Service will focus on digitising geological maps for each province, starting with Talas Province. However, currently the issues with confidentiality of data have not yet been resolved yet and hamper the institution's performance in that respect.
- The project encouraged women to participate in the training and discussed gender equality aspects with the management of the KGS. Women were present in the managing roles of the project and also participated to the visit in Finland and scientific conferences. However, it is not clear what the impact is of these activities at KGS level. The Geoinformation Centre includes mostly women, but this is not necessarily due to the project but rather reflect the required qualifications and salary levels, which are low. The woman who was involved in the project management was already a leading specialist of the Geological Department.

Sustainability	
EQ12. How sustainable are the results and approaches, in terms of institutional, technical, human and financial capacities, socio-economic conditions, governance and environmental/ climate resilience risks and potential trade-offs?	
f) Staff turnover rate and measures taken to retain and transfer knowledge and skills gained during the project within the institution	Sources used: Progress reports; Completion report; Self-assessment reports; Stakeholder interviews/FGD in Kyrgyzstan and Finland.
• Staff turnover has been generally high. During COVID-19 many staff left the institution. And even thereafter the turnover rate appears high especially for young people due to low salary rates and few working days (some local experts worked only one to three days per week). For example, from the KGE, four geophysicists participated in the project, of whom two relatively older experts remained—one based in the southern office and the other in the northern office. The others left the organisation due to low salaries. • Numerous changes within management occurred and the institutional restructuring further affects retaining of skills. In addition, some of the equipment provided for specific hydrogeological purposes such as computers and possibly even loggers, might not move with the hydrogeologists to the new Ministry. • Reportedly, some measures are taken to transfer knowledge to new staff, including the use of training materials provided by the project. For relatively simple tasks, such as digitisation, internal training and coaching might suffice but for more complex processes, this is difficult. For example, one of the two key participants of the KGE is approaching retirement age, and with only two people having the newly acquired skills, there is a risk that the knowledge and capacity developed during the project could be lost. The small number of trained staff makes it difficult to ensure long-term sustainability.	
g) Degree of institutionalisation of new skills into partner institution's work routine and extent to which strengthened competencies and systems are still operational, supported and used.	Sources used: Progress reports; Completion report; Self-assessment reports; Stakeholder interviews/FGD in Kyrgyzstan and Finland.
• The previous sections indicate already provide answers to this question. The level of institutionalisation of the new skills and equipment varies and is largely affected by institutional challenges, especially the restructuring processes, and government's limited funding to support continued operations. While the new skills are integrated into the geophysical work of KGE, the hydrogeologists cannot make use of the strengthened competencies until their new institutional home and mandate have been clarified and resolved. The Geological Department and Geoinformation Centre is likely to continue the digitisation of lower-level resolution maps, which are not considered confidential. • It is also expected that the geoportal will continue to be updated. However, the sustainability of the portal in terms of management and "ownership" must be further defined. Currently, GTK manages the portal and the project paid for the hosting, but this is not a sustainable solution. Uzbekistan is in charge of the updates but the hosting is more complex due to the Central Asian countries inter-relationships. According to GTK, the next project will decide on how the hosting will be organised.	
h) Arrangements with other stakeholders for continued implementation and up-scaling.	Sources used: Project document; Progress reports; Completion report; Self-assessment reports; Stakeholder interviews/FGD in Kyrgyzstan and Finland; Consultations with WB and EU.
• Although no clear arrangements were reported, various donors are said to show interest in supporting the sector, including the EU, Swiss Development Cooperation (interest in digitisation), UNDP, KOICA, and the WB. UNDP and KOICA are currently supporting food security projects in Batken Province by drilling new wells to ensure access to clean drinking water[16].	

[16] The evaluation team did not manage to get feedback from those donor organisations on the exact plans.

i)	Level of recognition and support of higher level (parent institution) decision makers, including financial arrangements to sustain project results (e.g. operational costs, maintenance and replacement of equipment, and implementation of strengthened skills and systems)	Sources used: Progress reports; Completion report; Self-assessment reports; Stakeholder interviews/FGD in Kyrgyzstan and Finland especially high level MNRETS.

- Again, most of the information has already been provided in the answers to the other EQs. Generally, the recognition is high at the Ministry of Natural Resources Ecology and Technical Supervision's top management level. However, there is no budget allocated from the Ministry of Finance for KGS. The only way for the service to receive funding from the state budget is to increase its staff count. But in 2024, a presidential order imposed a moratorium on the recruitment of state workers, which meant that KGS lost its opportunity to secure state budget support. KGS raises funds through demand-driven activities from both the private and state sectors. However, currently there is limited demand for its services. The main income derives from licensing mining companies. Therefore, the financial options for continuation and upscaling of the project activities remain limited. Given the financial constraints and the moratorium on hiring new staff, KGS is seeking donor support to meet its needs. Without external funding, it may be difficult for the service to fully realise its goals and further strengthen the project results.
- With respect to the hydrogeologists, the situation is uncertain as the institutional set up within the Ministry of Water Resources and Agriculture is not clear yet. The hydrogeologists fear that some of the provided equipment might not be transferred.

j)	Key factors enabling or inhibiting sustainability.	Sources used: Project document; Progress reports; Completion report; Self-assessment reports; Stakeholder interviews/FGD in Kyrgyzstan and Finland.

- Financial capability for maintaining the technical capacity and provided equipment is an important factor for enabling sustainability. The KGE, because of the demand for its commercial services, is able to build on the project's support to generate more income. They prolonged the license for Oazis Montaj software and also invested in other geological survey equipment. This is less evident for other project partners, such as the hydrogeologists who are now in an institutional vacuum. Given the financial constraints and the moratorium on hiring new staff, KGS is seeking donor support to meet its needs. Although mining companies use the Geoinformation centre services, the demand was not yet reported to be high and it proves difficult for KGS to maintain its pool of trained staff and sustain or replace provided equipment such as scanners. Some KGS staff are currently working only three hours per day due to budget constraints.
- Sustainability is also inhibited by the institutional restructuring processes, which particularly affect hydrogeologists who cannot perform their functions and make optimal use of the provided equipment.
- The lack of continued training on specific technical aspects and the difficulty of replacement of trained technicians reaching retirement age by young people can also affect sustainability of the project results.

Impact	
EQ13. In what ways has the project affected the work of partner country agencies both directly and indirectly, including intended and unintended effects, with regard to developed capacities, (incl. human rights, gender equality, reduction of inequalities, climate resilience, and low-emission development)?	
c) Changes in the partner institution's demand of services related to the project, and overall recognition of its expertise.	Sources used: Completion report; Self-assessment reports; Stakeholder interviews/FGD in Kyrgyzstan and Finland.
• Despite the reported challenges, information on groundwater and mineral resources are distributed to water utilities, private citizens, and various mining companies. Private citizens use hydrogeological services. Although no exact figures could be provided, on the customers and increased demand, the support of the project to help KGS shifting from old fashioned manual systems to modern technologies and digitised information has contributed to improved recognition. • The government is interested to explore critical raw materials. The potential identification of mineral deposits could further contribute to KGS receiving substantial dividends from mining companies. The geoportal could also play a role as it attracts many visitors from within and outside the country.	
d) Degree of increased coordination and up-scaling of project-related interventions and outputs.	Sources used: Completion report; Self-assessment reports; Stakeholder interviews/FGD in Kyrgyzstan and Finland.
• As mentioned, several donor organisations have an interest in the sector although the details of further support are not yet clear. Cooperation with GTK will continue under EU's Team Europe Initiative coordinated by GIZ: "EU4Sustainable Central Asia: Joint Action and Coordination on Water, Energy and Climate Change".	
EQ14. What are the wider (indicative) impacts of the project on other stakeholders and beneficiaries in the partner country including aspects of HRBA and CCOs?	
b) Contribution of the partner institution's services and products to the country's development benefits (including HRBA, climate resilience and low emission development related aspects).	Sources used: Completion report; Self-assessment reports; Stakeholder interviews/FGD in Kyrgyzstan and Finland.
• The increased capacity in the production and distribution of geoinformation for observations of environmental impacts and sustainable use of groundwater and mineral resources contributes to the country's priority needs as already explained under EQ1. However, it is difficult to assess the wider impact of the project at this stage. Due to the institutional challenges mentioned, the functioning of some of the supported stakeholder groups, such as the hydrogeologists, is compromised. Although there is great potential for the hydrogeological services regarding the monitoring and control of drilling and groundwater use, the current impact can still be considered relatively limited.	
EQ15. To what extent did the project have an impact on the Finnish institutions or Finnish private sector in terms of leveraging business opportunities and other linkages?	
c) Arrangements and contracts of the partner institution with other Finnish actors and the private sector for the purchase of equipment or provision of specific services.	Sources used: Completion report; Self-assessment reports; Stakeholder interviews/FGD in Kyrgyzstan and Finland.
• Despite the study tour to Finland and meetings with Finnish private sector partners, no further arrangements have been reported. Apparently, some donors were approached to procure more water loggers, probably using the same suppliers as the ones provided by the project, but this has not resulted in any concrete support yet.	
d) Extent to which the projects leveraged other business or market opportunities for Finnish institutions and private sector.	Sources used: Progress reports; Completion report; Self-assessment reports; Stakeholder interviews/FGD in Kyrgyzstan and Finland.
• No such activities have been reported.	

Annex 7: Luke – WOODVN

Capacity building for value chains of wood products industries in Vietnam

Project Name	Capacity building for value chains of wood products industries in Vietnam (WOODVN)
Country	Vietnam
Finnish institution	Natural Resources Institute Finland
Duration	2020–2024 (originally up to 2022)
Budget	EUR 450,000
Partners	Vietnam Academy of Forest Sciences/Research Institute of Forest Industry (VAFS/RIFI), and Vietnam Administration of Forestry (VNFOREST)
Impact	New sustainable, efficient and profitable forest management and wood processing methods are utilised in the plantation wood industry.
Outcome	VAFS/RIFI and VNFOREST staff have improved capacity to manage plantation forests and to develop and promote plantation timber use related value chains.
Outputs	1. VAFS/RIFI and VNFOREST have upgraded capacity to research the properties of plantation wood and the use of it as raw material. 2. Established and functional network between research institutes, educational institutions, authorities, and non-governmental organisations to promote research and technological development activities of wood product industries. 3. Upgraded skills of the partner agencies on utilising the Management Information System for Forestry Sector (FORMIS) for the needs of Wood products sector.
Previous projects/phases (title, duration, main focus)	No other forest/wood related project. Luke was involved in a fisheries project before.
Remarks	Research Institute of Forest Industry (RIFI) is the main partner and project coordinator in Vietnam. VNFOREST was involved in Output 3 and partly in Output 2.

Relevance	
EQ1. To what extent is the project aligned with–and responds to the development objectives/priorities of the partner country?	
Sources used:	Forest Act, Vietnam (2017); Project document; Medium (2024), Stakeholder interviews/FGD in Vietnam; Self-assessment.

- In 1989, Vietnam's Minister of Forestry, Phan Xuan Toi, issued a decision to eliminate round wood from the export list, shifting the focus to processed wood products (Medium, 2024). This has contributed to Vietnam becoming the largest wood products exporter in ASEAN (Association of Southeast Asian Nations), the second in Asia, and the sixth in the world. Forest products are among the most important export items of the country. The export value of timber and forest products has continuously increased with an average annual growth rate of 13% in the 2010–2018 period, reaching USD 9.3 billion in 2018. According to the Vietnam Timber and Forest Association the export value raised in 2024 to USD 16.3 billion, including non-timber forest products reaching over USD 17 billion, making the industry a key factor in the economy of Vietnam. Wooden furniture is the major export product followed by wood chips, plywood, and pellets.
- However, Vietnam's wood supply is not adequate to meet the demand of the wood production (especially furniture) industry, which largely depends on the import of raw materials. The fragmented plantations are dominated by small scale landowners producing low quality timber, predominantly acacia and eucalyptus, applying poor management practices and short rotation cycles. The trees are mainly used for the production of low value chips. In addition, the furniture companies producing for the export market lack some of the tools and modern technologies to produce more efficiently and comply to the legal requirements of the foreign markets.
- There is strong political support for the development of the forest sector in the country. The Forest Act (2017) includes the goal of adding value to the wood industry and replacing imported wood with higher-quality plantation wood. The Directive (2019) issued by the Prime Minister also aims at increasing the export value of forest products through the use of advanced technology, modern equipment and environmental standards.
- The project responds well to Vietnam's policy objectives and priorities through its support to research and capacity building for improved forest management on the one hand, and better wood processing technologies on the other hand. In addition, the project tried to address the growing demand for accurate forest resource data and information systems through its support to forest information systems and modelling.
- Interviews with stakeholders from the public and private sectors, including government officials, researchers and companies, strongly confirmed the relevance of the project.

EQ2. To what extent is the project aligned with–and responds to the development policies of MFA Finland (including HRBA and CCOs, and more recently benefits for Finnish actors)?	
Sources used:	Project document; Report on Development Policy Across Parliamentary Terms (2021); Report on International Economic Relations and Development Cooperation (2024); Theories of Change and Aggregated Indicators for Finland's Development Policy (2021 and 2023); Stakeholder interviews/FGD in Finland and Vietnam; Progress reports.

- The project has been designed and planned during the previous development policy guideline (MFA, 2021a) and it is well in line with one of its policy priorities: climate change, biodiversity and sustainable management and use of natural resources. In addition, the current policy guideline (MFA, 2024b) has climate action as one of Finland's areas of strength. The project is also aligned with MFA Finland's Theory of Change for the Priority Area "Climate and Natural Resources", Outcome 1: Forests and biodiversity.
- The project document refers to CCOs with respect to reduction of inequality, gender equality, climate resilience and low emission development. The project's contribution to many of these aspects is considered indirect. For example, with respect to reduction of inequality, many of the wood producers are considered relatively poor rural households who might ultimately benefit from the project's results. Improved knowledge on plantation tree species and their wood properties is expected to enhance the economic utilisation of plantation forests and strengthen the value chains of local wood product industries offering job opportunities. In addition, the emphasis on longer plantation rotation cycles and durable products is expected to contribute to increased carbon storage and sequestration. However, although these assumptions are in principle valid, experiences globally and in Vietnam indicate that such development can be a slow process that requires certain preconditions to be met, including socio-economic needs (e.g. short-term demand for income) and substantial price differences between pulpwood and large-diameter and high-quality logwood. Gender equity was emphasised more directly in the project by promoting the incorporation of female professionals, stakeholders and decision makers in all capacity building activities, and some of the output indicators were gender disaggregated.
- The challenges in primary wood production and further processing of plantation timber in wood product industries open up opportunities for Finnish actors providing knowledge, expertise and equipment for different aspects of the value chain. The project document makes specific reference to Finnish companies that could play a role in the project, including KWS Timber Tech (thermo-mechanical timber modification), Luxhammar (company specialising in production of thermal modification equipment), and Veisto Oy's (production lines and sawing machines (HewSaw®) for sawn timber). Not all these companies seemed to have played a role in the project while others were involved in the study tours in Finland.

EQ3. To what extent does the project respond to the conditions and capacity development needs of the partner agency?	
Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Project document; Annual work plans; Progress reports; Self-assessment.

- The project worked with two different institutions that did not necessarily have the same capacity needs. RIFI is a more research-oriented institution whereas VNFOREST represents an administrative organisation under the Ministry of Agriculture and Rural Development that is now being merged with MONRE. The earlier Finnish supported FORMIS forest management information system falls under the responsibility of VNFOREST. While VNFOREST also participated to some extent in the project's activities under Output 2 (networking), its main concern was with FORMIS (Output 3)[17]. The continued support to FORMIS responded somehow to VNFOREST's needs, but on the other hand, the system had not been updated and the integration of this component was primarily encouraged by MFA due to the earlier provided support to this system through various projects. At the same time, a new EU supported programme is expected to replace FORMIS with a new Management Information System due to the outdated platform and demand for improved functionality. The relevance of the project support to FORMIS can therefore be questioned. Nonetheless, the scenario modelling undertaken under the same output was considered useful, even though data from FORMIS could not be used for this purpose.
- Regarding the other project components, the issues were considered relevant. Although the discussion on the need for better plantation management and longer rotation cycles providing the required quality logs for the local wood production industry (especially furniture) was not new, the introduced research topics, technical solutions and benchmarking of Finnish technologies, were highly appreciated and in line with the capacity needs. A recurring response in the interviews with the partner institutions was that the practical approach and research focus were considered added value to the common practices.

EQ4. To what extent is the project design coherent and are the objectives and the intervention approach logically structured within the Results-Based Management Framework?	
Sources used:	Results-based management framework; Progress reports.

- As with most other ICI projects, the RBMF is relatively simple but has issues with the vertical logic.
- Although the impact is adequately formulated, the indicators are over-ambitious for such a relatively small short-term project. For example, "improved quality of sawn timber that is derived from domestic plantations wood", will take very long to materialise, and the impact cannot be measured in the coming years. Probably, the adoption of some improved plantation management processes would have been a more realistic option.

[17] While VNFOREST was not involved in Output 1, the support still aligned with their mandate regarding improved forest management practices aimed at enhancing the quality of forest products.

- On the other hand, the outcome is defined at output level (increased capacity rather than adoption or utilisation) and is not very different from the defined outputs, which also refer to increased capacity in specific areas. Progress on outcome indicators (reflecting improved capacity) are reported in terms of implemented activities and number of people trained. The real outcome of the project is difficult to measure as the utilisation of the increased capacity is not considered.
- The output indicators are overlapping, and the defined targets are in some cases very different from the indicator formulations.

Coherence and aid effectiveness

EQ5. How coherent is the project with the Country Programme and other MFA supported initiatives, and other Finnish interventions and agencies in the partner countries?

Sources used:	Finland's Country Strategy for Vietnam (2013–2016) and (2016–2020); Stakeholder interviews/FGD in Finland and Vietnam; Project document; Progress reports.

- Finland's "Country Strategy for Development Cooperation with Vietnam (2013–2016)", highlighted two development results: (i) Improved basis for the knowledge-based society; and (ii) Sustainable use and management of natural resources and improved climate sustainability. Due to Vietnam's transformation into a low middle income country with one of the fastest growing economies, Finland's bilateral cooperation strategy is shifting from aid to trade. The overall strategy to guide this process is described in the framework arrangement "Cooperation between Finland and Vietnam (2016–2020)", which builds further on the key areas supported through the Country Strategy. It highlights that rural development, particularly forestry, has been a long-term cooperation sector of Finland. The transition strategy builds further on the provided support and highlights management information system development (FORMIS) and promoting Finnish forest sector products and services. Further support to FORMIS was included in the project, and also the linkage with Finnish private sector was integrated in the project's strategy: "The motive and goal of the Finnish companies' participation in the project is to create business between the countries. Finnish companies will participate in the benchmarking activity in Finland and networking activities in Vietnam" (project document).
- The project document refers to other Finnish supported initiatives in Vietnam, including a study undertaken by Simosol Ltd on "Business Opportunities in Forestry Sector in Vietnam" and had plans for developing a Forest Owners Data Information Centre with the Vietnam Forest Owners Association. In addition, the Finnish Agri-Agency for Food and Forest Development is working in Vietnam with Forestry Cooperatives and their umbrella organisations to support smallholder forestry through a twinning model with MHY Savotta (a forest management association in Northern Savonia Finland. It is not clear to what extent the project has collaborated with these institutions as they have not been further mentioned in the progress reports or in the stakeholder interviews.

EQ6. How coherent is the project with other initiatives, e.g. linkages, coordination, compatibility and synergy with other relevant interventions and agencies in the partner countries?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Annual work plans; Progress reports.

- Other organisations are active in the forestry sector but mostly related to different aspects than the WOODVN project, such as timber legality assurance issues (EU Forest Law Enforcement, Governance and Trade). The Vietnam Timber and Forest Association received support from GIZ, International Tropical Timber Organisation, Food and Agriculture Organization and EU; however, their focus areas do not duplicate those of the project. RIFI also referred to other projects, supported by Australia (research on pilling) and Japan for the introduction of other tree species (that were not successful due low resistance to termite attack). Research is done on wood composites with the International Union of Forest Research Organizations, such as new products from plywood, medium-density fibreboard, wood panels, etc.
- The EU is developing a new forestry programme, which will be managed by GIZ. The programme will focus on improved forest management and conservation and on forest value chains. Support to information management is one of the activities and through the programme, the FORMIS system is expected to be replaced or integrated in the new Management Information System. Luke as well as its local partners are aiming to be involved in the project and provide proposals for different themes within the programme.
- According to RIFI technicians, the Government of Vietnam is already developing policies to incentivise tree growers to adopt improved management practices through the provision of credit and other measures.

EQ7. To what degree do the partner country agencies and higher-level authorities and decision-makers have responsibility and ownership of the projects?

Sources used:	Stakeholder interviews/FGD in Vietnam; Self-assessment.

- The initiative of the project derived from meetings that Luke and RIFI researchers had in conferences as far back as 2017. A fact-finding mission by Luke and consultations with the embassy resulted in further planning. The tender called by MFA included the support to FORMIS. Although partner institutions were not involved in the design of the project document, they commented on the draft version.
- The sense of ownership seems the highest in RIFI, which also manages the project from the local partners' side and is involved in most outputs. Close contact with Luke was maintained throughout the project.
- Due to the restructuring and merging of MONRE with the Ministry of Agriculture and Rural Development, the evaluation team was not able to meet high level decision-makers at the Ministry. However, leadership at the Department of Forestry confirmed the relevance of the project and appreciated the continuation of the long-term support of the government of Finland to the forestry sector and the project, building on those achievements, including the FORMIS

information system (even though it will be transformed in the near future). The creation of opportunities for forestry enterprises to meet, as was done through the project, was also considered of high value. However, the Department is also interested in other emerging issues such as policies regarding EU Forest Law Enforcement, Governance and Trade regulations, origin tracing, carbon markets, multipurpose forests, non-timber forest products, ecotourism, amongst others. It was expressed that a next phase of the project would preferably focus on such issues.

Efficiency

EQ8. What is the progress against the work plan target and time schedule (implementation progress)?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Progress reports; Self-assessment.

- The project officially started in the beginning of 2021, but due to the COVID-19 travel restrictions, actual support and visits by Luke in Vietnam did not take place before the second half of 2022. During that time, some webinars were organised, but the pandemic delayed the implementation of most outputs and therefore a no-cost extension was granted until the end of 2024.
- Most of the planned activities were undertaken but some had to be changed. Over the project period, the costs had increased considerably, which affected the project budget and thus the implementation of some of the planned activities. Fewer expert visits to Vietnam were made than originally planned. The external training on the use of FORMIS database that was planned to be conducted by a Finnish consultation firm was eventually undertaken by Vietnamese experts.
- Restructuring processes (Vietnam Environment Agency (VEA) to Pollution Control Department (PCD) and merging MONRE with the Ministry of Agriculture) also affected the progress. In addition, some changes in leadership took place which further delayed some activities.
- Furthermore, difficulties were reported with respect to the hierarchical management structure and administrative procedures, which caused delays in implementation.
- For other activities, such as the use of FORMIS data for modelling, the assumption that such data could be provided by the system proved incorrect and alternative data had to be used.

EQ9. To what extent are the results and processes feasible and cost-effective?

Sources used:	Project budget; Financial progress reports; Stakeholder interviews/FGD in Vietnam.

- The project had spent nearly 100% of the budget. Of this, 70% comprised technical assistance support by Luke experts and 8% for provided equipment. The actual costs significantly exceeded some budget lines (underestimated travel costs for example) but also included some under-expenditure in other budget lines, such as the outsourcing of FORMIS training to Vietnamese experts instead of a Finnish firm. Overall, the expenditure appears in line with the ICI instructions.
- About eight Luke experts have been involved in the project of whom five provided major inputs.
- With regards to cost-effectiveness, stakeholders from the partner institutions feel that the project was quite useful but value for money was affected by the delays and part of the budget not being used as intended. Nonetheless, most outputs were achieved, although some not fully. Given the relatively limited budget, cost-efficiency is reasonable.
- In general, feedback from respondents indicated that they considered the budget of the project quite low to achieve substantial results and the rather ambitious objectives. Possibly, the wide range of activities divided over two partner institutions might have contributed to that. A more focused approach on fewer areas could have been more cost-effective.

EQ10. To what extent is the project well managed and are M&E systems and risk analysis processes adequately designed and implemented?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Project document; Annual work plans; Progress reports.

- The management procedures were implemented as expected. Eight board meetings were conducted, three in 2021, one in 2022, two in 2023 and two in 2024. The meetings discussed the progress, plans and budget (re-) allocations.
- The MFA Focal Point changed several times during the project implementation and also the ICI FC was replaced. The ICI manual was also modified during the implementation. The new instructions included reporting on the RBMF amongst other changes which were considered more complicated by Luke. It was indicated by MFA and ICI FCs that Luke, due to its research focus, had relatively less experience in overall development cooperation management requirements and mechanisms and required more support in that area than some other institutions.
- The usefulness of the M&E system depends on the quality of the RBMF. As several weaknesses were found, they are also reflected in the M&E system. Impact indicators are not reported on as data are supposed to be collected at the end of the project. But even then, it would be too soon to provide any meaningful data on some indicators, which would require several years more before they can be adequately measured. The outcome indicators refer to output achievements. In brief, the M&E system mostly gathers data at activity level while the real outcome in terms of adoption and institutionalisation is not measured.
- A risk framework was designed and mitigating measurers were identified. The risk matrix was updated at least once (January 2023) but otherwise not referred to in the progress reports. Some risks turned out to be low, such as staff turnover, but others were high and affected the project implementation, such as increased costs.

Effectiveness	
EQ11. What are the main results (planned and unplanned) and to what extent have capacity strengthening efforts been adopted and contributed to the provision of improved services?	
Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Project document; Annual work plans; Progress reports; Self-assessment.

- In terms of achieved outputs, the evaluation shows mixed findings, with some outputs showing better results than others. But as mentioned under EQ8, not all activities could be implemented as planned.
- Output 1: VAFS/RIFI and VNFOREST have upgraded capacity to research the properties of plantation wood and the use of it as raw material. This output focused on the capacity building for carrying out scientific and applied research.
  - Three webinars, two training courses in Hanoi, and two field surveys were organised regarding the state of the wood products industry in Vietnam, a SWOT (strengths, weaknesses, opportunities, and threats) analysis on factors that limit the efficiency of plantation wood use and processing, and training on the study of wood properties and their natural variability and forest management.
  - Three conference papers were accepted: one for Wood Science Economy Poland 2022, another for IUFRO2024 and another for an International Scientific Conference of Hardwood Processing (ISCHP2024) in Coimbra, Portugal. In addition, a report on "Assessment of the Current Situation of Wood Processing Industry in Vietnam" was prepared. Fewer publications were prepared than the eight planned.
  - A training on innovation management and product development was conducted and new laboratory and IT equipment were purchased.
- Output 2: Established and functional network between research institutes, educational institutions, authorities, and non-governmental organisations to promote research and technological development activities of wood product industries.
  - A webinar with Finnish company presentations for 24 participants from Vietnamese stakeholders was conducted.
  - A benchmarking and networking trip to Finland for 12 experts of partner institutions, including a representative from a wood processing company, was arranged in 2022.
  - Two networking meetings were arranged in 2024, one in Hanoi, Aug 27, and one in Quy Nhon, Aug 29 with Vietnamese associations and Vietnamese and Finnish companies (Veisto, Luxhammar, and Avant Wood).
  - A research and development project has been established and completed by a Finnish and a Vietnamese company, in which the application of woodworking technology was pretested with Vietnamese plantation wood material. No further business initiatives were supported or achieved.
- Output 3: Upgraded skills of the partner agencies on utilising the Management Information System for Forestry Sector (FORMIS) for the needs of wood products sector.
  - Two webinars were organised on models and scenarios tools, including the European Forest Dynamics Model (EFDM). Other progress was already listed under Output 1.
  - FORMIS database training was arranged and the EFDM model was tested to define scenarios for production of Acacia. However, it was found that the FORMIS database did not contain adequate data to calculate scenario options for EFDM modelling.
- The quality of the project support was generally acknowledged by the partner institutions and some of the technical staff said that they learned quite a lot from the trainings. The knowledge gained on the use of modern technology for wood sawing, environmentally friendly preservation, and modification were considered very useful by the partner institutions. They appreciated the informal style of Finnish experts and their attention paid to details. Through the project their English language level also increased substantially. In addition, they learned "soft" skills, for example on how to improve teamwork, or how to write scientific papers and proposals. In addition, they appreciated the networking that was supported through the project. One of Luke's experts went to the University of Helsinki and facilitated a good collaboration with the Vietnamese researchers.
- However, RIFI also commented that in some areas they had more experience than Luke, such as in wood preservation. This made the collaboration balanced as both institutions could learn from each other. The practical research focus was highlighted and considered very useful.
- On the other hand, it was also suggested that the involvement of the Silvicultural Research Institute/VAFS would have improved the effectiveness of the project activities, because of their knowledge of growth dynamics and the external factors that affect those aspects.
- The study tour to Finland was emphasised by participants as a very interesting exercise. However, some of the demonstrated technologies, for example on logging, were not considered highly applicable to the situation in Vietnam, where plantations are mostly owned by small scale tree growers. The Finnish sawmills were also working with much larger size logs than the ones produced in Vietnam. The thermal modification technologies were considered to have high potential, for the construction of swimming pools, outdoor furniture and other applications.
- Despite the general positive appreciation of the project, some respondents felt that the project could have been more effective by focusing on a specific concrete technology, facilitating more in-depth research. "The project supported general ideas but was not very specific". In addition, the need for joint research was emphasised.
- In terms of outcome, the latest progress report estimates that 70% of the outcome was achieved. However, the indicators basically refer to implemented activities that do not provide information on the level of capacity built, let alone the degree of adoption or utilisation of the increased capacity or project outputs. The overall feedback from partner institutions seems to indicate that the project has touched upon many aspects, improving knowledge that could be further built on, but has not made a substantial change yet in terms of utilisation.

Sustainability	
EQ12. How sustainable are the results and approaches, in terms of institutional, technical, human and financial capacities, socio-economic conditions, governance and environmental/ climate resilience risks and potential trade-offs?	
Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Project document; Annual work plans; Progress reports; Self-assessment.

- According to partner institutions, staff turnover has not been a major issue and has not affected the sustainability of the project results.
- The researchers from RIFI are still in contact with Luke and jointly look for other donors (including the new EU programme) and prepare project or research proposals. RIFI prepared a concept note for the International Tropical Timber Organisation, of which some of the ideas derived from the WOODVN project.
- Researchers also confirmed that they intend to work on some of the unfinished papers on their own. Through the project activities they have broadened their network, which is expected to provide more opportunities for research and collaboration.
- It is generally recognised that the change of the plantation sector towards the production of high-quality logs is not an easy process and requires adequate time and support to overcome many of the constraints (which are not so much technical as socio-economic), especially for small-scale tree growers. In addition, the advanced technologies on logging and wood processing used in Finland are only partly applicable to the situation in Vietnam and would require certain adaptions. Some of the technologies, such as thermal modification could be applied by only a few of the larger companies. Although the project of course did not pretend to improve the entire value chain, it focused on some specific aspects that raised some interest. However, the institutions will have to build further on these aspects, in terms of research, facilitation and policy development, which will require further support.

Impact	
EQ13. In what ways has the project affected the work of partner country agencies both directly and indirectly, including intended and unintended effects, with regard to developed capacities, (incl. human rights, gender equality, reduction of inequalities, climate resilience, and low-emission development)?	
Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Project document; Annual work plans; Progress reports; Self-assessment.

- RIFI researchers and managers highlighted that the project has helped them changing their mindset on research, showing the value of having a more practical focus. The problems related to short rotation plantations are recognised and new technical solutions are now being better understood. The visit to Finland has broadened their perspective. The knowledge gained on the use of modern technology for wood sawing, environmentally friendly preservation and modification given by the Finnish company representatives was considered very useful, although the challenges for adoption in Vietnam were also recognised. Although the project was useful, it did not have a major impact on the work of RIFI.
- VNFOREST also gained new knowledge and tools from the EFDM model training, but has not yet applied them in daily work.
- The project ensured a relatively high participation of women in the project activities, and the gender aspects were also highlighted in the assessment study of the wood value chain sector. The participation of women in project activities varied from 43% to 71%. The project was noted for its role in promoting gender awareness within the forestry sector, particularly through research initiatives and presentations highlighting women's participation in forestry activities. However, no direct impact was reported on the gender equality status of the partner institutions because of the project support in this area.

EQ14. What are the wider (indicative) impacts of the project on other stakeholders and beneficiaries in the partner country including aspects of HRBA and CCOs?	
Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Project document; Annual work plans; Progress reports; Self-assessment.

- The project aimed at improving the quality of the wood products through better plantation management practices (improved seeds, pruning, thinning, longer rotation cycle) and improved harvesting and wood processing techniques to improve the value chain and getting better quality products fetching higher prices. The idea was that improving the value chain of wood from plantation forests could increase the well-being of the poor in rural areas. However, the impact indicators are quite ambitious for such a small project, as global experience (including from MFA's own supported forestry programmes in Tanzania and elsewhere) shows that such a transition is a difficult and time-consuming process. Currently, most tree growers have small acacia plantations (woodlots) producing low quality timber for chip production, based on short rotation periods and poor management practices. There are several challenges for them to produce at a more commercial level, especially increasing the rotation cycle from four to five years to 12.
- This was also recognised in the project's semi-annual report of 2024: "Currently, the difference between the price of pulpwood and logwood is too small to motivate the forest owners and village communities to grow large-diameter and high-quality wood. In addition, demand for large-diameter timber is low because it is not available enough and has traditionally been replaced by imported timber. While stable high-volume demand of sawlogs is missing, the roundwood supply chains are built on efficient production of low-quality timber for low value adding uses. The insecure raw material supply, on the other hand, makes major industrial investments unattractive or simply too risky." Therefore, although some of the Vietnamese companies have shown interest in adopting new treatment and modification technologies, the (ambitiously stated) impact remains very small. For example, some of the wood

processing and furniture production companies, such as the one that visited Finland (see EQ15), import the wood they need from Malaysia and actually all over the world. Hence, also the impact related to climate resilience, low emission development, and reduction of inequalities remains small.

- Partner institutions recognise opportunities with respect to the wood value chain, especially related to wood processing and trade. Although the project initiated some private sector involvement, more systematic support is needed to create opportunities for enterprises to meet and do business.

EQ15. To what extent did the project have an impact on the Finnish institutions or Finnish private sector in terms of leveraging business opportunities and other linkages?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Progress reports.

- Networking meetings were arranged between Finnish companies, Business Finland, and Vietnamese companies, and a Vietnamese company participated in a study visit to Finland. However, none of these activities resulted in further business arrangements. The Vietnamese company that participated in the visit to Finland, was interested in purchasing thermal modification equipment and inquired about the purchase of a 30m3 oven and the parameters regarding energy consumption. According to the Vietnamese company, despite several attempts to contact the Finnish company, they were not able to get the information on the parameters. The price would have been around EUR 2 million. Eventually, the Vietnamese company purchased the equipment from Italy for EUR 300,000. Although the oven is not as efficient as the Finnish product, due to the price difference and customer support, the company decided to buy the Italian equipment. The company also visited kilns constructed by another Finnish company in Malaysia. One of the mentioned constraints of Finnish machines were that they are too big, based on the requirements in Finland, which is mostly not suitable for Asian conditions. The quality is good, but the prices are very high. The representative of the Vietnamese company recognises substantial market potential for thermal modification equipment in Vietnam and holds Finnish equipment in high regard. However, Finnish companies seem to show limited interest in the Vietnamese market.
- One of the issues raised by various respondents is the fact that for the improvement of the value chain the involvement of key actors, especially representatives of the private sector is required. Luke and its partner institutions are not business experts. This was also recognised by the project. Although participants in various activities included eight different Vietnamese organisations, the role of the private forest owners and their interest groups is important in the development of the timber product value chain. Apart from the involvement of wood processing companies, also forest owner groups should be engaged[18].

[18] Lessons learnt from other MFA supported projects, such as the "Participatory Forest Plantation Project" in Tanzania could have been useful in that respect.

Annex 8: Syke – KGZ-Water III

Consolidating institutional capacities for national surface water quality monitoring in the Kyrgyz Republic

Project Name	Consolidating institutional capacities for national surface water quality monitoring in the Kyrgyz Republic (KGZ–Water III)
Country	Kyrgyzstan
Finnish institution	Syke
Duration	2021–2024 (originally 2023)
Budget	EUR 850,000
Partners	Ministry of Natural Resources, Ecology and Technical Supervision (MNRETS)—initially State Agency for Environmental Protection and Forestry (SAEPF), and Kyrgyzhydromet, the agency on Hydrometeorology under the Ministry of Emergency Situations. Currently there is a restructuring process taking place and water monitoring will most likely be included in the Ministry for Agriculture, Food Security and Land Reclamation
Impact	Integrated Water Resources Management is supported by regular monitoring and reliable data assessments on quality of surface waters.
Outcome	Increased capacities of SAEPF (now MNRETS) and Kyrgyzhydromet to produce and share reliable data on water quality and to assess the status of various water bodies.
Outputs	• Improved capacities of SAEPF and Kyrgyzhydromet to implement the Joint Water Quality Monitoring Programme and to update it. • Improved surface water quality monitoring capacities of the laboratories of SAEPF and Kyrgyzhydromet which broadens their service provision and financial sustainability. • Improved access to surface water quality data for government units and stakeholders. • SAEPF and Hydromet provide information on surface water quality to stakeholders and the public.
Previous projects/phases (title, duration, main focus)	• Water Quality Monitoring in the Kyrgyz Republic, 2011–2014 (FinWaterWEI I). Purpose: Compiling a road map towards a Joint Surface Water Quality Monitoring Programme (JSWQMP). Improved laboratory facilities and skills for work in the field and lab. • Formation of decision-making system aimed at ecological and economic development of Issyk-Kul Lake's territory, based on the results of environmental monitoring, 2014–2018 (as part of FinWaterWEI II). Purpose: Improved water monitoring for management aiming at water protection, sustainable development and adaptation to climate change within the area of Issyk-Kul administrative oblast. Improved JSWQMP, pilot system for environmental data and information assessment covering the Issyk-Kul, strengthened capacities of the SAEPF laboratory at Cholpon Ata. • Capacity Building of the Kyrgyz Republic on Son-Kul Lake Status Assessment for Environmentally Sustainable Development, 2016–2018 (as part of FinWaterWEI II). Purpose: Improved capacity of the Kyrgyz Republic to monitor comprehensively persistent organic pollutants from sediments, water, fish and bottom fauna of the Lake Son Kul. Assessment of the Lake Son Kul environmental state and recommendations for its sustainable management delivered to the decision-makers and local communities. Improved environmental information system.
Remarks	According to Syke, the common thread between all projects is strengthening information management. Two laboratories achieved the accreditation status according to ISO/IEC 17025 (at first the SAEPF laboratory in Bishkek in 2013, and then the regional laboratory in Cholpon Ata in 2018), but this was not maintained for Cholpon Ata.

Relevance	
EQ1. To what extent is the project aligned with–and responds to the development objectives/priorities of the partner country?	
Sources used:	National Development Strategy of the Kyrgyz Republic (2018–2040); "Unity, Trust, Creation" Development Program of the Kyrgyz Republic (2018–2022); Project document; Stakeholder interviews/FGD Kyrgyzstan; Self-assessment.
• The project focused on capacity building of national water quality monitoring and management. This need is directly reflected in Kyrgyzstan's water policy. The importance of water and sustainable management of water resources are widely acknowledged in the National Development Strategy of the Kyrgyz Republic (2018–2040) and in the "Unity, Trust, Creation" Development Program of the Kyrgyz Republic (2018–2022). Both policy documents emphasise the need for using reliable data to provide a solid basis for planning preventive measures to protect	

human health, water ecosystems and their biodiversity. After the Soviet Union collapsed, the water quality monitoring systems were discontinued, and the limited monitoring and assessment capacities have constituted an obstacle for progress in wider application of integrated water resource management.

- The decrease in access to good quality drinking water is a main problem in rural, urban and semi-urban areas where there is absence of piped water or where water systems are technically in poor condition to meet the sanitary standards. Pollution of water resources by chemical and biological substances forms a dangerous health risk. Climate change further increases this risk, and various respondents referred to recent periods of droughts and floods affecting the water availability and quality.
- With regards to regional coverage in Kyrgyzstan there is a lack of monitoring data on surface water quality from the headwaters of the Syr-Darya River. The project builds on the results achieved during the previous three projects carried out in the northern part of Kyrgyzstan focusing on the rivers Chu-Talas (2011–2014), lake Issyk-Kul (2015–2018) and lake Son-Kul (2016–2018). This project's 2021–2024 scope is the southern part of Kyrgyzstan. The goal is to extend the water quality monitoring to cover the Naryn river basin, which is the source for headwaters of Syr-Darya. Interviews with various respondents confirmed that there are major concerns due to gold mining and pollution from agricultural and industrial activities in that area. The continuation of the project, widening its focus to the Naryn river basin is therefore well justified.

EQ2. To what extent is the project aligned with–and responds to the development policies of MFA Finland (including HRBA and CCOs, and more recently benefits for Finnish actors)?

Sources used:	Project document; Stakeholder interviews/FGD in Finland and Kyrgyzstan; Progress reports.

- The project was well aligned with Finland's development policy objectives that were applicable when the project was designed, e.g. (i) food security, access to water and energy; (ii) sustainable use of natural resources; and (iii) improving the economies of developing countries to secure new jobs, livelihoods, and prosperity. Through improved methodologies for assessments of surface water resources and environmental impacts, the projects aim at contributing to sustainable use of water. These are perfectly in line with the Finnish development objectives of providing access to safe water. The project is well aligned to MFA's Theory of Change for Priority Area Climate and natural resources, Outcome 5 Water.
- The project document indicated that promoting gender equality will be integrated into the scope of all project activities and trainings conducted. During the Syke field mission in October 2022, a survey on gender issues was conducted in four different laboratories.
- The project aims at strengthening Kyrgyzstan's water quality monitoring systems to better withstand and adapt to the impacts of climate change. Effective water monitoring is also vital for protecting biodiversity, as it provides essential data and insights to sustain healthy aquatic ecosystems.
- In terms of low emission, the twinning approach centred on learning through practical collaboration, required country visits. However, the project tried to plan various activities in one visit to reduce the number of flights. In addition, some workshops and seminars were expected to be done remotely.
- The project document envisaged the organisation of the third Conference on Environmental Cooperation between Finland and Kyrgyzstan in collaboration with FMI and GTK. This was indeed implemented. Syke also collaborated with FMI on the study tour to Finland. But no other forms of collaboration were mentioned.

EQ3. To what extent does the project respond to the conditions and capacity development needs of the partner agency?

Sources used:	Stakeholder interviews/FGD in Finland and Kyrgyzstan; Project document; Annual work plan; Progress reports; Board meeting minutes; Self-assessment.

- Representatives from the partner institutions confirmed that the project was designed in a participatory manner, responding to the perceived capacity needs of the institutions while building on the previous projects' results with respect to joint water quality monitoring, laboratory improvement and accreditation, and information systems. The previous ICI projects laid good ground for improved water quality monitoring but there was still room for further strengthening the capacities and upscaling the results to the southern regions.
- Plans were prepared on an annual basis with the participation of the partner institutions. The board meeting minutes indicate that annual plans were discussed and ratified.

EQ4. To what extent is the project design coherent and are the objectives and the intervention approach logically structured within the Results-Based Management Framework?

Sources used:	Results-based management framework; Progress reports.

- The RBMF is reasonably well developed with clear outputs and impact defined at adequate level. However, the outcome refers to improved capacity only and not the intended use of that capacity at the end of the project (the expected change/effects of capacity building).
- The indicators are more problematic. Some indicators are put at the wrong intervention level or are even repeated at different levels. For example, the implementation of a joint water quality programme is an indicator at outcome level as well as for Output 1. The implementation is directly supported by the project (although funded by the Kyrgyz government for the last one) and therefore should be put at output level.

- The RBMF includes many qualitative indicators that are not easily to measure. Hence, the progress reports include long narrative explanations on the indicator achievements and some estimated "scores" that appear a bit arbitrary.

Coherence and aid effectiveness

EQ5. How coherent is the project with the Country Programme and other MFA supported initiatives, and other Finnish interventions and agencies in the partner countries?

Sources used:	Finland's Country Strategy for the central Asian Countries of Kyrgyzstan, Tajikistan and Uzbekistan 2021–2024; Stakeholder interviews/FGD in Finland and Kyrgyzstan; Project document; Progress reports; Consultation FMI.

- The project is highly coherent with Finland's Country Strategy for the Central Asian Countries of Kyrgyzstan, Tajikistan and Uzbekistan 2021–2024. The project falls under the strategy goal 4.3 Climate change mitigation/adaptation and sustainable management of natural resources. The development cooperation projects funded by MFA promoted the Finnish development policy approaches, especially in the fields of water management, sustainable use of natural resources and climate change mitigation and adaptation. Syke's ICI projects are directly referred to in the strategy: "The Finnish Environment Institute's projects in Kyrgyzstan, Tajikistan and Uzbekistan will enhance the capacities of the local environment and water officials in progressing towards improved water quality, wastewater, and safe reuse."
- As mentioned, a conference on Environmental Cooperation between Finland and Kyrgyzstan was jointly organised with FMI and GTK, and Syke and FMI collaborated in the organisation of the study visit to Finland.
- Although FMI and Syke both work with Kyrgyzhydromet, the evaluation team was informed that the projects are very different and that no forms of cooperation exist between them.

EQ6. How coherent is the project with other initiatives, e.g. linkages, coordination, compatibility and synergy with other relevant interventions and agencies in the partner countries?

Sources used:	Stakeholder interviews/FGD in Finland and Kyrgyzstan; Project document; Annual work plan; Progress reports; Interviews WB and EU Delegation.

- The project document states that close coordination and collaboration is sought with several EU, Swiss and WB supported projects. The WB supported Kyrgyzhydromet in obtaining a mobile laboratory unit and also agreed to upgrade some of the laboratories. The project has collaborated with the WB to ensure that there is no duplication of efforts (although the planned development of ISEMWO information system was subsequently abandoned as the WB intended to develop a comprehensive data management system). The project also provided support to the identification of data needs and preparation of the ToR for the information system that the WB will develop.
- The EU: Team Europe will support Kyrgyzstan in the water sector through the promotion of an integrated water resource management approach and action entitled "Water Sector Reform Performance Contract in the Kyrgyz Republic". These initiatives will be complementary to the project results and also be implemented through the MNRETS.

EQ7. To what degree do the partner country agencies and higher-level authorities and decision-makers have responsibility and ownership of the projects?

Sources used:	Stakeholder interviews/FGD in Kyrgyzstan; Self-assessment.

- The level of ownership and responsibility of the project varied. While the project participants and management appreciated Finland's support, the sense of ownership did not appear very strong, which could be partly attributed to the many institutional changes and insecurity. The government has not committed adequate financial resources to sustain improvements in water monitoring, although Hydromet appears to have secured funding to maintain and further develop monitoring activities.
- As mentioned for EQ3, the design has been done in a participatory manner, building on the results of the previous projects. During the implementation, the partners could influence the planning process and agree on modifications and budget re-allocations, such as for the procurement of passive samplers and other equipment that was not originally planned for.
- High level decision-makers in the MNRETS and Kyrgyzhydromet are well aware of the project and even the Deputy minister of MNRETS has participated in some board meetings. However, as the project worked with two different partners, they mostly felt responsibility for their own relevant components.

Efficiency

EQ8. What is the progress against the work plan target and time schedule (implementation progress)?

Sources used:	Stakeholder interviews/FGD in Finland and Kyrgyzstan; Progress reports; Self-assessment.

- The project officially started in 2021, but due to the COVID-19 pandemic, Syke's first visit to Kyrgyzstan took only place in May 2022. The pandemic delayed the implementation of most outputs and therefore a one year no-cost extension was granted until the end of 2024. Due to further delays with the procurement of laboratory equipment a further extension was granted until April 2025. The geopolitical situation with the war in Ukraine also influenced the implementation as most of the equipment that is used in Kyrgyzstan normally derives from Russia. But the

project had to procure the equipment from Europe and Kazakhstan, which took much longer. In addition, according to Syke, the transfers of money required substantial efforts and time as detailed explanations to intermediary banks had to be provided on the nature of the transfers between Finland and Kyrgyzstan.

- Most of the planned activities were undertaken, but delays were experienced for some outputs due to several factors. For example, the decision on procurement of laboratory equipment and reagents was postponed for some time due to a plan of the WB to upgrade Kyrgyz water laboratories (USD 2 million). Mid 2023 slow progress was reported on nearly all Output 2 indicators (capacity of laboratories) and some trainings had to be repeated due to staff turnover and other reasons.
- Other planned activities or outputs were abandoned:
  - Water quality classification system: It was acknowledged that additional research and corresponding results are necessary to support the development of such system which cannot be provided through the project. In addition, microbiological water quality data for water and health is also not the direct responsibility of the project partner institutions.
  - Plan for the development of a national reference laboratory on water: The discussions did not materialise in a concrete plan. Instead, the project activities were focused on laboratory training topics and organising national interlaboratory comparison on water quality parameters in cooperation with the Central Laboratory (national proficiency testing provider) under the MNRETS.
  - Implementation and exchange of water quality data from ISEMWO data management system: The system, introduced in previous projects was found to be too demanding and expensive to implement. In addition, the WB is developing a unified data-sharing information system and possibly a separate (or integrated) water information system that could replace the ISEMWO. Project activities related to this were suspended.
- One aspect that seems to have affected the efficiency of the project is the institutional restructuring process that is taking place in the government, which contributes to uncertainties.

EQ9. To what extent are the results and processes feasible and cost-effective?

Sources used:	Budget and (financial) progress reports; Stakeholder interviews/FGD in Kyrgyzstan.

- The last progress report indicates that EUR 781,894 or 92% of the budget was spent. The expert fees (including travel, accommodation and per diem) comprised 69 % and equipment 12%. Other costs represented study tours, trainings etc. These costs appear in line with the 2021 ICI manual. Considering that the training approach focused much on peer-to-peer capacity building and coaching, the relatively high contribution of fees seem justified. However, some consulted respondents found the budget too skewed towards the fees and costs of Finnish experts. Some respondents commented that the budget of the ICI project is very small, and a high percentage is used for the fees of the Finnish experts and conferences.
- In terms of cost-effectiveness, ICI projects in general are quite efficient and have small overheads and costs in producing tangible outputs. In this case not all outputs were achieved and therefore the cost-effectiveness varies somewhat, but overall, it is considered satisfactory.

EQ10. To what extent is the project well managed and are M&E systems and risk analysis processes adequately designed and implemented?

Sources used:	Stakeholder interviews/FGD in Finland and Kyrgyzstan; Project document, Annual work plan; Progress reports; Board meeting minutes.

- The management procedures were implemented as expected. Five board meetings were conducted on a biannual basis: March 2022, November 2022, April 2023, November 2023, February 2024. The minutes indicate that the progress, plans and budget (re-)allocations were discussed. High level officials from the Kyrgyzstan's institutions participated.
- With respect to support from MFA and ICI FCs, Syke reported that the MFA Focal Point changed four times during the project implementation, but the impact was considered minimal. The embassy also provided support when necessary. The facilitation of the ICI FC was considered useful, and the same person continued throughout the project. Her main role has been to support and approve the progress reports. But also some support was provided in the design of the RBMF.
- No specific M&E system was put in place but the level of achievement of RBMF indicators was reported in the biannual progress reports. As most indicators were of qualitative nature, the progress was reported narratively and an estimated score was provided in terms of percentage achieved. The scores appear rather subjectively put and, in some cases, they seem relatively high against the reported progress, rather reflecting the activities performed than the actual outputs achieved. For example, with regards to the intended data exchange of water quality data from ISEMWO data system between responsible institutions via TUNDUK (Kyrgyzstan's national e-government platform), the score was put at 50% but actually no output was achieved as this activity was abandoned. The 50% achievement was based on alternative activities, such as the procurement of ICT hardware and the further development of the DigiLab system.
- A risk assessment was conducted at design phase, but the risk matrix of the project document was not updated or reported on, while some of the risks materialised during implementation. The project manager stated that risk assessment was followed but no major changes took place that were reported.

Effectiveness	
EQ11. What are the main results (planned and unplanned) and to what extent have capacity strengthening efforts been adopted and contributed to the provision of improved services?	
Sources used:	Stakeholder interviews/FGD in Finland and Kyrgyzstan; Project document, Annual work plan; Progress reports; Board meeting minutes; Self-assessment report.

- In terms of achieved outputs, the evaluation shows mixed findings, with some outputs showing better results than others. Particularly Output 3, related to data management systems fell behind but also for Outputs 1 and 2 not all planned activities were implemented and intended targets met.
- Output 1 (joint monitoring): The joint monitoring activities by MNRETS and KyrgyzHydromet were implemented during the project period and in 2024 financed by the partner institutions themselves. The monitoring of the water quality of the River Naryn, initiated in 2023 with the support of the project, was continued in 2024. As a result, approximately 70–75% of the country's water bodies were included in the National Water Monitoring Programme. Also, deep water monitoring is conducted. However, the water quality classification system was not established and microbiological water quality data is not shared electronically because the ISEMWO data exchange system is not operational. The introduced passive sampling method was considered useful for enhancing water quality monitoring, integrating new chemical parameters.
- Output 2 (capacity laboratories): Investments in laboratory upgrades and training, at the technical levels (Kyrgyz accreditation centre, laboratory staff) have increased the capacity of laboratories. The Kyrgyz Accreditation Centre, in collaboration with the central laboratory, integrated ISO 17025 standards into the national system. It is now training and supporting laboratories across the country to achieve standardisation and accreditation. However, from the five project supported laboratories, only the MNRETS' central laboratory in Bishkek was accredited. The others strive for accreditation on some operations but cannot get full accreditation as some of their buildings and equipment are old and do not match the required standard. The plan for establishment of a national reference laboratory was not established. Instead, additional resources were allocated to building capacities for organising national interlaboratory comparison on water quality parameters.
- Output 3 (data management): The DigiLab system was upgraded and some stakeholders (but not all) confirmed its use. They also referred to the use of the MUKit application (Measurement Uncertainty Kit). However, the ISEMWO information system was not implemented and not integrated into the national TUNDUK information and data exchange platform (which was not feasible anyway as it would not include environmental data).
- Output 4 (awareness): Awareness campaigns were implemented such as "Clean Lake Issyk Kul" (as a part of the World Cleanup Day), a climate conference was jointly implemented with FMI and GTK, and a website was established and maintained.
- The interviewed staff from MNRETS and Kyrgyzhydromet commended the quality of the provided support and considered both capacity building, especially the practical approach, and the provided equipment very useful. However, Kyrgyzhydromet stakeholders commented that they did not receive the materials of the training series, which would enable them to continue training of other staff. Syke commented that the aim is to share the materials after the events or though the project website, but in this case it might not have happened. The visits to Finland were also highly valued although some of the practices and methods used are not applicable to Kyrgyzstan. One respondent noted the advantages of local community involvement in water monitoring in Finland and suggested that adopting a similar approach in Kyrgyzstan could lead to better outcomes.
- In terms of outcome, stakeholders confirmed that the provided support and achieved outputs have contributed to enhancing the capacities of surface water quality monitoring. But the level of adoption and institutionalisation of the introduced practices in the institutions varies. While the project support has improved data accuracy and reporting—particularly for key water bodies such as the Naryn River, Son-Kol, and Issyk-Kul— and also contributed to the integration of the ISO 17025 standards in the national system, the results have been uneven.
- With respect to the capacity of laboratories, only the central laboratory is currently well-equipped and meets the ISO standards, while other laboratories remain in very old buildings, lacking modern equipment and adequate technical expertise.
- Although the capacity for monitoring has improved, respondents from Kyrgyz Hydromet (now under the Ministry of Emergency) and the Department of Environmental Monitoring (under the Ministry of Natural Resources) both confirm that joint monitoring will be discontinued in 2025, as each institution will be planning its own monitoring exercises. Syke commented that sampling activities will continue at the established sampling points/stations. This will ensure systematic collection of data and accumulation of longer data sets.
- The establishment of information systems has been the most challenging part. Even during the project implementation, data sharing between partners, for example from their DigiLab systems, proved difficult, resulting in separate implementation. The discontinuation of the ISEMWO system has also affected data management and information sharing.

Sustainability	
EQ12. How sustainable are the results and approaches, in terms of institutional, technical, human and financial capacities, socio-economic conditions, governance and environmental/ climate resilience risks and potential trade-offs?	
Sources used:	Stakeholder interviews/FGD in Finland and Kyrgyzstan; Project document, Annual work plan; Progress reports; Board meeting minutes; Self-assessment.

- For some aspects, such as support to the accreditation process, sustainability might be secured. For example, the law on accreditation standards, as per international standards, was declared and the Centre of Accreditation is part of International Laboratory Accreditation Cooperation. Many laboratories have voluntarily applied for accreditation, paying for the costs themselves. MNRETS had also recently recruited a Quality Manager and continued proficiency testing with some Russian laboratories, which are important elements in maintaining the quality procedures developed within ICI project. Also improved water monitoring is likely to be continued, although independently by the involved institutions. However, sustainability remains a significant challenge in other areas.
- National agencies continue to depend much on donor funding, limiting self-reliance. Although the level of recognition of the project is high amongst decision-makers, the Kyrgyz government's funding remains insufficient to support continued operations, making long-term sustainability uncertain.
- Coordination between state institutions remains weak. Despite the fact that Syke has worked with MNRETS (earlier SAEPF) and KyrgyzHydromet for many years in different projects, it was confirmed that these institutions will not continue their joint water monitoring exercises. The mentioned reasons are the costs involved and different mandates. In general, collaboration and data sharing between institutions appears challenging in the Kyrgyz context. However, there seems to be mandate-based visions and division of tasks between the sectors and actors involved in water monitoring.
- Frequent institutional restructuring processes have taken place over the past years. At the project start the plan for establishing a water state agency was initiated. At that point it was not clear, whether it would be established under the mandate of MNRETS or Ministry of Agriculture. The agency would integrate and coordinate all water-related services and data under one umbrella. There were also discussions on the institutional framework of KyrgyzHydromet. At the time of the evaluation, discussions on institutional changes were still on-going, but according to Syke, after a period of restructurings, KyrgyzHydromet remained under the Ministry of Emergency Situations, while the Department of Environmental Monitoring is expected to remain under MNRETS. Challenges are expected in the coordination of MNRETS with KyrgyzHydromet. Also, the mandates might slightly alter.
- Human resource sustainability remains fragile. Managerial reshuffling within departments disrupts continuity. Although no exact figures could be provided on staff turnover, respondents confirmed that the laboratory staff turnover rate, although not as high as reported in the progress reports, is still considerable for MNRETS and slightly lower for KyrgyzHydromet. The CholponAta laboratory will be moved to another town and the trained staff will not continue working for the laboratory. Although training materials are available, it will take time for MNRETS to train the new staff to the same level.
- Participants noted growing donor interest, particularly from the WB, but this did not result in structured collaboration yet. Although consultations of the evaluation team with the WB confirmed that its involvement was a one-time activity to buy equipment to labs, other sources mention that the WB project "Kyrgyz air quality improvement project" includes construction of new building for the Department of Environmental Monitoring of MNRETS. The new building will host new laboratory facilities with upgraded equipment not only for air quality monitoring but also for water quality monitoring.
- In addition, an Indian company was contracted to develop a management information system. The EU Team Europe might support Kyrgyzstan in the water sector through the promotion of the integrated water resource management.

Impact	
EQ13. In what ways has the project affected the work of partner country agencies both directly and indirectly, including intended and unintended effects, with regard to developed capacities, (incl. human rights, gender equality, reduction of inequalities, climate resilience, and low-emission development)?	
Sources used:	Stakeholder interviews/FGD in Finland and Kyrgyzstan; Project document, Annual work plan; Progress reports; Board meeting minutes; Self-assessment.

- The institutions' capacity has increased to undertake water monitoring. Although the joint monitoring approach might be discontinued, independently the institutions still could cover about 70–75 % of the water bodies in the country. In addition, they use introduced technologies, such as passive sampling devices and deep-water monitoring. Furthermore, the laboratories have improved capacity and equipment which could improve their efficiency and quality. However, the extent to which these technologies will be continued in the future is not clear, especially given the institutional changes, which might have an effect on the actual roles and relationships.
- A survey on gender issues was conducted in four different laboratories in 2022 and the findings were shared in a board meeting, which generated quite some interest. However, no clear effects of this regarding the institutions' policies were reported. Generally, in Kyrgyzstan women receive lower wages and are more present in lower-paid jobs.

EQ14. What are the wider (indicative) impacts of the project on other stakeholders and beneficiaries in the partner country including aspects of HRBA and CCOs?	
Sources used:	Stakeholder interviews/FGD in Finland and Kyrgyzstan; Progress reports.

- According to interviewed stakeholders, the project has improved water monitoring, benefiting both the government and communities through enhanced data availability and analysis. Especially the quality of water data for the strategic transboundary Naryn River and Son-Kol (polluted during the Soviet time and after Soviet collapse) are important but also for the lake Issyk-Kul. Water authorities now have access to more reliable data, supporting better decision-making. In particular, hydropower operators can optimise resource management with more accurate flow and water quality assessments in the Naryn River, while tourism and fisheries in Issyk-Kul and Son-Kol benefit from improved pollution monitoring, helping protect ecosystems and sustain economic activities.
- The project activities related to the water quality monitoring of lake Son Kol that were initiated in the previous phase, had a clear impact according to a respondent at Director level. The lake was heavily polluted with chemicals used to destroy invading insects and people were afraid of using it as a source of drinking water and for recreation activities (i.e. fishing). Through the support of the project the water quality was tested, including environmental parameters (such as flora and fauna changes). The project organised campaigns with the Civil Society Organisations and local communities to remove abandoned Chinese fishing nets from thelake bottom. The clean-up measures were carefully planned to avoid migration of sediments containing harmful substances. After the previous phase this was continued in 2023 and the water is now considered safe to use.

EQ15. To what extent did the project have an impact on the Finnish institutions or Finnish private sector in terms of leveraging business opportunities and other linkages?	
Sources used:	Stakeholder interviews/FGD in Finland and Kyrgyzstan; Progress reports.

- The project, through study tours to Finland facilitated knowledge exchange with Finnish institutions, but no indication was provided of any business opportunities created for Finnish institutions or Finnish private sector actors.

Annex 9: FMI – FUME

FMI-Uzhydromet Meteorology Project

Project title	FMI–Uzhydromet Meteorology Project (FUME)
Country	Uzbekistan
Finnish institution	Finnish Meteorological Institute
Duration	21.02. 2022–31.12.2026
Budget	EUR 2,000,000
Partner institution(s)	Center of Hydrometeorological Service of the Republic of Uzbekistan (Uzhydromet)
Impact	By 2025 the vulnerability of Uzbekistan and Central Asian societies to changing climate and extreme weather events has decreased.
Outcome	Uzhydromet capacity to generate effective and timely weather and climate services and early warnings has improved.
Outputs	1. The hydrometeorological, severe weather and environmental observation capacity of Uzhydromet for Uzbekistan and Central Asian region has been improved. 2. Improved capacity for automated, customer-oriented weather forecast and early warning service production by Uzhydromet. 3. Improved capacity of Uzhydromet in institutional development and in providing hydrometeorological trainings for Central Asian region.
Previous projects/phases (title, duration, main focus)	The FINUZ project was implemented from 2011 to 2014 and focused on climate change adaptation by reducing the risks of loss of life and property caused by severe weather and extreme climate events in Central Asian societies.
Remarks	The project was originally planned to end in 2025, but an extension until the end of 2026 was requested in October 2024. In the beginning, the COVID-19pandemic and related travel restrictions affected the project. Then, the partner institution, Uzhydromet, underwent restructuring in spring 2023, delaying the implementation further. Additional delays occurred due to procurement issues, including the shipping and customs clearance of equipment. In addition, the site survey work took longer than expected.

Relevance	
EQ1. To what extent is the project aligned with–and responds to the development objectives/priorities of the partner country?	
Sources used:	Project document (2021); Forth National Communication of the Republic of Uzbekistan under the UN Framework Convention of Climate Change (2024); Strengthening Hydromet and Multi-hazard Early Warning Services in Uzbekistan (2022); Stakeholder interviews/FGD in Uzbekistan.

The results targeted by the project are well in line with the partner country's context and priorities:

- Uzbekistan ranks among the top 20 countries globally in terms of its exposure to drought and faces above-average levels of flooding, as well as risks from landslides and avalanches.
- In 2018, Uzbekistan ratified the Paris Agreement. To meet the obligations under the Agreement, several laws, decrees and resolutions of the President and Cabinet of Ministers have been adopted, national programmes and institutional reforms have been initiated, as well as a set of measures and actions implemented. For example, "On measures to further improve the activities of the Centre for Hydrometeorological Service of the Republic of Uzbekistan" (PP-4896 dated 17.11.2020), Uzhydromet is defined as an authorised state body in the field of hydrometeorology, climate change, as well as monitoring of environmental pollution. Further on, "On hydrometeorological activities" (ZRU-745 of 12.01.2022), one of the main directions of the state policy in the field of hydrometeorological activities are: i) forming, improving and ensuring the functioning of a unified state system of hydrometeorological observations and measurements; ii) providing public administration bodies as well as population with information on actual and forecasted state of the natural environment, its pollution, including emergency information; iii) conducting scientific basic and applied research in the field of hydrometeorology, climate change, environmental pollution and international cooperation, including under the United Nations Educational, Scientific and Cultural Organization.
- Since gaining independence, Uzhydromet has served as the WMO's Regional Specialised Meteorological Centre for Central Asia.
- Some interviewees referred to various presidential / government decrees, such as those concerning the installation of air quality monitoring stations around the country as examples of the relevance of the project and its activities.

EQ2. To what extent is the project aligned with–and responds to the development policies of MFA Finland (including HRBA and CCOs, and more recently benefits for Finnish actors)?	
Sources used:	Report on Development Policy Across Parliamentary Terms (2021); Report on International Economic and Development Cooperation (2024); Theories of change and Aggregated Indicators for Finland's Development Policy (2023); Project document; Progress reports.

- The project was designed and planned under the previous development policy guideline (MFA, 2021a) and it is well in line with one of its policy priorities: Climate change, biodiversity and sustainable management and use of natural resources. In addition, the current policy guideline (MFA, 2024b) identifies *climate action* as one of Finland's areas of strength, with a particular emphasis on providing expertise in weather observation and early warning systems.
- Outcome 3 in MFA Finland's Theory of Change for the Priority Area "climate and natural resources" is meteorology and disaster risk reduction. The project contributes especially to Output 1 under this Outcome: Partner countries' capacity to generate effective and timely weather and climate services and early warnings has improved.
- The HRBA and CCOs have been discussed in the project document, aiming that at least the minimum standard for CCOs (do no harm) is fulfilled. The project especially contributes to the CCO on climate resilience by increasing preparedness to adopt the effects of changing climate through improving hydrometeorological observation capacity and skills for producing weather and early warning services. In the progress reports, disaggregated data on men's and women's participation in the training events as well as study tours is usually provided. The ICI FC has pointed out that more attention should be paid during implementation including reporting on HRBA, gender equality and non-discrimination.
- Although the project was designed and planned before the current policy emphasis on the benefits for Finnish actors, the project document emphasises the opportunities for Finnish private sector. FMI cooperates closely with Vaisala, see EQ15.

EQ3. To what extent does the project respond to the conditions and capacity development needs of the partner agency?	
Sources used:	Concept note; Project document; Strengthening Hydromet and Multi-hazard Early Warning Services in Uzbekistan (2022); WB's website on Central Asia Hydrometeorology Modernization Project (CAHMP); Stakeholders interviews/FGD in Uzbekistan and Finland.

- The priority needs were identified based on FMI's earlier assessments and cooperation with Uzhydromet (FINUZ 2011–2014), as well as the discussions with Uzhydromet after the FINUZ project. There has also been a fact-finding mission (November 2022) assessing the level of technical capacity of the Uzhydromet and analysing needs.
- Based on the interviews with Uzhydromet representatives, the priority needs have been identified well. It was also emphasised that Uzhydromet had actively sought out and compared different organisations to find a suitable cooperation partner that could meet its needs (referring also to the presidential decree on improving hydrometeorological services, see EQ1).
- Based on the interviews, there is an ongoing dialogue between the partners on the needs of Uzhydromet staff (e.g. for training).
- FMI has also drawn on other donors' assessment studies and experiences confirming gaps in data management and communication of forecasts and warnings. For example, the WB provided its support for the modernisation Central Asian (including Uzbekistan) hydrometeorological and climate services in 2012–2022 (CAHMP). The WB's road map prepared in 2022 on "Strengthening Hydromet and Multi-hazard Early Warning Services in Uzbekistan", also discusses the capacity gaps and needs, bringing up e.g. a need to improve capacity to produce, manage, translate and communicate hydromet data and information, including forecasts and warnings for stakeholders and end-users.

EQ4. To what extent is the project design coherent and are the objectives and the intervention approach logically structured within the Results-Based Management Framework (RBMF)?	
Sources used:	Updated Results-Based Management Framework (2023); Strengthening Hydromet and Multi-hazard Early Warning Services in Uzbekistan, Road map (2022).

- The objectives and the intervention approach are logically structured within the RBMF. The outputs and the Outcome (Uzhydromet capacity to generate effective and timely weather and climate services and early warnings has improved) seem to be set at relatively realistic levels, considering the project activities and resources available. It is important to note that although the project provides numerous systems and related devices (e.g., lightning detection, air quality sensors, SmartMet), its training activities typically reach only 10–35 people per subject, including master trainers. According to interviews, around 120 staff members have participated in various training events and study tours. However, Uzhydromet is a large organisation, with approximately 300 staff at the central office and around 1,500 in regional offices (according to the WB's 2022 roadmap). This highlights the challenge of scaling training efforts to ensure widespread capacity development across the entire organisation.
- Many indicators are linked to institutional and technical capacity-building, which aligns with the project's objectives. However, most of the indicators do not have its own baseline and target limiting the ability to measure progress and assess the project's effectiveness. In addition, the difference between impact and outcome indicators could have been made sharper; currently, both levels include service improvement metrics. Overall, while there is gender-disaggregated data, outreach to vulnerable groups is not clearly present.

- The impact statement is at a rather ambitious level: By 2025 the vulnerability of Uzbekistan and Central Asian societies to changing climate and extreme weather events has decreased. Forecasting services and early warning systems play a very important role in producing the information needed, but for reducing vulnerability at the country-level and across the Central Asian region, many other actions are needed which also take time to implement.

Coherence and aid effectiveness

EQ5. How coherent is the project with the Country Programme and other MFA supported initiatives, and other Finnish interventions and agencies in the partner countries?

Sources used:	Finland's Country Strategy for the Central Asian Countries of Kyrgyzstan, Tajikistan and Uzbekistan 2021–2024 (2021); Finland's Country Programme for the Central Asian countries of Kyrgyzstan, Tajikistan and Uzbekistan 2021–2024 (2021); Progress reports; Stakeholder interviews/FGD in Finland.

- The project is very well in line with the Central Asian Country Strategy and Country Programme (2021–2024). The Country Programme includes outcomes such as "Reducing health risks and the risks of loss of life and property caused by severe weather, climate and environmental events" and "Better preparedness to adapt to and mitigate the effects of climate change" which both are linked with the project's outcome (Uzhydromet's improved capacity to generate effective and timely weather and climate services and early warnings).
- FMI has two other ICI projects in the Central Asian region, specifically in Kyrgyzstan and Tajikistan. The first output of the FUME project aims at improving hydrometeorological, severe weather and air quality observation capacities also across Central Asia. Moreover, Output 3 includes the improvement of capacity of Uzhydromet's Tashkent Hydrometeorological Professional College, which serves as the WMO-designated Regional Training Centre for the Central Asia. Regional collaboration among the three project countries has been strengthened by organising joint activities, e.g. training events and study tours.
- GTK implemented its ICI project in Uzbekistan in 2022–2024. In November 2022, FMI, GTK, Uzhydromet and the State Committee of the Republic of Uzbekistan on Geology and Mineral Resources organised a high-level climate change seminar (Towards climate resilience and rational use of groundwater resources). In addition, in 2023, there has been an information sharing meeting between FMI and GTK.

EQ6. How coherent is the project with other initiatives, e.g. linkages, coordination, compatibility and synergy with other relevant interventions and agencies in the partner countries?

Sources used:	Strengthening Hydromet and Multi-hazard Early Warning Services in Uzbekistan - Road map (2022); Progress report; UNDP Uzbekistan website; Stakeholder interviews/FGD in Uzbekistan and Finland.

- The FUME project has linkages to other projects. It seems that these projects are more complementary than overlapping, and they create also synergies from the Uzhydromet's point of view.
- FUME has been listed as one of the projects in the WB's Road Map (2022). Several of the listed projects have ended, such as WB's "Central Asia Hydrometeorology Modernization" project, CAHMP (2012–2022), which now seems to get a successor, since CAHMP–II is currently under preparation. FMI has participated in the CAHMP–II workshop in November 2024 to share updates and ensure alignment on ongoing initiatives, tools, and services aimed at enhancing hydrometeorological services.[19]
- According to the minutes of the 3rd Project board meeting, United Nations Environment Programme (UNEP) has funding to conduct an air quality assessment for the city of Termez (capital for Surxondaryo region) in cooperation with FMI and Uzhydromet. This will have synergies and added value with FUME air quality activities.
- Zamin Foundation has had a joint project in 2020–2023 with Uzhydromet on automation of atmospheric air pollution monitoring and this cooperation also continues[20]. This project and the FUME were mentioned by Uzhydromet representatives as complementing each other: FMI has supported Uzhydromet to have automated air quality stations and the Zamin funded project provided funding for the expansion of these stations. In addition, the Zamin project has also aimed to develop a national air quality index. FMI's project provided an important contribution for this, although the development of national air quality index has not been the target of FUME. During a study tour to Finland, various air quality indexes were presented and discussed with the Finnish experts, i.e. the project provided international expertise and best practices to support development work.
- UNDP Uzbekistan is implementing the "Enhancing multi-hazard early warning system" project (2021–2027), funded by the Green Climate Fund of approximately USD 10 million. The first component of the project focuses on modernising the observation network, enhancing the system, and developing climate risk models. The second component is being implemented in collaboration with the Ministry of Emergency Situations and aims to strengthen Uzbekistan's early warning system. The support includes modernising and automating the ministry's warning infrastructure, and the development of a mobile application for public warnings and procuring additional equipment to enhance the delivery of alerts to communities. The third component focuses on strengthening community capacity, raising awareness of climate risks, and improving disaster preparedness. There have been discussions between UNDP and FMI about the collaboration which would benefit both projects. The UNDP project is especially interested in the integration of SmartMet software, since SmartMet can be used as a visualisation tool.

[19] See https://wmo.int/media/project-update/wmo-and-world-bank-cooperation-action-supporting-central-asia-hydromet-services

[20] See https://zaminfoundation.ngo/en/events-info/9c4c953e-14fc-4471-8b4a-cbd2aa7a2cb3?from=events

EQ7. To what degree do the partner country agencies and higher-level authorities and decision-makers have responsibility and ownership of the projects?	
Sources used:	Progress report; Stakeholder interviews/FGD in Uzbekistan.

There is sufficient evidence to conclude that a high level of ownership and respect for responsibilities exists.

Uzhydromet was able to influence the design and implementation of the project by:

- Following the presidential decree on enhancement of hydrometeorological observation through modern equipment and methodologies, various countries' experiences in hydrometeorology and environmental monitoring were examined, including those of Finland, Switzerland, South Korea, Kazakhstan, China, and Russia. Among these, the most relevant expertise for improving environmental monitoring was found at FMI. Its institutional and organisational framework, real-time data-driven weather forecasting programs, and automated early-warning system stood out as exemplary models.
- Carrying out a fact-finding mission in the beginning of the project implementation, which analysed capacities, needs as well as possible gaps between the plans and the reality and resulted in the update of the implementation plan.
- Planning discussions with the top management and e.g. head of the units/sections based on the interviews. In addition, it was highlighted that there is an on-going discussion and information sharing between the partners e.g. on the capacity strengthening needs of Uzhydromet staff.
- Uzhydromet's top management clearly supports the project and has taken ownership of it by:
  1) Supporting the maintenance and operation of the newly installed equipment, i.e. Uzhydromet has a dedicated Technical Supervision Department responsible for overseeing and ensuring the proper functioning of all received equipment. This department plays a crucial role in maintaining the long-term efficiency of the systems in place. Additionally, the government has allocated a dedicated budget line for maintenance and technical support within the regular state budget.
  2) Resolving the issue of taxation on imported equipment: although government regulations allow tax exemptions for certain projects, this exemption is not granted automatically. Uzhydromet submitted the required documentation to customs authorities, demonstrating that the equipment was part of a technical assistance initiative under the government's investment program. As a result, tax exemptions were secured for three separate procurements, leading to total savings of approximately EUR 100,000.
  3) Nominating technical staff from both central and regional offices to participate in all capacity-building events and closely monitor their progress to see that there is effective transfer and absorption of newly acquired skills within the organisation.
- A government regulation now requires each city and district administration to allocate funds for procuring and installing monitoring equipment in their respective areas. This will ensure a nationwide rollout of air quality monitoring systems.

Efficiency

EQ8. What is the progress against the work plan target and time schedule (implementation progress)?	
Sources used:	Progress reports; Stakeholder interviews/FGD in Finland and Uzbekistan.

- The project was originally planned to be implemented from 2022 to 2025. It started in February 2022, but due to the COVID-19pandemic, only some remote activities could be carried out. In practice, full implementation began in autumn 2022. After that, there was a restructuring process of Uzhydromet in spring 2023 due to the reduction of the number of administrative units of the Uzbek Government. Because of this restructuring, the project was halted and planned activities postponed. There were also delays in procurement, and subsequent shipping and custom clearing procedure of equipment, which in turn, caused delays in the project implementation. In addition, the site survey work for the lightning detection system took longer than expected. The project requested and received an extension of the project until the end of 2026.
- The tax exemption issue (see also EQ7) delayed the implementation from 2023 to early 2024. After resolving the issue, activities such as the procurement of SmartMet equipment and the delivery of training could proceed. Based on the latest progress report (06.2024–11.2024), the project is now progressing relatively well.

EQ9. To what extent are the results and processes feasible and cost-effective?	
Sources used:	Financial reports.

- The project has spent EUR 1,025,015.14 until the end of November 2024, which is around half of its budget (51%). The major part (46%) has been used for the fees of the Finnish experts. The costs of the capacity development have been 59% of the spending. The partner institution's share of the costs so far has been 43%, major part of it has been the purchased equipment (34%). The subcontracted services have formed 4% of the costs.
- The cost structure is well in line with the current ICI project's budget rules (MFA, 2023b), which stipulates that at least 60% of costs should be allocated to capacity building, and the costs directly benefitting the partner country should be at minimum 20% of the total costs and subcontracting costs should not be more than 15%. Ensuring that sufficient budget is left for the final year, in particular for follow-up activities, institutionalisation efforts and possible scaling up of training outcomes would be important.

EQ10. To what extent is the project well managed and are M&E systems and risk analysis processes adequately designed and implemented?	
Sources used:	Progress reports; Memorandum of Understanding; Stakeholder interviews/FGD in Uzbekistan.

- Some of the project progress reports are quite short and not all data (e.g. annual data) and information are available, as the ICI FC pointed out in the last progress report.
- In the MoU, it has been agreed that the Project Board meets twice a year. According to the progress reports, there have been three meetings: two in spring 2023 and one in autumn 2024. While the COVID-19pandemic in 2022 and the restructuring of Uzhydromet in spring 2023 affected the scheduling of these meetings, it remains unclear why there was a gap of nearly 1.5 years between meetings in 2023 and 2024.
- Risk assessment was made and included in the project document. The risk tables have also been updated in 2023 and 2024.
- During interviews, Uzhydromet representatives noted that the project has been well managed and implemented.
- Many interviewed professionals, particularly from regional offices, indicated that this was their first exposure to training on the new weather forecasting system. The consistently positive feedback reflects not only the high quality and professionalism of the trainers and interpreters but also the effective planning and logistics of the training events. This suggests strong project management and a well-structured capacity-building approach, which likely contributes to greater participant engagement and confidence in adopting new systems.

Effectiveness

EQ11. What are the main results (planned and unplanned) and to what extent have capacity strengthening efforts been adopted and contributed to the provision of improved services?	
Sources used:	Progress reports; Stakeholder interviews/FGD in Uzbekistan and Finland.

- The project is currently about halfway through and due to the implementation delays (see EQ8), none of the outputs have been fully achieved (based on the latest progress report). However, Output 2 (Improved capacity for automated weather forecast and early warning service production by Uzhydromet) is nearing completion. The central SmartMet servers have been installed, data integration completed and workstation installations at the regional centres are underway. In addition, two SmartMet training sessions (September 2024, February 2025) have been conducted, and the system is already in use at the central office.
- The earlier cooperation with Uzhydromet under the FINUZ (2011–2014) contributed to strengthening the weather monitoring system. Automated meteorological stations were installed at Uzhydromet and Tashkent Hydrometeorological Technical Collage, accompanied by capacity building activities on technical use and maintenance of these stations, as well as data collection, validation and processing. This support has enhanced Uzhydromet's ability to monitor weather conditions more effectively.
- The interviewed Uzhydromet staff members were highly satisfied on the quality of capacity development (such as training events, study tours, hands-on work and training, regular communication through emails, messages in the Telegram group). The training events were described as "highly effective", "exceptionally high quality", "well-organised", and study tours were found very useful.
- Training on various systems has been provided, though installations—such as SmartMet workstations in regions, lightning detection sensors, air quality sensors, SmartMet Alert, and the SILAM model—are still ongoing, making it difficult to fully assess knowledge adoption. The SmartMet system is in use at the central office, with trained staff confident in its use and able to train others, though not yet utilising all its features. In the area of air quality monitoring, Uzhydromet is conducting comparative analyses, developing national standards for PM 2.5, PM 3 and PM 10 pollutants, and creating a national air quality index, based on the valuable methodological support received from FMI.

Sustainability

EQ12. How sustainable are the results and approaches, in terms of institutional, technical, human and financial capacities, socio-economic conditions, governance and environmental/ climate resilience risks and potential trade-offs?

Sources used:	Progress reports; Stakeholder interviews/FGD in Uzbekistan.

- Uzhydromet was restructured in spring 2023, however, according to the interviews, not all departments experienced significant changes. For instance, the. air quality department and forecasting department remained largely as they were. There was some conflicting information about staff turnover, some interviewees considered it a challenge, while others did not view it as an issue. What could be observed when interviewing the staff members was that at least some of the Unit Heads had been appointed to new positions (either as a head of other unit, or for other position) within the Uzhydromet. Staff turnover is identified as a risk in the project risk matrices, and as mitigation measures, information sharing to new persons, providing training for wider group of experts, preparing and sharing technical guidance documents (SOP) and training materials, and training master trainers are mentioned to be applied.
- As the project has been running for almost two years, it is still too early to assess the extent to which the new skills have been incorporated into Uzhydromet's work practices and the sustainability of the project results. For example, the SmartMet Programme is now being used at the central office, but there are no internal instructions that would require it to be used e.g. in the daily work of the forecasting department. When discussing the programme, it was pointed out that it should be used for at least one year (including all seasons) to be able to assess if the programme is effective. To gain a comprehensive understanding of its impact, a period of approximately five years was suggested.
- For regional meteorological aviation stations, regulation concerns for the future include a need for having IT support in place as well as to have another round of training in order to discuss questions that will arise from the first practical application of SmartMet. There is also a need for the development of a detailed user guide. It is anticipated that the system will be updated online, which will require regular upgrading qualifications. As shared by the interviewees, a clarification is still needed regarding whether the use of SmartMet in Uzbekistan will require International Civil Aviation Organisation certification. Additionally, it is uncertain whether technical staff will need to be certified in its use in accordance with international standards and requirements. Further discussions and guidance are necessary to ensure compliance and readiness for implementation. The IT staff is also trained in maintenance of the system. It is hoped that they will be available 24/7 to provide immediate support to the regional offices in the event of system failures.
- Factors contributing to the sustainability of project results:
  1) Presidential and government's decrees on modernisation of hydrometeorological services (see EQ1) accompanied by the allocation of respective budgets.
  2) Relatively high level of ownership of Uzhydromet, including the establishment of a dedicated Technical Supervision Department responsible for overseeing and ensuring the proper functioning of all received equipment (see EQ7).
  3) Strong cooperation with national experts, fostering close working relationships that enhance knowledge transfer and capacity building; highly motivated national experts; quality of Finnish experts. (see EQ11)
  4) Support from other, national and international donors (e.g. Zamin foundation, UNDP, UNEP, WB) for modernising hydrometeorological services and development of early warning services. (see EQ6)

Impact

EQ13. In what ways has the project affected the work of partner country agencies both directly and indirectly, including intended and unintended effects, with regard to developed capacities, (incl. human rights, gender equality, reduction of inequalities, climate resilience, and low-emission development)?

Sources used:	Stakeholder interviews/FGD in Uzbekistan; Progress reports.

- It is difficult to assess the effects at this stage, as the project still has nearly two years remaining. Interviewees mentioned that the capacity of Uzhydromet staff have been strengthened in air quality monitoring and weather forecasting. It was also mentioned in the interviews that the development of the air quality monitoring systems (and air quality index although not focus of this project) seems to be actively progressing, and that there are also synergies with nationally funded projects.
- The support already provided to Tashkent Hydrometeorological Technical Collage in the previous cooperation project (training, material, automatised meteorological station) has enhanced the quality of education at the centre. The centre offers various short-term courses for participants from Central Asian countries, contributing to the professional development of staff in the field of hydrometeorology. This builds long-term institutional and human capacity, essential for sustaining climate monitoring and adaptive responses beyond the project's lifetime.
- In the interviews, potential impacts of the project were also noted. In Central Asia, atmospheric sounding is not used in weather data collection. The new model will change this situation by integrating modern methods, such as the use of satellite data and artificial intelligence technologies. This will provide more detailed and visible monitoring of atmospheric conditions. With the help of artificial intelligence, it will be possible to analyse large amounts of data in real time, identify hidden patterns and improve the accuracy of forecasts. Satellite data, in turn, will provide

information on the state of the atmosphere at different altitudes and in hard-to-reach regions. Thus, the implementation of this model will create conditions for a more accurate and comprehensive understanding of weather processes in Central Asia, which will significantly improve the quality of meteorological forecasts.

EQ14. What are the wider (indicative) impacts of the project on other stakeholders and beneficiaries in the partner country including aspects of HRBA and CCOs?

Sources used:	Stakeholder interviews/FGD in Uzbekistan.

- As noted earlier, the project is still on-going. However, the development of the air quality monitoring system, as previously mentioned, is likely to have wider impacts. This is supported by a government regulation requiring that each city and district administration allocate funds for procuring and installing monitoring equipment in their respective areas. This will ensure a nationwide rollout of air quality monitoring systems, which in turn will support assessments related to public health and environmental impacts and planning strategies for emission reduction.
- FUME has so far built the capacities of Uzhydromet related to early warning services by training staff members on SmartMet Alert. The programme is not yet in use. In addition, there is a plan to implement Uzhydromet's early warning services at a community level. Since the UNDP project is strongly focusing on the improvement of early warning systems in Uzbekistan, including strengthening community capacity and mobile application for public warnings, collaboration between the two projects could help generate broader and more sustainable impacts.

EQ15. To what extent did the project have an impact on the Finnish institutions or Finnish private sector in terms of leveraging business opportunities and other linkages?

Sources used:	Progress reports; Stakeholder interviews/FGD in Uzbekistan and Finland.

- FMI is working closely with Vaisala, whose lightning detection sensors are being used in the FUME project. For Vaisala, an ICI project is an important entry point to the country providing opportunities to introduce their systems. The light detection network which is now build does not cover the whole country and might provide business opportunities for the future. Moreover, the system can serve as a reference model for neighbouring countries planning to build similar networks, potentially enabling cross-border data exchange and regional cooperation.

Annex 10: FMI – INDFIN

Enhancing BMKG Capacity on Weather Climate and Air Quality Forecast and Warnings to Better Serve the Indonesian Society

Project Name	Enhancing BMKG Capacity on Weather Climate and Air Quality Forecast and Warnings to Better Serve the Indonesian Society (INDFIN)
Country	Indonesia
Finnish institution	Finnish Meteorological Institute
Duration	2023–2025
Budget	EUR 500,000
Partners	Agency for Meteorology, Climatology, and Geophysics of the Republic of Indonesia–Badan Meteorologi, Klimatologi, dan Geofisika (BMKG)
Impact	The Indonesian society is better prepared to air quality and meteorological hazards due to the enhancement in the weather, aviation weather and air quality forecast services and the products generated by BMKG.
Outcome	BMKG has improved tools and capacity to produce more accurate weather forecast and weather aviation services as well as air quality forecasts and warnings for the safety of the Indonesian society.
Outputs	1. Enhanced BMKG capacity for weather forecasting and service production. 2. Air quality dispersion model operational and used for forecasting 3. Improved capacity of BMKG on weather Aviation instrumentation use and maintenance.
Previous projects/phases (title, duration, main focus)	In 2014, FMI and BMKG already signed a Memorandum of Understanding and FMI has been supporting the capacity building of BMKG through several expert visits and participation in different seminars and training workshops organised in Indonesia. The relationship has been continuously strengthened through high-level meetings and ongoing discussions between the two agencies.
Remarks	

Evaluation Question/Criteria	*Findings*
Relevance	
EQ1. To what extent is the project aligned with- and responds to the development objectives/priorities of the partner country?	
Sources of information used:	Policies Vietnam; Project document, stakeholder interviews, and self-evaluation reports.

- Indonesia is one of the world's most vulnerable countries for natural hazards and climate phenomenon, situated on the Pacific Ring of Fire (an area with a high degree of tectonic activity). The country copes with the constant risk of volcanic eruptions, earthquakes, floods, and tsunamis. In addition, man-made disasters such as forest fires caused by traditional slash-and-burn culture, particularly on Sumatra and Kalimantan islands, have far-reaching environmental impacts. Due to its large size, with over 17,000 islands, the situation is very diverse, which complicates the collection and analysis of data and early warning systems.
- The project responds directly to Indonesia's policy priorities, which include developing early warning systems for extreme weather events and having a proper risk management system. The project is well aligned to the 20-year development plan, "Rencana Pembangunan Jangka Panjang Nasional 2005-2025". At the 2021 United Nations Climate Change Conference (COP26) in Glasgow, Scotland, the government submitted an updated slate of the Nationally Determined Contributions to the UN. The plan included new measures for adaptation and resilience, including the early warning systems. Climate change mitigation and adaptation have become pressing concerns, making the development of meteorological and climate capacities essential for informed decision-making.
- Given Indonesia's growing urban pollution concerns, the demand for reliable air quality data has increased. Government agencies and the public require accurate forecasts to mitigate health impacts and implement effective policies.
- The activities are designed to acknowledge the Indonesian Government and BMKG's objectives and priorities for developing Indonesia's meteorological and environmental sectors.

Evaluation Question/Criteria	Findings
EQ2. To what extent is the project aligned with- and responds to the development policies of MFA Finland (including HRBA and CCOs, and more recently benefits for Finnish actors)?	
Sources of information used:	Project document; Report on Development Policy Across Parliamentary Terms (2021); Report on International Economic Relations and Development Cooperation (2024); Theories of Change and Aggregated Indicators for Finland's Development Policy (2023); Stakeholder interviews/FGD in Finland and Indonesia; Progress reports.
• The project has been designed and planned during the previous development policy guideline (MFA, 2021a) and is well in line with one of its policy priorities: climate change, biodiversity and sustainable management and use of natural resources. In addition, the current policy guideline (MFA, 2024b) has climate action as one of Finland's areas of strength. The project is also aligned with MFA Finland's Theory of Change for Priority Area "Climate and Natural Resources", Outcome 3: "Vulnerability of all people to extreme weather events and natural disasters has decreased and their resilience to them increased". • Weather and climate services, and early warning systems aimed at reducing vulnerability to extreme weather and natural disasters have been emphasised in various policy documents. The CCO of climate resilience, in terms of enhancing Indonesia's weather and climate services is a core objective. In 2019, Finland and MFA became one of the convening partners in the Risk-informed Early Action Partnership, intended to protect a billion people in the developing world from extreme weather by 2025. The INDFIN project clearly responds to the Risk-informed Early Action Partnership objectives by providing practical solutions in severe weather and environmental disaster forecasting and the early warning dissemination process. • The project document states that gender equality will be promoted at every level throughout the project to ensure that all activities are at least gender sensitive, and whenever possible gender progressive. Specific actions are listed. Gender-disaggregated data, as well as data on disabilities and age of participants in project activities will be collected where possible. A gender workshop is planned for the end of 2025.	
EQ3. To what extent does the project respond to the conditions and capacity development needs of the partner agency?	
Sources of information used:	Stakeholder interviews/FGD in Finland and Indonesia; Project document; Annual Work Plan: Progress reports; Self-assessment.
• FMI conducted several fact-finding visits to assess existing gaps within BMKG's operational framework. These visits were critical for identifying the potential for optimising existing modalities, including exploring the role of climate change and air quality monitoring. FMI also identified best practices to maximise the benefits of collaboration between BMKG and Finnish experts. Through discussions and compromises, the project's goals were fine-tuned to ensure relevance and applicability to the local context. • According to BMKG managers and technical experts, the INDFIN project is highly relevant to BMKG's capacity development needs. Before the project, BMKG had limited experience in numerical weather prediction (NWP) model verification. Through the collaboration, BMKG has developed greater expertise in this area. The training on Lidar and Radar analysis significantly advanced BMKG's capabilities in utilising remote sensing technologies which were new to the agency. Furthermore, the project has proven to be crucial for the introduction of the System for Integrated modeLling of Atmospheric composition (SILAM), an air quality modelling technology that had never been implemented at BMKG before. Prior to this collaboration, BMKG had to develop air quality models independently. Now, the SILAM model is running daily in semi-operational mode, becoming the main tool for air quality forecasting. • However, the project works with several departments and not all technical staff has been equally involved in the design process. In the FGD with technicians a comment was made that an improved needs assessment and modality assessment could have been undertaken, suggesting that the alignment to BMKG's needs could have been better. • The instrumental maintenance support provided by FMI and related training were also highly relevant. BMKG now benefits from state-of-the-art meteorological instruments, with significantly reduced maintenance costs. These tools are regarded as some of the best equipment BMKG has ever had access to, improving the agency's operational capacity.	
EQ4. To what extent is the project design coherent and are the objectives and the intervention approach logically structured within the Results-Based Management Framework?	
Sources of information used:	Results-based management framework; Progress reports.
• The RBMF is well developed but as with most other ICI projects the outcome has been defined at output level (BMKG has improved tools and capacity) rather than reflecting the actual use and application of the increased knowledge and tools. Some of the outcome indicators refer to utilisation though. • It is not clear to what extent baseline values have been collected. For example, Impact Indicator 3 indicates that the satisfaction of the BMKG stakeholders will be assessed at the beginning of the project, including the airport authorities and the air navigation services. • Some of the indicators are not clearly defined in a SMART manner, for example, Outcome Indicator 1: "Comprehensiveness of the weather forecasts and aviation forecast provided by BMKG". The target is clearer (BMKG has expanded the weather portfolio services in at least 2 new products for users) but the indicator and target definitions should not be different. The target should only state the intended value of the indicator at the end of the project.	

Evaluation Question/Criteria	Findings
Coherence and aid effectiveness	
EQ5. How coherent is the project with the Country Programme and other MFA supported initiatives, and other Finnish interventions and agencies in the partner countries?	
Sources of information used:	Finland's country strategy for Vietnam 2013–2016 and 2016-2020; Stakeholder interviews/FGD in Finland and Indonesia; Project document; Progress reports.
• Finland does not have a Country Programme with Indonesia, but consultations with the embassy confirm that the project is considered highly relevant and coherent with Finland's policy priorities within the context of Indonesia. Capacity building in Indonesia's climate-related agencies is a critical priority, and the partnership directly responds to this need. Climate change mitigation and adaptation have become pressing concerns, making the development of meteorological and climate capacities essential for informed decision-making. The cooperation between FMI and BMKG is considered a "crown jewel" of the initiatives, underscoring its centrality to Finland—Indonesia international development efforts. • In addition, one of the key cross-cutting objectives addressed by the collaboration is the alignment with the sustainable development goals, particularly on food security. By working with the World Food Programme and other partners, Finland has contributed to a global effort to address food security challenges, with climate information playing a crucial role in agricultural planning and resilience. • Beyond the INDFIN project, BMKG is also involved in collaboration with other Finnish entities, particularly Vaisala, which focuses on weather prediction models specifically for airport environments (weather aviation). The project document mentions another PIF proposal, which is apparently still in the pipeline.	
EQ6. How coherent is the project with other initiatives, e.g. linkages, coordination, compatibility and synergy with other relevant interventions and agencies in the partner countries?	
Sources of information used:	Stakeholder interviews/FGD in Finland and Indonesia; Annual Work Plan; Progress reports.
• The partnership between FMI and BMKG complements a broader network of international cooperation, such as the BMKG's engagement with Meteo France International (MFI) within the EU context. MFI had implemented a significant modernisation project for BMKG during the period 2012–2015 to strengthen BMKG's climate and weather service capacity. Meteorological observation infrastructure was installed across the 33 Indonesian provinces (including a lightning detection network on Java Island), and integrated meteorological information systems at a central level in Jakarta, as well as in 5 Regional Centres. Furthermore, MFI has signed a contract with BMKG for the second phase of the modernisation project called "Scaling Up - Strengthening BMKG Climate and Weather service capacity". The MFI and INDFIN projects are complementary with the FMI project focusing on NWP verification. • The project is also directly linked to other interventions by international agencies and contributed to BMKG's role as a regional training centre for the World Meteorological Organization (WMO), helping to strengthen Indonesia's position in regional meteorological cooperation, particularly within Southeast Asia. BMKG's roles as a Regional Training Centre (RTC) under WMO and as a UN Fund (WMO, UNDP, and UNEP) Systematic Observations Financing Facility (SOFF) Peer Advisor were strengthened. • The project also facilitated collaboration with the Red Cross Finland (RCF) in air quality. The INDFIN project worked cross-functionally with RCF's health-related programmes, enhancing the accuracy and applicability of air quality information, particularly in terms of its impact on public health. This coordination between FMI, BMKG, and RCF demonstrates how INDFIN effectively ties together different stakeholders towards common goals, enhancing the impact.	
EQ7. To what degree do the partner country agencies and higher-level authorities and decision-makers have responsibility and ownership of the projects?	
Sources of information used:	Stakeholder interviews/FGD in Indonesia; Self-assessment.
• BMKG played an equally active role in the project, from the initial planning to execution and monitoring. The high-level involvement ensured that the project remained relevant to Indonesia's national priorities. BMKG experts contributed to defining the project scope, ensuring that efforts were complementary to existing capabilities. • BMKG has shown strong ownership of the project, particularly in the development and implementation of air quality models. This ownership is evident in the semi-operational use of these models and the creation of a dedicated website where the collaboration's outcomes are showcased. • The self-assessment and consultations with BMKG management level and technical staff all confirm a strong sense of ownership and responsibility. The BMKG managers are aware of the project activities and are satisfied with the ongoing results. The different heads of the BMKG departments involved in the project support the activities and results, facilitating the project's development. The BMKG experts value the INDFIN management considerations of their needs when planning the activities. • Moreover, the project's design also had an aspect of mutual learning. While Indonesia benefited from Finland's expertise in air quality and aviation, Finland too learned from Indonesia's experience in tropical climate systems and regional weather phenomena, further deepening the collaborative nature of the relationship. • The collaborative design of the project contributed to a sense of shared responsibility between the Finnish and Indonesian teams. The interaction between the two agencies was not "top-down" but there was constant communication and feedback, which led to the continuous adaptation of the project to meet BMKG's needs.	

Evaluation Question/Criteria	Findings
• The high-level commitment shown by BMKG was confirmed by the Embassy and other stakeholders. BMKG consistently advocated for the continuation of the INDFIN project and demonstrated a proactive approach, involving other government bodies such as the Ministry of Finance (Kemenkeu) and BAPPENAS (National Development Planning Agency), ensuring that the initiatives are integrated into Indonesia's broader development goals.	
Efficiency	
EQ8. What is the progress against the work plan target and time schedule (implementation progress)?	
Sources of information used:	Stakeholder interviews/FGD in Finland and Indonesia; Progress reports; Self-assessment.
• The project has been relatively efficient, showing good implementation progress for most outputs. Some activities have been completed ahead of schedule. • Consulted stakeholders confirm that the project has been quite efficient. The clearly defined roles and responsibilities of the various stakeholders ensured that resources were allocated effectively, and the outputs were achieved within the projected timeframe. It was mentioned that BMKG was directly involved in budgeting, ensuring that the project met its targets without unnecessary delays or cost overruns. However, there were some delays in information sharing, especially on BMKG's side, which have affected the efficiency of certain activities.	
EQ9. To what extent are the results and processes feasible and cost-effective?	
Sources of information used:	Project budget; Financial progress reports; Stakeholder interviews/FGD in Indonesia.
• By November 2024, the project had used about 78% of the project budget. About 80% of the costs reflected FMI fees and associated travel and accommodation costs. As the project is on-going, these figures might change. Overall, the expenses seem in line with the MFA ICI manual. • At least 23 experts have been involved, but most inputs were provided by a limited number of FMI staff. • Consulted stakeholders consider cost-effectiveness to be quite good, especially as BMKG also contributes and has a budget for maintenance. Implementation progress is good and the results are already beginning to manifest in the enhanced capacity of BMKG. The training sessions, particularly the training of trainer approach, proved to be an effective means of knowledge transfer. FMI's ongoing support, including intensive online discussions, ensured that BMKG staff were well-equipped to implement the new technologies. • FMI also used its technical support efficiently by combining training for several different projects. For example, in a study visit BMKG staff joined forces with experts from five other countries to work on the NWP verification tool. • The project managed to leverage BMKG's existing infrastructure while introducing new capabilities. Rather than creating parallel systems, the collaboration enhanced what was already in place, increasing cost-effectiveness.	
EQ10. To what extent is the project well managed and are M&E systems and risk analysis processes adequately designed and implemented?	
Sources of information used:	Stakeholder interviews/FGD in Finland and Indonesia; Project document; Annual Work Plan; Progress reports.
• The management procedures were implemented as expected. Although only the minutes of one board meeting were shared, the progress reports and consultations with BMKG indicate that annual board meetings were conducted. Progress, plans and budget (re-) allocations were discussed. • No specific M&E system was put in place. Most of the output indicators in the RBMF and even those at outcome level ("targets") can be easily reported on, based on the implemented activities and direct deliverables. But in terms of real outcome (adoption and institutionalisation of project results), few measurements are conducted. The progress reports discuss the implementation progress and achievements for each indicator, except for the impact level. • A risk management matrix was developed in the project document. But according to partner institution management and staff, the project progressed without significant risks, and the activities proceeded as planned. Although the risk matrix is not discussed in every board meeting, there are no major concerns with the project implementation.	
Effectiveness	
EQ11. What are the main results (planned and unplanned) and to what extent have capacity strengthening efforts been adopted and contributed to the provision of improved services?	
Sources of information used:	Stakeholder interviews/FGD in Finland and Indonesia; Project document; Annual Work Plan; Progress reports; Self-assessment.

• The project is on track to achieve its outputs, and major milestones have already been reached. Especially the introduction of the air quality dispersion model (Output 2) was emphasised by BMKG staff as a major result.
• Output 1 - Enhanced BMKG capacity for weather forecasting and service production.
  ○ NWP verification is running and has been distributed to the regional offices. BMKG experts have developed a Portable Integrated NWP and Assessment Report (BPintar) that includes a verification module. The model has already been introduced in some regional offices at BMKG, also some of the NWP model aspects are available online at the same website created to SILAM model.
  ○ This year (2025) the project will focus on enhancing BMKG's capacity to serve the users/customers.
• Output 2 - Air quality dispersion model operational and used for forecasting.	

Evaluation Question/Criteria	Findings
	○ BMKG has already implemented the website for the air quality forecast, it includes 6 different products/parameters. The website is under testing before it is openly available for the public. https://iklim.bmkg.go.id/id/silam-ina-nwp/ ○ Several stakeholders are already participating in the air quality activities, including Ministry of Environment and the Jakarta Environment Office. ○ As part of improving the capacities of the Indonesian air quality network, the project has an ongoing campaign to measure PM 2.5 particles during the dry and rainy seasons. In 2025 the project will undertake a PM equivalence campaign to determine the correction coefficient or correction equation and measure the uncertainty for BMKG's PM measurements. • Output 3 – Improved capacity of BMKG on weather Aviation instrumentation use and maintenance. ○ BMKG experts have been trained on the maintenance of observation instrumentation, with a particular focus on radars and lidars. ○ In 2025, the project continues training BMKG experts to utilise the aviation weather data more efficiently in forecasting duties and enhancing BMKG capacity on Air Traffic Management-Met integration and collaborative decision making in airports. • The quality of the project support was highly acknowledged and emphasised by BMKG management and technical staff. The comprehensive and relevant training (both in Finland and in Indonesia) and practical hands-on approach was highly appreciated and considered effective. • A FGD with technical staff confirmed the satisfaction with the technical support provided by FMI, but also included some suggestions for future collaboration: ○ A needs assessment and modality assessment should be conducted simultaneously (and collaboratively) to ensure alignment with BMKG's needs and existing capabilities. ○ Improved dissemination and coordination mechanisms should be developed to prevent implementation bottlenecks. ○ Even more hands-on and practical training should be provided, particularly on-the-job training. ○ While short-term training sessions were beneficial, on-site training proved to be the most effective method for knowledge transfer. BMKG emphasised the importance of training within its facilities rather than relying on remote sessions. If the collaboration continues, there should be a stronger focus on phased training. ○ Collaboration should extend beyond knowledge-sharing to include technological and research cooperation. BMKG appreciates the opportunities and facilitation to achieve deeper research integration, potentially leveraging partnerships such as the trilateral programme with FMI and the University of Helsinki. • In terms of outcome, one of the most important results was the capacity-built and adoption of the introduced new air quality forecasting models. Although the SILAM model is still in semi-operational use, it is tailored to Indonesian conditions and has already a clear effect on BMKG's ability to predict and manage air quality. • The improvement of weather forecasting capabilities to better predict extreme weather events, have been largely achieved. Through the training and technology transfer, BMKG has greatly enhanced its ability to use advanced meteorological equipment: ○ Radar and lidar analysis: BMKG has developed new technical expertise in analysing data from these instruments, contributing to more accurate weather predictions and early warning systems. ○ Standard Operating Procedures (SOP): Although BMKG has not yet formalised SOPs for radar and lidar analysis, the SOP has been written. Further, the training has laid the foundation for future standardisation and operational guidelines. • However, one aspect that reportedly fell slightly below expectations was the depth of the numerical modelling for weather research and forecasting climatology, which faced some limitations in terms of time and available facilities. The expectations from both FMI and BMKG differed slightly, and this highlighted the need for better communication in terms of project scope and deliverables. • There were also unintended results, including additional activities related to data assessment, which led to the identification of gaps in available data. This gap prompted additional sampling efforts for chemical particles—an area that had not been explored before. FMI's lab equipment was instrumental in this new direction, with the potential for future publications based on these findings.
Sustainability	
EQ12. How sustainable are the results and approaches, in terms of institutional, technical, human and financial capacities, socio-economic conditions, governance and environmental/ climate resilience risks and potential trade-offs?	
Sources of information used:	Stakeholder interviews/FGD in Finland and Indonesia; Project document; Annual Work Plan; Progress reports; Self-assessment.
	• According to the partner institution, staff turnover has not been a major issue and has not affected the sustainability of the project results. • The consulted partner institution experts and other stakeholders believe that most of the project results will be sustained. Some of the introduced systems have been further developed and utilised by BMKG. However, the need for further capacity strengthening and building further on the results of the project was also highlighted.

Evaluation Question/Criteria	Findings
• The self-evaluation confirmed that some of the results will be sustained, including SILAM and Hirlam – Aladin R-Package verification tool, as SILAM is already used as an operational air quality forecast, and Hirlam – Aladin R-Package was made in the accessible mode.	
Impact	
EQ13. In what ways has the project affected the work of partner country agencies both directly and indirectly, including intended and unintended effects, with regard to developed capacities, (incl. human rights, gender equality, reduction of inequalities, climate resilience, and low-emission development)?	
Sources of information used:	Stakeholder interviews/FGD in Finland and Indonesia; Project document; Annual Work Plan; Progress reports; Self-assessment.
• As the project is on-going, the institutional impact at BMKG level cannot be fully assessed yet, but the evaluation findings already indicate that some of the capacity building activities and introduced systems have been integrated and adopted by the trained experts and by the partner institution. • An important unintended positive result was increased collaboration and knowledge-sharing within BMKG units and across other relevant national institutions, strengthening internal coordination on air quality issues. • Another unintended effect of the collaboration was FMI's support to BMKG's regional role as a training centre. By sharing expertise with neighbouring countries, BMKG became more engaged in regional meteorological cooperation, which enhanced its reputation and strengthened its position as a centre of expertise in Southeast Asia. • The broader impact of the INDFIN cooperation can be seen in its ripple effects across various sectors. It has improved the work of BMKG, shifting the focus from purely operational tasks to more research based-operation oriented functions. • A FGD with BMKG management representing different departments concluded that the project's emphasis on knowledge management and climate modelling will help BMKG becoming more self-sufficient in providing critical meteorological and climatological services. In addition, the INDFIN cooperation has provided BMKG with significant best practices that can be further adopted for future collaboration. The key aspects include structured cooperation frameworks, improved equipment maintenance, leadership development, big data integration, and domestic industry strengthening. • BMKG recommends extending the INDFIN collaboration to focus on developing new capacities, including forecasting greenhouse gases in air quality models, which is not currently included in the existing models. The Global Atmospheric Watch program, which measures CO2 in rural areas not affected by urban pollution, should also be further strengthened, especially in key areas like Koto Tabang (West Sumatra), Lore Lindu, (Central Sulawesi), and Sorong (West Papua). • In terms of gender equality and reduction of inequalities, the project has implemented some good practices in the implementation but the impact on this at BMKG level is less clear.	
EQ14. What are the wider (indicative) impacts of the project on other stakeholders and beneficiaries in the partner country including aspects of HRBA and CCOs?	
Sources of information used:	Stakeholder interviews/FGD in Finland and Indonesia; Project document; Annual Work Plan; Progress reports; Self-assessment.
• Although it is still early to assess the wider impact, some of the systems are already being used and contribute to improved weather forecasting and air quality monitoring, enabling more accurate warnings related to weather phenomena and air quality. The enhancement of these systems directly contributes to safeguarding human lives, particularly in the face of increasingly unpredictable weather patterns. The (indicative) impact is directly related to addressing CCOs of climate resilience and carbon emissions. • As the national meteorological agency, BMKG holds an important role in Indonesia's environmental governance. Strengthening its capacity directly benefits various stakeholders, including local governments, policymakers, and the public. Improved air quality monitoring translates to better-informed policies, more effective pollution mitigation strategies, and ultimately, enhanced public health and safety. The broader impact extends to other stakeholders, such as the National Agency for Disaster Countermeasure (BNPB) and Ministry of Environment and Forestry that will benefit from enhanced forecasting capabilities. While SILAM has not yet been applied to smoke detection and volcanic ash forecasting, there is hope that it will play a significant role in these areas in the future as the plan continues to evolve.	
EQ15. To what extent did the project have an impact on the Finnish institutions or Finnish private sector in terms of leveraging business opportunities and other linkages?	
Sources of information used:	Stakeholder interviews/FGD in Finland and Indonesia; Progress reports.
• The collaboration has provided opportunities for Finnish companies, especially Vaisala, to expand their market reach. Vaisala provided advanced radar and lidar equipment. The company's involvement in providing weather forecasting equipment has not only bolstered BMKG's technical and data analysis capacities but also strengthened Finland's position as a market leader in meteorological technologies. • Through the cooperation, BMKG gained a deeper understanding of the Finnish approach to maintaining high-quality equipment with minimal maintenance, which has since been applied to Indonesia's weather forecasting capabilities. This collaboration also led to the procurement of Vaisala's radar systems by Timor Leste, demonstrating the far-reaching impact of the cooperation beyond Indonesia.	

Evaluation Question/Criteria	Findings
	• Unintended outcomes have also occurred. Unexpectedly, the project also led to potential collaboration with the University of Helsinki, creating opportunities for future joint research and knowledge exchange. This has been a significant unintended benefit, further strengthening Indonesia's scientific ties with Finland. • The project has contributed to strengthened relationships between Finland and Indonesia. This "soft power diplomacy" has extended beyond the technical aspects of the projects, fostering closer ties between the two nations. Finland's involvement in these initiatives showcases its readiness to contribute to global environmental challenges, thereby raising its profile on the international stage.

Annex 11: FMI – FINTAJ III

Finnish-Tajikistan Meteorology Project, Phase III

Project title	FMI – Tajikistan Meteorology Project, phase III (FINTAJ III)
Country	Tajikistan
Finnish institution	Finnish Meteorological Institute
Duration	17.01.2023–31.12.2026
Budget	EUR 1,000,000
Partner institution(s)	The Agency on Hydrometeorology of the Committee of Environment Protection (Tajikhydromet)
Impact	Weather, warning and air quality information in Tajikistan meets the needs of the Tajik Society.
Outcome	Improved capacity of Tajikhydromet to deliver air quality, weather and early warning services and conduct glacier monitoring.
Outputs	1. Enhance capacity for weather forecasting and early warning services in Tajikhydromet 2. Enhanced capability for glacier studies and subsequent scientific communication 3. Enhanced air quality services and management in Tajikistan
Previous projects/phases (title, duration, main focus)	The FINTAJ project, phase I was implemented from 2014 to 2017 (including one year extension). It focused on improving the capacity of Tajikhydromet to deliver weather, climate, and environmental information, weather forecasts and warnings. The FINTAJ II project was implemented from 2018 to 2021 and focused on improving the capacity of Tajikhydromet in glacier monitoring, air quality monitoring, modern observation and forecasting process, and increasing the quality and level of information, services and early warnings provided by Tajikhydromet.
Remarks	

Relevance	
EQ1. To what extent is the project aligned with–and responds to the development objectives/priorities of the partner country?	
Sources used:	National Strategy for Adaptation to Climate Chage of the Republic of Tajikistan up to 2030; Medium-Term Development Programme of the Republic of Tajikistan for 2021–2025; National Development Strategy of the Republic of Tajikistan for the period till 2030; The National Water Strategy of the Republic of Tajikistan for the period up to 2040.

- FINTAJ III is very well aligned with key national strategic frameworks of Tajikistan, including the National Strategy for Adaptation to Climate Change of the Republic of Tajikistan for the period up to 2030 (NSACC), the Medium-Term Development Programme for 2021–2025, the National Development Strategy for the period up to 2030 (NDS 2030), and the National Water Strategy up to 2040 (NWS 2040). By enhancing hydrometeorological capabilities, improving the accuracy of climate data, and strengthening institutional and human resource capacities, the project significantly contributes to building Tajikistan's resilience against climate-related threats, thus supporting sustainable socio-economic development, effective environmental management, and informed climate adaptation and decision-making.
- FINTAJ III directly addresses the priorities outlined in the NSACC, which identifies Tajikistan as highly susceptible to climate impacts, notably in sectors like agriculture and water resource management. The NSACC stresses the necessity of “a comprehensive and balanced approach to climate-related issues based on integrated scientific analysis,” an objective directly supported by FINTAJ II's enhanced scientific monitoring, research, and analytical capabilities.
- The Medium-Term Development Programme 2021–2025 also emphasises mitigating climate risks as essential for sustainable socio-economic growth, explicitly recognising climate impacts as barriers to national development. It underlines the critical importance of forecasting and risk reduction measures to safeguard economic stability. FINTAJ III aligns with this priority by providing essential hydrometeorological and air quality data, contributing directly to the robustness of national planning and sustainable resource management.
- The NDS 2030 outlines a comprehensive framework for sustainable national growth, prioritising vulnerability reduction, industrialisation, innovation, and environmental sustainability. It highlights “the rational use of human and natural capital and strengthening institutional capacity” as strategic goals. By fostering institutional and technical capabilities within hydrometeorological services, FINTAJ III directly supports the NDS 2030's objectives, enhancing Tajikistan’s ability to transform its economy and society toward greater resilience and sustainability.
- The NWS 2040 explicitly targets sustainable water resource management, climate adaptation, and disaster risk reduction. It prioritises improved data support systems and heightened safety standards for hydraulic infrastructure.

Through its glacier monitoring and forecasting enhancements, FINTAJ III provides crucial data necessary for informed water resource management, directly contributing to the goals of risk reduction and sustainable management of water resources outlined in the NWS 2040.

EQ2. To what extent is the project aligned with–and responds to the development policies of MFA Finland (including HRBA and CCOs, and more recently benefits for Finnish actors)?

Sources used:	Report on Development Policy Across Parliamentary Terms (2021); Report on International Economic and Development Cooperation (2024); Theories of Change and Aggregated Indicators for Finland's Development Policy (2023); Project document; Progress reports.

- The project has been designed and planned during the previous development policy guideline (MFA, 2021a), and it is well in line with one of its policy priorities: climate change, biodiversity and sustainable management and use of natural resources. In addition, the current policy guideline (MFA, 2024b) identifies climate action as one of Finland's areas of strength, under which providing expertise in weather observation and early warning systems has been emphasised.
- Outcome 3 in MFA Finland's Theory of Change for the Priority Area climate and natural resources is meteorology and disaster risk reduction. The project contributes especially to Output 1 under this Outcome: partner countries' capacity to generate effective and timely weather and climate services and early warnings has improved.
- The HRBA and CCOs have been discussed in the project document, aiming that at least the minimum standard for CCOs (do no harm) is fulfilled. Lists of actions for all CCOs are provided.
  - For example, gender equality actions include, in addition to promoting balanced participation of men and women in project activities, a workshop on gender equality.
  - Non-discrimination actions include for example promoting open sharing of information on weather and air quality, developing weather, climate and air quality information in a format accessible to vulnerable communities, and improving dissemination processes of weather and climate information.
  - The project especially contributes to the CCO on climate resilience by increasing preparedness to adapt to the effects of climate change through strengthening Tajikhydromet's capacity to produce forecasting, climate and air quality services and early warning services so that information can be utilised by the general public, stakeholders and decision-makers. The project also supports information dissemination processes and the development of a mobile phone application for weather and early warnings.
  - The contribution to the CCO on low emission development is more indirect: the project focuses on Tajikhydromet's capacity to produce and provide better information on air quality, which would be used in planning and implementing air quality management plans. Reducing air pollution emissions also impact greenhouse gas emissions, as they mostly originate from the same sources.
  - In the project's progress reports, information on men's and women's participation in the training is provided, but otherwise there is very little information on the implementation of HRBA and CCOs, as it has been pointed out also by the ICI FC.
- Although the project was designed and planned before the current policy emphasis on benefits for Finnish actors, the project document discusses the opportunities for the Finnish private sector in the field of meteorology and weather observations as well as environmental monitoring (remote sensing, air quality observation). The plan is to promote Finnish technology and companies through seminars and study tours.

EQ3. To what extent does the project respond to the conditions and capacity development needs of the partner agency?

Sources used:	Project document; Completion reports of phase I and II; Climate Risk Country Profile, Tajikistan (2021); Stakeholders interviews/FGD in Tajikistan and Finland.

- The prioritised needs have been identified based on the FMI's earlier assessments and cooperation with Tajikhydromet (FINTAJ 2014–2017 and FINTAJ II 2018–2021), as well as through discussions with Tajikhydromet. For example, at the beginning of the first project, an assessment of air quality and its monitoring in Tajikistan was made, along with a road map for enhanced services. In addition, a feasibility study was conducted providing recommendations for Tajikhydromet's modernisation, and the results of the study were used in planning the phase II. The completion report of the second phase discusses on key recommendations, which have also been used for the planning of the third phase of the project. A list of priority development needs has also been provided by Tajikhydromet.
- The project has also utilised assessment studies and project information provided for example, by the WB and Asian Development Bank (e.g. Climate risk country profile 2021). The project was designed to complement other actions and projects, such as those funded by the WB and Asian Development Bank. While these projects have made infrastructural investments, there has been a significant need for additional support to strengthen the capacities of Tajikhydromet's staff in modern observation and weather service technology.
- Based on the interviews, the project has addressed well the priority needs, and there is a continuous discussion between the partners on the needs of Tajikhydromet staff (e.g. for training).

EQ4. To what extent is the project design coherent and are the objectives and the intervention approach logically structured within the Results-Based Management Framework (RBMF)?	
Sources used:	Project's results-based management framework.

- The objectives and the intervention approach are logically structured within the RBMF. All indicators have baseline and target values.
- The outputs are quite similar to those in the previous phase of the project, but the indicators and targets show that they build on the previous phase's results and are focusing more on the use of the provided skills and systems than in the earlier phase.
- The outcome improved capacity of Tajikhydromet to deliver air quality, weather and early warning services and conduct glacier monitoring now focuses more on service delivery than in the previous phase and appears to be a fairly realistic result, considering the long-term cooperation and support provided by FMI (and other projects).
- The impact statement has been formulated broadly: weather, warning and air quality information in Tajikistan meets the needs of the Tajik Society. Thus, it seems quite ambitious, although this depends on the time frame in which it is considered to be achieved.
- Overall, while there is gender-disaggregated data at the output level, outreach to vulnerable groups is not clearly addressed.

Coherence and aid effectiveness

EQ5. How coherent is the project with the Country Programme and other MFA supported initiatives, and other Finnish interventions and agencies in the partner countries?	
Sources used:	Finland's Country Strategy for the Central Asian countries of Kyrgyzstan, Tajikistan and Uzbekistan 2021–2024 (2021); Finland's Country Programme for the Central Asian countries of Kyrgyzstan, Tajikistan and Uzbekistan 2021–2024 (2021); Project document; Progress reports; Stakeholder interviews/FGD in Finland.

- The project is very well in line with the Central Asian Country Strategy and Country Programme (2021–2024). The Country Programme includes outcomes such as "Reducing health risks and the risks of loss of life and property caused by severe weather, climate and environmental events" and "Better preparedness to adapt to and mitigate the effects of climate change" both of which are linked to the project's outcome (Improved capacity of Tajikhydromet to deliver air quality, weather and early warning services and conduct glacier monitoring).
- FMI has two other ICI projects in the Central Asian region, in Kyrgyzstan (FINKMET) and Uzbekistan (FUME). In all these three projects, SmartMet and SmartMet Alert systems, as well as the SILAM model have been installed and are in use (with varying levels of usage between the countries). Regional collaboration between the three project countries have been strengthened by organising joint activities, such as training events and study tours.
- Syke's surface water quality monitoring project is also implemented in Tajikistan. Syke's other key laboratory partner is the Surface Water Laboratory, which is part of Tajikhydromet. The project document does not mention Syke 's project, maybe because no synergies were identified between the projects. However, it was mentioned in the interviews that FMI's and Syke's experts have had discussions about cooperation with Tajikhydromet.

EQ6. How coherent is the project with other initiatives, e.g. linkages, coordination, compatibility and synergy with other relevant interventions and agencies in the partner countries?	
Sources used:	Project document; Implementation, Completion and Results report, CAHMP (2023); WB's website on Climate Adaptation and Mitigation program for Aral Sea basin; Asian Development Bank's website on Water Resources Management in Pyanj River Basin project; Progress reports; Stakeholder interviews/FGD in Tajikistan and Finland.

- WB, Asian Development Bank, and World Meteorological Organisation (WMO) together with other international donors and local operators, have launched projects aiming at the modernisation of national hydrometeorological services in Central Asia, including Tajikistan.
  - The WB's Central Asia Hydrometeorology Modernization Program (CAHMP) included a component focusing on Tajikistan (Strengthening of Hydromet Services in Republic of Tajikistan) ensuring that it has infrastructure and capacity comparable with other countries in Central Asia region, to sustainably observe, forecast and deliver weather, water and climate services. The actual funding for this component was around USD 16 million (05.2011–03.2023) (WB 2023). CAHMP II is currently under preparation. FMI participated, for example, in the CAHMP-II workshop in November 2024, to share updates and ensure alignment on ongoing initiatives, tools, and services aimed at enhancing hydrometeorological services[21].
  - The WB also supported the Climate Adaptation and Mitigation Program for Aral Sea Basin (CAMP4ASB) in 2016–2024, aiming to enhance regionally coordinated access to improved climate change knowledge services for key stakeholders in participating Central Asian countries, as well as to increase investments[22].

[21] See: https://wmo.int/media/project-update/wmo-and-world-bank-cooperation-action-supporting-central-asia-hydromet -services; https://wmo.int/activities/projects/project-portfolio/world-bank-group-hydromet-expert-services-central-asia

[22] See: https://projects.worldbank.org/en/projects-operations/project-detail/P151363

- Asian Development Bank's Water Resources Management in Pyanj River Basin project (on-going since 2017) focuses on improving institutional and physical capacities of water resource management system in the Pyanj River Basin of southern Tajikistan, including building climate-proof irrigation system[23].

- As mentioned earlier, the ICI project was designed to complement these other actions and projects. The above-mentioned modernisation activities also require major organisational transformation and human capacity development within Tajikdhydromet as well as additional funding and sources of income to maintain and operate new systems. FINTAJ III aims to support Tajikhydromet in these aspects.
- As an example of concrete complementary action between FMI, Tajikhydromet and the Asian Development Bank's project is joint implementation of SmartMet system. Asian Development Bank's project identified that Tajikhydromet lacks a centralised weather data platform which is needed, for example, to provide meteorological data to the hydrological modelling system. This function could be fulfilled by the SmartMet system. The SmartMet training provided by the ICI project in April 2023 was based on the Asian Development Bank project scope.
- At the project kick-off event in October 2023 included participants from several UN organisations as well as other international and national organisations, including ministries, committee and agencies of Tajikistan.
- Related to Output 2 (glacier studies), expedition to glaciers have taken place annually, and according to interviews, these expeditions are coordinated with experts from other countries and projects (e.g. Swiss experts). The results of the expeditions have been presented at several international conferences. In addition,
- Representatives of Tajikhydromet have participated in the UN's climate change conferences, e.g. in the United Nations Climate Change Conference, COP-28 in Dubai in 2023, especially in the side event on Early Warnings for All Initiative held at the Tajikistan Pavillion.

EQ7. To what degree do the partner country agencies and higher-level authorities and decision-makers have responsibility and ownership of the projects?

Sources used:	Project document; Progress reports; Stakeholder interviews/FGD in Tajikistan.

- The management knows the project well. It seems that Tajikhydromet has ownership and is committed to the project, although the signs for this were somewhat mixed.
- As discussed earlier (see EQ3), there have been discussions with Tajikhydromet (top management, head of centres/departments) about the needs the project should address during its different phases. These discussions also came up in the interviews, where it was stated that the project has responded to the identified needs. Continuous discussion (face-to-face, emails, on-line meetings) between the partners regarding the needs of Tajikhydromet staff (e.g. for training) was mentioned by several interviewees. In addition, the project has used feedback questionaries related to training events (e.g. collecting feedback on SmartMet training).
- The management of Tajikhydromet, along with the management of Kyrzyghydromet and Uzhydromet, participated in the "High level visit to Finland" in May 2023 to discuss the projects, and also regional cooperation.
- There were internet connection problems in Tajikhydromet's regional offices needed e.g. for using SmartMet system, and Tajikhydromet subscribed to more effective connections for them.
- The achievements of the project—reflecting the long duration of the cooperation—were frequently mentioned in the interviews. It was also noted that, although the budgets for the different phases of the project have been relatively small (with reference to the fact that most of the budget goes to Finnish experts), the project has been taken seriously and seen as very important for Tajikhydromet due to its capacity development activities. The last three years of cooperation, in particular, were seen as the most relevant.
- At the management level, there have also been discussions about the need to follow up on the learning process of staff who participated in training events. For example, some form of testing related to the training (e.g. a pre-test before and a test after) was seen as important to enhance participant attendance and motivation—although this has not been implemented by the project. Management had requested that staff members who participated in the latest training event provide a training session for other staff members. It is noted that this discussion on staff learning seemed to be influenced by comparisons with the achievements of neighbouring countries (e.g. Kyrgyzstan). The needs for more practical training and peer to peer learning within the project was mentioned.
- According to the progress report, there have been some challenges related to the staff participation in April 2024. Despite an agreement made during the pre-meeting with Tajikhydromet, local experts (meteorologists) were no available to work together with Finnish experts in preparing the first version of the SmartMet Alert tools for Tajikhydromet. In the following session (November 2024), experts from two local offices (Khujand and Khorog) participated in the work.
- It was also brough up in the interviews that the commitment to continued use of the SmartMet software depends on its ability to provide accurate weather forecasts (see EQ12).

[23] See: https://www.adb.org/projects/47181-002/main

Efficiency	
EQ8. What is the progress against the work plan target and time schedule (implementation progress)?	
Sources used:	Progress reports; Stakeholder interviews/FGD in Tajikistan.
• According to the progress report, the project has been mainly implemented as planned. Some challenges were encountered, such as weak internet connections at the regional offices or staff members not participating in the activities as expected. However, these issues were resolved during implementation. Other challenges mentioned were related to technical capacities, for example the lack of technical specialists to maintain the observation network, or limited English proficiency among weather forecasters delaying the adaptation and use of the SmartMet software. The project has paid attention to the language barriers by translating materials into Russian and ensuring the presence of good interpreters during training events. However, it was also mentioned in the interviews that not all younger staff members are proficient in Russian. • Based on the latest progress report (up to November 2024), some of the targets under the three outputs were assessed to be near completion, for example, forecasting and IT staff trained on NWP modelling and SmartMet Tool (under Output 1), and the modernisation of the air quality reference station completed and accepted (under the Output 3). It is possible that the target related to SmartMet training has now been reached, since a training event was organised in February 2025, in Tashkent, Uzbekistan, with at least three Tajikhydromet staff members participating.	
EQ9. To what extent are the results and processes feasible and cost-effective?	
Sources used:	Financial reports.
• The project has spent EUR 485,990,22 until the end of November 2024, which is close to half of its budget (49%). The major part so far (46%) has been used for the fees of the Finnish experts. The costs of the capacity development form 76% of the total spending. The partner institution's share of the funding has so far been 35%, with the majority of this related to purchased equipment (18%). There have been no costs related to subcontracted services. • The current cost structure is well in line with the ICI project's budget rules (MFA, 2023b), which require that at least 60% of costs focus on capacity building, and that costs directly benefitting the partner country should be at minimum 20% of total costs, and that subcontracting costs do not exceed 15%. • It is difficult to assess the cost-effectiveness of the project, since it is only halfway through its implementation. Some of the targets under the outputs are close to being reached, but several others still need to be achieved. However, achieving the outputs as well as the outcome seems feasible.	
EQ10. To what extent is the project well managed and are M&E systems and risk analysis processes adequately designed and implemented?	
Sources used:	Progress reports; Memorandum of Understanding; Stakeholder interviews/FGD in Tajikistan.
• The project progress reports are quite brief, and not all data (e.g. annual data) and information have been provided, as the facilitation consultant pointed out in the latest progress report. • According to the Memorandum of Understanding (MoU), it was agreed that the Project Board would meet twice a year. According to the progress reports, two meetings were held in 2023 (May and October), but only one in 2024 (an email meeting in May discussing budget issues). The next meeting was planned for first half of 2025. • A risk assessment was conducted and included in the project document. The risk assessment was updated in 2024, adding new risks as well as reassessing impact of previously identified ones. • It was mentioned in the interviews that the project has been well managed and implemented.	
Effectiveness	
EQ11. What are the main results (planned and unplanned) and to what extent have capacity strengthening efforts been adopted and contributed to the provision of improved services?	
Sources used:	Progress reports; Completion reports (I and II phases); Stakeholder interviews/FGD in Tajikistan and Finland.
• The project is about halfway through its implementation. It has not yet fully achieved any of its outputs, but based on the progress reports and stakeholder interviews, Output 2 (enhanced capability for glacier studies and subsequent scientific communication) and Output 3 (enhanced air quality services and management) have progressed well. Annual glacier survey expeditions have been conducted, the collected data has been analysed and findings shared at international conferences. Scientific publications are also in progress. In the case of the air quality component, the modernisation of the air quality reference station has been completed and SILAM—the air quality forecast model—training for IT experts has been provided. Output 1 (enhanced capacity for weather forecasting and early warning services) has also progressed, with SmartMet training events held in September 2024 and February 2025, and work on the mobile phone application and SmartMet Alert is ongoing. • It is noted that the capacity building related to the air quality monitoring began in the first phase of FINTAJ and continued during the second phase, providing a solid foundation for further development in its current phase. This was also mentioned in the interviews. Similarly, there is a good foundation for glacier-related work. Glacier monitoring and research started during the second phase of the project, also utilising the glacier monitoring expeditions conducted in Kyrgyzstan (FINKMET II) by involving Tajik experts in some of those expeditions. The automatic weather station installed earlier also supported the glacier component during the phase II. In the case of weather	

forecasting and early warning services, although capacity development related to modern observation and forecasting started earlier—particularly in the second phase—the SmartMet and SmartMet Alert systems have been introduced as new tools in the current phase. The staff at Tajikhydromet now need to learn and adapt new methods and ways of working.

- The interviewed staff members were generally very satisfied with the quality of the capacity development activities (training events, study tours, hands-on work). For example, Finnish experts were described as "highly professionals", "dedicated", and "responsive". Some interviewees mentioned that certain parts of the training focussed on theoretical information, that might have been delivered in advance online, allowing the face-to-face training to focus more on practical application. Related to SmartMet training, it was noted that there were quite a few people sharing one computer, requiring participants to take turns using the software. On the other hand, it was also mentioned that the training was very practical, and participants had the opportunity to run the SmartMet programme several times, which helped ensure they learned how to use it effectively.
- The interviewees provided examples of adopting new knowledge and skills:
  - Regarding air quality monitoring, daily, monthly and annual reports and briefs are produced, and this information is also shared with the Committee for Environmental Protection, under which the Tajikhydromet operates. They have also managed to increase measured air quality parameters (e.g. PM_2, SO_2). Interviewees gave an example of a situation where they were able to repair a device which did not function when they received it from the manufacturer.
  - In glacier monitoring, staff have been trained to use drones and GIS software. These skills have been used for monitoring (e.g. measuring snow depth), modelling, and preparing maps. In addition, scientific articles were close to be published, and a local article in Tajik had already been published, along with brochures presenting the glacier monitoring work.
  - Weather forecasters are now using SmartMet daily. They received training from a regional staff member who had participated in the SmartMet training, so the training-of-trainers (ToTs) model has worked well. The software was described as quite complicated but usable, especially temperature and rainfall forecasting now considered fairly accurate.

Sustainability

EQ12. How sustainable are the results and approaches, in terms of institutional, technical, human and financial capacities, socio-economic conditions, governance and environmental/ climate resilience risks and potential trade-offs?

Sources used:	Progress reports; Stakeholder interviews/FGD in Tajikistan; Central Asia Hydrometeorology Modernization project's implementation, completion and results report (2023).

- The completion reports of the previous phases mention high staff turnover in Tajikhydromet, and it is also recognised as a risk in the current phase of the project. In addition, it has also brought up by other projects, like WB's CAHMP project. It was not frequently mentioned in the interviews, probably because many of the interviewed staff had been already involved in the project during earlier phase(s). However, in the case of the interviewed technical staff in the weather forecasting department, only one had been working in the department for many years, while four others had only 1,5–2 years of experience. As mitigation measures for staff turnover, the project provides training to a broader group of experts, provides technical guidance documents (SOP), and develops training materials for training new staff. During the evaluators' visit to the weather forecasting department, it was observed that, for example, the SmartMet training material was in use. In addition, the ToTs approach is being applied, and it was found that at least in the case of SmartMet, knowledge and skills have been transferred to other staff members. In the area of glacier monitoring, Tajikhydromet has involved some university students, and at least one of them had recently started as a junior specialist in Tajikhydromet. Having partnerships with local and regional universities was one of the recommendations made by WB's CAHMP project (implementation, completion and results report 2023) for retaining staff.
- Based on the discussions with Tajikdhydromet management and technical staff, new knowledge and skills related to air quality monitoring as well as the glacier studies seem to be quite well incorporated into the institution's work. For air quality monitoring, the SILAM air quality forecast model is a new tool, and the related process (e.g. installations on computers) are still ongoing, so it is not yet part of routine procedures. In the case of weather forecasting and early warning, SmartMet and SmartMet Alert are also new tools, and although SmartMet is now in use and using SmartMet Alert is in the process, both require significant changes in working practices compared to the past. When discussing SmartMet, it was mentioned that if the tool does not enable the production of accurate forecasts conveniently, it may not be adopted. Several interviewees expressed the need for more precise models to be included in SmartMet than those currently available, specifically referring to the ICON (ICOsahedral Nonhydrostatic model) modelling framework, which they believed was not open source and would therefore require additional resources. It is noted, however, that ICON released an open-source code in January 2024. Based on the discussions, it seems that Tajikhydromet staff have not yet fully internalised all aspects of modern forecast technology and production processes (including the critical need to have reliable observation data). This is understandable, since moving from completely manual processes to the use of an automated weather forecast production tool like SmartMet represents a remarkable change. It requires a good understanding of both the possibilities as well as limitations of the new tool. Since the project is still ongoing, it will likely be able to further strengthen this component and its sustainability.
- Strong—and in most cases, long-term—cooperation with technical experts, their high motivation, the quality of Finnish experts, and the use of training-of-trainers, as well as the training wider group of staff members are all

factors contributing to the sustainability of the project results. In addition, complementary support provided by other international donors (such as the WB, Asian Development Bank) also enhances sustainability.

- As discussed above, the key challenges for sustainability of the project's results are retaining qualified staff and ensuring sufficient capacities to use new tools provided by the project.

Impact

EQ13. In what ways has the project affected the work of partner country agencies both directly and indirectly, including intended and unintended effects, with regard to developed capacities, (incl. human rights, gender equality, reduction of inequalities, climate resilience, and low-emission development)?

Sources used:	Progress reports; Stakeholder interviews/FGD in Tajikistan; Air Quality Management in Tajikistan (2023).

- The current project is still halfway through its implementation, but as discussed earlier (see EQ 11, EQ12), the knowledge and skills related to air quality monitoring as well as glacier studies seem to be quite well incorporated into Tajikhydromet's work.
- It is noted that Tajikhydromet currently operates one automated air quality station. According to the WB's report (2023), another automated station is located at the U.S. Embassy, while five additional stations are operated manually. These stations are not comprehensively distributed across the city to capture different pollution sources. Despite these limitations, the FMI's and Tajikhydromet's cooperation on improved air quality monitoring has already provided more information to authorities the, and the use of the SILAM model will also enable air quality forecasting. These developments contribute to better air quality management by authorities in Dushanbe. This is important, since air pollution causes significant health and economic losses in Dushanbe and other urban centres in Tajikistan.
- The glacier studies carried out, along with the results presented at congresses and in forthcoming published articles, provide an important basis for increasing awareness and fostering dialogue with Tajik authorities and other stakeholders on the impacts of climate change.

EQ14. What are the wider (indicative) impacts of the project on other stakeholders and beneficiaries in the partner country including aspects of HRBA and CCOs?

Sources used:	Progress reports; Stakeholder interviews/FGD in Tajikistan.

- As mentioned earlier, the provision of improved air quality information is important for better air quality management, which in turn supports reduction of health and economic losses.
- Glacier studies have been also carried out in Kyrgyzstan. Sharing the data and results of the studies in both Kyrgyzstan and Tajikistan provide a wider perspective on the impacts of climate change in the Central Asian region.
- Improved weather forecasting capabilities, along with better data quality and enhanced information dissemination through a mobile phone application, have the potential to improve the quality of weather and early warning services in Tajikistan. The realisation of this potential will be seen after the project has completed its activities.

EQ15. To what extent did the project have an impact on the Finnish institutions or Finnish private sector in terms of leveraging business opportunities and other linkages?

Sources used:	Completion report (II phase); Stakeholder interviews/FGD in Finland.

- FMI is working closely with Vaisala, and the introduction of its equipment took place during earlier phases of the project. Vaisala, for example, provided a mobile automated weather station for glacier studies. The ICI cooperation in Tajikistan has probably had a positive impact, since Vaisala delivered 20 automatic weather stations in Tajikistan through the tender process of WB/ Asian Development Bank.

Annex 12: GTK – VietMAR

Managed aquifer recharge to ensure sustainable groundwater availability and quality under ongoing climate change and fast economic development in Vietnam

Project title	Managed aquifer recharge to ensure sustainable groundwater availability and quality under ongoing climate change and fast economic development in Vietnam (VietMAR)
Country	Vietnam
Finnish institution	Geological Survey of Finland
Duration	01.03.2018–30.09.2023
Budget	EUR 600,000
Partner institution(s)	The Sub-Institute of HydroMeteorology and Climate Change (SIHYMECC) and The Center for Water Resources Warning and Forecast (CEWAFO)
Impact	To contribute to the targets and missions of the National Climate Change Strategy of Vietnam by improving the understanding of sustainable water resource management related to the Strategy's mission on water security through sustainable use of groundwater resources in Vietnam.
Outcome	To improve the capacity of the Vietnamese partner organizations (CEWAFO and SIHYMECC) to secure future freshwater resources with sustainable solutions and environmentally friendly solutions (MAR methods) and to strengthen their capability to act as an expert organization in decision making processes at local, regional and national level.
Outputs	1. CEWAFO and SIHYMECC are able to conduct full-scale sustainable water resource management background investigations that take climate change and economic development into account 2. CEWAFO and SIHYMECC can appraise and conduct feasible MAR studies 3. CEWAFO and SIHYMECC are able to conduct MAR feasibility studies to ensure good quality and sufficient quantity of groundwater in changing climatic and socio-economic conditions 4. Stakeholders and other beneficiaries are aware of MAR potential in Vietnam
Previous projects/phases (title, duration, main focus)	1. Development and implementation of climate change adaptation measures in coastal areas of Vietnam (VIETADAPT); 2011–2013 2. Developing and implementing climate change adaptation measures at local level in Vietnam (VIETADAPT II); 2015–2016 The overall objective of both projects was to support the implementation of Vietnam's national strategies on climate change by identifying practical adaptation measures to address the impacts of natural hazards and climate change on groundwater and surface water resources at the local level.

Relevance	
EQ1. To what extent is the project aligned with–and responds to the development objectives/priorities of the partner country?	
Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Law on Water Resources (2012 and 2023); Vietnam's National Climate Change Strategy (2022).

- Although MAR was not explicitly prioritised under the 2012 "Law on Water Resources", the law's general provisions supported sustainable water use, indirectly accommodating MAR. The project was a first of its kind, introducing MAR as a solution to the country's groundwater challenges. Since then, MAR has gained national recognition, and it is now formally incorporated in the 2023 revision of the "Law on Water Resources" and a 2024 Circular. Thus, the project was well aligned with national development objectives by introducing a solution for the groundwater problem. Today, its alignment would be even stronger as MAR has become a "hot topic" in Vietnam.
- Viet MAR aligns seamlessly with all water management solutions outlined in "Vietnam's National Climate Change Strategy". The Strategy recognises water security as a core pillar of climate adaptation and prioritises the protection and restoration of water resources through national planning, river basin strategies, and stricter controls on groundwater use. It outlines measures to prevent the degradation and pollution of water sources, alongside efforts to rehabilitate compromised supplies. Special focus is given to ensuring sustainable water use, particularly in drought-affected, water-scarce, and saltwater-intrusion-prone regions.

EQ2. To what extent is the project aligned with– and responds to the development policies of MFA Finland (including HRBA and CCOs, and more recently benefits for Finnish actors)?	
Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Progress reports; Project document; Completion report; Self-assessment; Government Report to Parliament on Finland's development policy (2016); Finnish Water Way (2018); Theories of Change and Aggregated Indicators for Finland's Development Policy (2021 & 2023); Report on International Economic Relations and Development Cooperation (2024).

- The Viet MAR project closely adhered to Finnish development policies throughout its development and implementation. It responded to the objectives of Finland's Development Policy 2016, particularly its fourth Priority Area on food security, water, and sustainable natural resource management. Additionally, it aligned with the "Finnish Water Way—International Water Strategy Finland" and the MFA's Theory of Change for climate and natural resources, particularly the fifth outcome area on water.
- While gender and inclusiveness were considered in the project, GTK felt that integrating specific indicators for gender, non-discrimination, and inclusiveness was challenging. Gender equality was promoted through gender-disaggregated data collection and by facilitating female participation in project activities. This was achieved by selecting seminar locations that enabled female participation, given that women in Vietnam generally have more restrictions on travelling outside their home city compared to men. Additionally, the project invited the women's union to take part in its activities, but they did not attend. The project did not directly contribute to reducing inequalities; however, equality was considered in project activities by addressing language and physical barriers. English training was organised at the beginning of the project for young experts from the implementing institutions SIHYMECC and CEWAFO, training materials and dissemination products were translated into Vietnamese, and interpretation was provided when needed.
- The project directly contributed to climate resilience by assessing climate change impacts on surface water and groundwater resources and by supporting climate change mitigation through the introduced MAR techniques. MAR can be used to enhance ecosystem restoration and protection of groundwater-dependent environments. In addition, study visits to Finland showcased Finnish environment protection practices including waste, waste water and water management and during project implementation environmental sustainability was considered by reducing the use of plastic.
- Finnish private sector engagement—a priority of the current Finnish development policy—was embedded in the project's design, although the project was designed and planned before the current policy emphasis on benefits for Finnish actors. The project aimed to strengthen collaboration between Finnish and Vietnamese water sector actors and explore further project openings to expand the reach of Finnish water expertise.

EQ3. To what extent does the project respond to the conditions and capacity development needs of the partner agency?	
Sources used:	Stakeholder interviews/FGD in Vietnam; Project document.

- The project was well aligned with CEWAFO's mandate, which includes forecasting and warning on water resources, as well as the planning and protection of water resources. Responsibilities were divided in a way that matched institutional roles: CEWAFO focused on groundwater, while SIHYMECC, whose expertise is more linked to surface water and climate change, took responsibility for assessments related to different climate change scenarios and socio-economic perspectives. Their involvement enabled the interdisciplinary approach needed for functional MAR applications. Since MAR aligned with both partners' mandates and was recognised as a new, promising and practical solution to a growing environmental problem in Vietnam, initiating research on the topic was a logical and timely decision.

EQ4. To what extent is the project design coherent and are the objectives and the intervention approach logically structured within the Results-Based Management Framework?	
Sources used:	Results-based management framework.

- The logical connection between outputs, outcome, and impact could be more clearly articulated.
- Outputs 1–3 focus on enhanced capacity of the implementing partners to independently conduct MAR-related research. This makes sense and follows the logic of the ToC presented in this evaluation. The associated outcome—that the implementing partners are recognised as national experts in MAR—is a logical step, though a big one and thus would better fit as an impact statement. Output 4 focuses on raising stakeholder awareness of MAR potential, and the outcome refers to the recognition of the implementing partners as experts. The causal pathway between raising awareness on MAR and institutional recognition of the partner institutions remains weakly defined.
- The structure of the outputs could have been simplified. Outputs 2 and 3, in particular, overlap in their emphasis on MAR feasibility assessments and pilot studies, and could have been merged to improve clarity.
- Some indicators are not clearly worded and contain multiple targets, such as impact indicator 1. At outcome level, two studies are cited as evidence of achievement, but as project deliverables, they are more accurately classified as outputs.
- Self-assessments were used to measure changes in knowledge and perceived influence. These assessments are a practical method to track capacity development among the implementing partners over time, however, this would have been stronger if complemented by more objective methods.
- A positive aspect of the framework is the systematic collection of gender-disaggregated data on training participants throughout the project.

Coherence and aid effectiveness

EQ5. How coherent is the project with the Country Programme and other MFA supported initiatives, and other Finnish interventions and agencies in the partner countries?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Completion report; Transition strategy; Project document; Progress reports.

- VietMAR was developed under Finland's Transition Strategy for Vietnam (2016–2020) and aligned well with its priorities of water and private sector collaboration.
- The project maintained close cooperation with other ICI projects in Vietnam and with the Finnish Water Forum. Joint planning of international travel allowed projects to engage with common stakeholders and maximise opportunities for in-person meetings.

EQ6. How coherent is the project with other initiatives, e.g. linkages, coordination, compatibility and synergy with other relevant interventions and agencies in the partner countries?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Progress reports; Completion report.

- The project demonstrated coherence with other initiatives through targeted geographical selection, strategic collaboration, and resource-sharing with other projects and institutions.
- The study site in Central Vietnam was chosen partly to avoid the heavy presence of donor-funded initiatives in the Mekong River Delta, even though that region also faces groundwater depletion and would have been a suitable location to pilot MAR. In the Delta, ongoing Dutch and German initiatives were addressing groundwater issues, but their focus was on confined aquifers, while GTK's expertise lies in unconfined aquifers.
- In Cat Nhon, VietMAR established a collaborative partnership with the University of Applied Sciences of Dresden's AquaViet project, enabling both projects to optimise their limited resources.. The joint effort led to a peer-reviewed scientific publication and master and doctoral theses.
- Reportedly the project collaborated with CEWAFO's parent institution, the National Centre for Water Resources Planning and Investigation (NAWAPI) through, e.g., the participation of CEWAFO's experts in fieldwork conducted as part of NAWAPI's project in the same study area, allowing access to its monitoring wells and data.
- Additionally, GTK and the Korea Institute of Geoscience and Mineral Resources organised a joint training on groundwater management, including groundwater chemistry, modelling, monitoring and MAR. . The project also collaborated with Vietnamese universities (HUNRE, Hanoi University of Water Resources, Quy Nhon) who participated in the project workshops and seminars. Hanoi Environment agency was trained on groundwater modelling practices.
- While there was some engagement, including invitations to workshops and participation in each other's seminars, GTK acknowledged that cooperation with other donor-funded projects could have been stronger. Nonetheless, the project effectively avoided duplication and established meaningful linkages with relevant actors.

EQ7. To what degree do the partner country agencies and higher-level authorities and decision-makers have responsibility and ownership of the projects?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Project document; Completion report.

- Partner institutions were actively involved in project design and implementation, e.g. conducting extensive research to identify suitable study sites, acquiring permits for data collection, and engaging with local authorities.
- Despite the project's efforts to communicate activities and outcomes within partner institutions, some researchers working in the partner institutions noted that communication between management and themselves could have been sometimes better.
- Direct engagement with higher levels of power was limited, and GTK felt that establishing such connections was not possible. The evaluation team did not manage to meet with MONRE.
- The project received support from the parent institutions and local authorities. The partner institutions' parent institutions, the Institute of Meteorology, Hydrology and Environment (IMHEN) and NAWAPI, participated in the project activities such as trainings and field work, and shared data with the project. The evaluation team did not manage to meet with IMHEN to confirm this. Local authorities and other stakeholders were regularly informed about project activities, and the fact that the project was granted permissions to collect and analyse samples from the study areas demonstrate their cooperation. In addition, the project documentation reports that background data was provided by the responsible institutes, DONRE (Department of Natural Resources and Environment—the local-level branch of MONRE), water supply companies and waterworks.
- Although supportive of the project, some interviewed researchers expressed frustration over the slow decision-making by the local administration and People's Committee regarding the study site location and the processing of permits to collect samples.
- Despite the support from the stakeholders, the People's Committee made key decisions affecting project implementation, including rejecting groundwater use in one study site and expressing concerns about MAR's potential risks at another, leading to study site relocations.

Efficiency

EQ8. What is the progress against the work plan target and time schedule (implementation progress)?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Completion report.

- The project largely followed the original plan and met most of its targets, with a non-cost extension granted due to delays caused by the switch of study sites and COVID-19 travel restrictions.

- The project faced a setback when both of its initially identified MAR study sites had to be changed due to the People's Committee's decisions after research had already been conducted in those sites. This caused delays in piloting the MAR concept, and plans had to be adapted.
- According to the completion report, a stakeholder workshop to assess risks and challenges of MAR options was not conducted due to the challenges faced by the project (case study site changes, COVID-19 disruptions, and delays in piloting). However, various studies were conducted to assess climate change impacts, groundwater level changes, water balance, and chemical status. Findings were incorporated into the MAR feasibility study and discussed in the final seminar and discussion papers. Risks and challenges were discussed during a stakeholder workshop in December 2022 as well as in the final seminar.
- Despite challenges with site selection and external constraints, the project adapted well and succeeded in building the partner institutions' capacity to conduct MAR feasibility studies and demonstrate riverbank filtration, which had been a core objective from the outset.

EQ9. To what extent are the results and processes feasible and cost-effective?

Sources used:	Stakeholder interviews/FGD in Vietnam; Final project budget.

- The project budget complied with the ICI manual[24]. The final expenditure report indicates that EUR 580,400, or 97% of the budget, was spent. Expert fees comprised 56.5% and realised capacity development costs (Part A in the budget) accounted for 72% of the actual expenditure. Fixed assets such as IT equipment, licenses, and field research equipment represented 6.7% of the budget, while costs directly benefiting the partner country agency—such as fixed assets, administrative expenses, and travel—amounted to 27%. Since training and peer-to-peer capacity building was in the heart of the project, the relatively high contribution of fees, capacity development, and travel costs are justified.
- Partner institutions acknowledged that although the project had a small budget, it effectively built their researchers' capacity.

EQ10. To what extent is the project well managed and are M&E systems and risk analysis processes adequately designed and implemented?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Completion report; Progress reports; Risk matrix; Self-assessment.

- The completion report summarises that nine Project board meetings were held. Feedback on the project management by the implementing institutions was good. Management met frequently and steering the project went smoothly. The board meetings focused on project achievements and key results, with major decisions covering no-cost extensions, annual plans with budget updates, and use of contingency funds.
- Although there were changes in MFA and Embassy personnel over the five-year project, communication remained strong. GTK appreciated the ICI meetings organised by MFA in Helsinki for Finnish institutions implementing ICI projects in Vietnam, which served as effective platforms for sharing experiences and lessons learned across projects. The Embassy actively supported project activities, participated in workshops, and facilitated exchanges between different ICI projects in Vietnam. The embassy also provided support in the applications for further funding from other sources, such as the EU.
- A self-assessment was conducted for VietMAR, facilitated jointly by the ICI facilitator and GTK, with participation from MFA and the Embassy.
- Overall, the project adhered to simple and good M&E practices. It systematically tracked and reported on progress made against predefined indicators. Baseline data were collected at the beginning of the project and self-assessments—though subjective—were used to track change in partners' knowledge and skill levels against the indicators in the RBMF. Gender-disaggregated data were collected in terms of participation in trainings and changes in capacity.
- The risk management framework was extensive, counting for both external and internal risks. It was updated frequently, indicating its active use as a risk management tool.

Effectiveness

EQ11. What are the main results (planned and unplanned) and to what extent have capacity strengthening efforts been adopted and contributed to the provision of improved services?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Progress reports; Completion report; Mission reports.

- Young researchers in the partner institutions gained exposure, practical experience and enhanced their skills in data collection, groundwater monitoring, isotope analysis, and writing reports and scientific papers. English language, communication, and presentation skills were reportedly improved as well. Several academic outputs were produced, including two MAR feasibility studies based on project results and experiences, a peer reviewed publication, and several theses about the project results, supporting individual researchers' academic qualifications.
- Practical field training and workshops led by Finnish experts were highly valued and positive feedback was given on the expertise and professionalism of Finnish trainers. However, stakeholders noted that trainings should have taken place earlier in the project cycle to allow time for application, and there could have been more of them. The 2–3 day trainings were considered too short for such complex topics. For participants without prior knowledge, the

[24] ICI project's budget rules (MFA, 2023b), require that at least 60% of costs focus on capacity building, and that costs directly benefitting the partner country should be at minimum 20% of total costs, and that subcontracting costs do not exceed 15%.

seminars served as an introduction, while those with existing expertise benefited from peer exchange and could deepen engagement with the subject matter.

- Study visits to Finland were considered highly beneficial. They offered inspiration, exposed participants to MAR solutions in real-world settings, and provided ideas for future adaptation in Vietnam.
- The project successfully strengthened the partner institutions' knowledge of MAR. Both CEWAFO and SIHYMECC reported an improved understanding of MAR technologies and approaches. CEWAFO has since provided advice on MAR to NAWAPI for drafting the new legislation on MAR, and confidence was expressed by the partner institutions in their ability to implement MAR projects in the future—although it was noted that GTK's involvement would add value to the work.
- Although it was felt that the timing of the project was not entirely optimal and that more emphasis should have been put on communications about MAR to local officials —and even within the partner institutions from the management to the staff level—the project later contributed indirectly to national-level reforms. NAWAPI and IMHEN were involved in the ongoing Water Act reform process, utilising the knowledge generated through the project. Although MAR was not yet widely known at the start of the project, there is now increased recognition of its potential.
- Although neither of the partner institutions are currently actively working on MAR, as a result of the project, they are better positioned to take on MAR studies as the topic gains more prominence.

Sustainability

EQ12. How sustainable are the results and approaches, in terms of institutional, technical, human and financial capacities, socio-economic conditions, governance and environmental/ climate resilience risks and potential trade-offs?

Sources used:	Stakeholder interviews/FGD in Vietnam; Completion report.

- The evaluation team found evidence of some supporting factors but overall has concerns about the sustainability of the project results.
- Some of the researchers trained through the project have started teaching the topics in universities and writing scientific papers on them, which is a positive spillover effect and contributes to the long-term continuation of the knowledge beyond the project's lifecycle.
- Some technical staff from CEWAFO are now working on other MAR projects.
- While no formal workshops or presentations were organised following the study trips to Finland, participants shared the materials they had received with colleagues. These materials support the transfer and sustainability of the gained knowledge, though more structured follow-up would have strengthened the depth and reach of the knowledge transfer.
- Both institutions retained the local coordinators of the project, but according to the partner institutions, most of SIHYMECC's and almost half of CEWAFO's trained researchers have left the institutions by now. In addition to the materials received from the trainings, the partner institutions did not mention ways in which they would have transfer gained knowledge to new and old colleagues. Additionally, some researchers were unable to continue with the project, as they were reassigned to other tasks and did not participate further, despite having initially been involved in project activities.
- The project provided some equipment like computers and software support, such as computers for modelling and software licences during the project period, but long-term sustainability in this area is constrained. It was stated that NAWAPI has one license, but the rest are no longer active. The lack of modelling licences and not enough laboratories for isotope analysis may hinder their ability to fully apply the knowledge gained. The evaluation team was informed that state investment projects occasionally support the purchase of new equipment, which may help alleviate some of these limitations over time; however, this support does not appear to be guaranteed or systematic.

Impact

EQ13. In what ways has the project affected the work of partner country agencies both directly and indirectly, including intended and unintended effects, with regard to developed capacities, (incl. human rights, gender equality, reduction of inequalities, climate resilience, and low-emission development)?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Completion report.

- Two out of three targets at the impact level were not met. MAR facility planning has not started in the Binh Dinh province and no commercial partnerships were realised—both targets being naturally out of the project's control. The project was one of the first MAR projects—if not the first one—in Vietnam, and it was felt that it might have come too early. Vietnam was not ready for it, and the lack of external support hindered its success.
- While the timing of the project posed some limitations—given that MAR was not yet widely known or supported—it still played a pioneering role. Its early efforts contributed to laying the foundation for subsequent research and policy developments. VietMAR's results were later referenced in the national law development process. MAR is now a "hot topic" in Vietnam, albeit still in a research state. Efforts are underway to make it operational, and several new MAR-related initiatives are in progress.
- CEWAFO was consulted during the development of new legislation on MAR, illustrating how the project elevated the visibility and credibility of the institution in shaping MAR policy.
- As the new Water Act comes into force, the project's contributions are expected to gain further relevance. Partner institutions are better placed to respond to the increasing demand for MAR studies, and proposals to address these emerging needs have already been developed.
- The project directly strengthened technical and academic capacities, with spillover effects into education and research. Researchers trained on MAR and isotope have begun teaching these topics in universities and contributing to scientific publications.

EQ14. What are the wider (indicative) impacts of the project on other stakeholders and beneficiaries in the partner country including aspects of HRBA and CCOs?	
Sources used:	Stakeholder interviews/FGD in Finland; Completion report.

- Although no concrete outcomes related to human rights, gender equality, or the reduction of inequalities were identified, the completion report noted that implementing partners expressed increased understanding of human rights. However, this could not be verified in the interviews. In addition, the project contributed to climate resilience by promoting sustainable groundwater management through MAR, supporting long-term environmental sustainability.

EQ15. To what extent did the project have an impact on the Finnish institutions or Finnish private sector in terms of leveraging business opportunities and other linkages?	
Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Completion report.

- Through VietMAR, GTK engaged with other ICI projects and stakeholders in Vietnam. The project facilitated international networking, including joint case study work, participation in seminars and webinars. The case study collaboration with Dresden University of Applied Sciences and Technical University of Dresden led to a joint peer-reviewed article and academic theses. Additionally, collaboration with BGR (Federal Institute for Geosciences and Natural Resources) led to plans to document GTK's and BGR's experiences in MAR and compile them into a MAR guideline.
- Turku Region Water Ltd. played an active role in the project's implementation and the project maintained close coordination with the Finnish Water Forum. Several Finnish companies were informed of potential MAR business opportunities by showcasing Finnish expertise in MAR through training sessions, missions, industry events, and exchanges. Business Finland office in Ho Chi Minh City was also visited during missions. Outreach to water supply companies across and beyond Binh Dinh province led to wider interest in MAR. Seminars organised by the project (and FWF) increased the visibility of Finnish expertise and interest among Vietnamese water companies to pursue MAR projects in collaboration with Finnish actors. However, GTK mentioned that involving Finnish companies is not easy, as not many are willing to pursue this kind of business approach outside Europe. Despite that, some discussions have started on possible MAR projects in Vietnam and other countries for GTK, and at least one MAR agreement has since been made between Finnish and Vietnamese companies.
- Since VietMAR, GTK has successfully obtained other funding to continue work in Vietnam.
  - A follow-up Business Finland-funded project, viewed as a continuation of VietMAR, gathered insights into the expectations of Vietnamese waterworks. This provided valuable market intelligence to better align Finnish services with local needs. These preparatory efforts laid the groundwork for future engagement, even if commercial returns have yet to materialise.
  - GTK, MONRE and the Ministry of Agriculture and Forestry of Finland received EU TAIEX funding to support Vietnam's Department of Water Resources Management in completing a regulatory framework for groundwater protection and MAR, through a Finnish expert mission to Vietnam and a study visit to Finland.

Annex 13: FMI – PROMOAIR

Promoting Modernisation of Air Quality Observation and Management Systems in Urban areas of Vietnam

Project Name	PROmoting MOdernisation of AIR Quality Observation and Management Systems in Urban Areas of Việt Nam (PROMOAIR)
Country	Vietnam
Finnish institution	Finnish Meteorological Institute
Duration	2020–2024 (originally 2022)
Budget	EUR 600,000
Partners	Northern Centre for Environmental Monitoring (NCEM), initially under the Vietnam Environment Agency and from 2023, the Pollution Control Department (PCD) under MONRE
Impact	Available air quality information in Vietnam meets the needs at national, local and citizen level
Outcome	VEA/NCEM is able to utilise new air quality monitoring, assessment and forecasting methods to provide better air quality related data and services
Outputs	1. Improved quality and coverage of air quality monitoring 2. Air quality dispersion model operational and used for air quality assessment and forecasting 3. Improved capacity of VEA to utilise satellite-based information in air quality assessment 4. VEA/NCEM internal processes support improved research capacity and gender focused activities
Previous projects/phases (title, duration, main focus)	None
Remarks	

Relevance	
EQ1. To what extent is the project aligned with–and responds to the development objectives/priorities of the partner country?	
Sources used:	Policies Vietnam; Project document; Yale University (2024); Stakeholder interviews/FGD in Vietnam; Self-assessment.

- Air pollution is becoming one of the most critical factors affecting the health of Vietnamese population. The 2024 Environmental Performance Index (EPI, as developed and monitored by Yale University) ranked Vietnam 166 out of 180 countries for air quality, or number 22 out of 25 countries of the Asia Pacific region Yale University 2024. In terms of air pollution Vietnam scored the highest of all 180 countries.
- The project aligns with Vietnam's Environmental Protection Law of 2020, which focuses on pollution control and environmental protection. The law emphasises the importance of air quality monitoring and air pollution control (article 12) as part of environmental protection efforts. The law underscores the need for developing both infrastructure and technology, as well as forecasting capabilities, robust database systems, and effective public disclosure of information. These elements align precisely with the project's focus areas.
- The “National Plan for Air Quality Management” (2021–2025), approved by the Prime Minister in November 2021, emphasises strengthening air quality monitoring systems. The overall objective of the plan is to “enhance the management of ambient air quality by controlling emission sources, monitoring ambient air quality, issuing warnings, and forecasting air quality to improve the environment and safeguard public health.” The plan outlines four specific objectives, including the goal to "enhance monitoring, warning, and forecasting efforts for ambient air quality in urban areas and regions with a high concentration of emission sources." Additionally, the appendix highlights Priority Areas for implementation, such as the initiative to "complete and modernise the automatic and continuous ambient air quality monitoring system; improve forecasting and warning capabilities for ambient air quality; establish air quality monitoring points; and finalise the database system for ambient air quality in special urban areas and class I cities and above."
- The “National Environmental Protection Masterplan” for the period 2021–2030, with a vision to 2050 was approved by the Prime Minister in July 2024. The document outlines a comprehensive air quality monitoring strategy. It specifies that the National Air Quality Monitoring Network should include automatic and periodic air quality monitoring stations in areas with minimal pollution (background monitoring) and in areas highly impacted by different sources of pollution (impact monitoring), to continuously track key pollutants (SO_2, NO_2, CO, O_3, PM_{10}, and $PM_{2.5}$).
- The relevance of the project was emphasised by the PCD management. At the start of the project there was high demand for improvement of the air quality monitoring and forecasting systems to ensure the provision of reliable and representative air quality data for decisionmakers and the public. The PCD has been tasked with drafting a

plan to tackle air pollution in big cities like Hanoi and Ho Chi Minh City, and air quality monitoring is an essential part of this plan.

EQ2. To what extent is the project aligned with–and responds to the development policies of MFA Finland (including HRBA and CCOs, and more recently benefits for Finnish actors)?

Sources used:	Project document; Report on Development Policy Across Parliamentary Terms (2021); Report on International Economic Relations and Development Cooperation (2024); Theories of Change and Aggregated Indicators for Finland's Development Policy (2023); Stakeholder interviews/FGD in Finland and Vietnam; Progress reports.

- The project has been designed and planned during the previous development policy guideline (MFA, 2021a) and it is well in line with one of its policy priorities: climate change, biodiversity and sustainable management and use of natural resources. In addition, the current policy guideline (MFA, 2024b) has climate action as one of Finland's areas of strength under which providing expertise in weather observation and early warning systems has been emphasised. The project is also aligned to Outcome 3 of the MFA Finland's Theory of Change for Priority Area "Climate and natural resources" related to disaster risk reduction. The project contributes especially to the Output 1 under this Outcome: "Partner countries' capacity to generate effective and timely weather and climate services and early warnings has improved".
- The project document refers to CCOs with respect to gender equality, reduction of inequality and climate resilience and low emissions development. Gender equality has been considered by encouraging both male and female participants to take part to the project activities and trainings. A specific gender equality workshop was planned and Output 4 specifically referred to NCEM's internal processes supporting gender focused activities. The project considered that they had only indirect capabilities to help at reduction of inequality. "Most of the work will be done by improving processes that will benefit the society at large". The project objectives are aligned with climate sustainability. Regarding low emission development practical actions were taken by FMI, such as combining missions with other projects when possible. In addition, measures for tackling air quality are also expected to contribute to lower emissions.

EQ3. To what extent does the project respond to the conditions and capacity development needs of the partner agency?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Project document; Annual work plan; Progress reports; Board meeting minutes; Self-assessment.

- The project is highly relevant to NCEM's (and PCD's) needs. Stakeholders and managers at NCEM confirmed that "air quality forecasting was urgently needed, it came at right moment".
- The capacity needs identification process was conducted in a participatory manner. NCEM had influence on the course topics, and specific needs were identified before each training course. The content of courses was agreed beforehand, based on jointly undertaken needs assessments during the entire project. NCEM could also include new topics. For example, NCEM requested the use of satellite imageries for Particulate Matter (PM) 2.5 monitoring and also web GIS, which were not included in the original FMI proposal.
- The need for quality assurance and quality control measures were identified by FMI. Although NCEM confirmed the importance of those aspects, progress was limited and FMI considers that the partner found this less relevant than the other activities, especially the air quality assessment report and air quality forecasting. This is also confirmed by NCEM's presentation of the project results in the final seminar, which highlights the report and the SILAM model.

EQ4. To what extent is the project design coherent and are the objectives and the intervention approach logically structured within the Results-Based Management Framework?

Sources used:	Results-based management framework; Progress reports.

- The RBMF has a few issues. The outputs are a bit overlapping but impact is defined at the adequate level (not over-ambitious). However, the Outcome refers to improved capacity only ("NCEM is able to…"), instead of the intended use of that capacity at the end of the project (the expected change/effects of capacity building).
- Some indicators are adequately formulated but others are less clear and SMART. For most indicators, the progress reports discuss at length the level of implementation referring to activities in the RBMF rather than the achievement of the indicators.

Coherence and aid effectiveness

EQ5. How coherent is the project with the Country Programme and other MFA supported initiatives, and other Finnish interventions and agencies in the partner countries?

Sources used:	Finland's Country Strategy for Vietnam 2013–2016 and 2016–2020; Stakeholder interviews/FGD in Finland and Vietnam; Project document; Progress reports.

- Finland's "Country Strategy for Development Cooperation with Vietnam 2013–2016", highlighted two development results: (i) Improved basis for the knowledge-based society; and (ii) Sustainable use and management of natural resources and improved climate sustainability. Due to Vietnam's transformation into a low middle income country with one of the fastest growing economies, Finland's bilateral cooperation strategy is shifting from aid to trade. The overall strategy to guide this process is described in the framework arrangement "Cooperation between Finland and Vietnam 2016–2020", which builds further on the key areas supported through the Country Strategy. The PROMOAIR project is well aligned with these strategies and especially one of the cooperation's

focus areas: science, technology and innovation. Institutional cooperation between FMI and NCEM for the modernisation of the air quality monitoring services is well in line with this policy guideline in addition to an emphasis on environmental sustainability.

- The project linked up with PROMOSERV, also implemented by FMI, to use their meteorological data as an input to the SILAM air quality model. Despite the support of FMI PROMOSERV experts, this was not successfully implemented as it would have required some additional work on the part of VNMHA (the partner institution of PROMOSERV), which they could not undertake because their capacity is now fully utilised and there is no room for additional tasks/responsibilities. Even though the VNMHA and NCEM/PCD belong to the same ministry, the collaboration remains limited.
- The project is also coherent with other projects which involve Finnish institutions. A Finnish weather transmitter from Vaisala has already been installed to the NCEM air quality monitoring station within the WB air quality project on source apportionment. The ICI project also contributed to the design of another large project.

EQ 6. How coherent is the project with other initiatives, e.g. linkages, coordination, compatibility and synergy with other relevant interventions and agencies in the partner countries?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Project document; Annual work plan; Progress reports.

- NCEM has received support from various donor organisations, including KOICA, Japan International Cooperation Agency, United States Agency for International Development, United Nations Industrial Development Organization, WB, UNEP, and Clean Asia. Some activities are still on-going. There are not many linkages or coordinated efforts between those projects but as they focus on different aspects (mostly not related to air quality) no conflicts or duplications were found. The KOICA satellite imagery equipment is considered complementary.
- NCEM also uses other models for air quality, such as the Community Multiscale Air Quality Model, developed by the United States Environmental Protection Agency. The model is complementary to SILAM and assessment comparisons are made in reports. According to technical staff, both have comparative advantages. SILAM is better for providing trends while for higher pollutants Community Multiscale Air Quality Model is preferred.
- FMI used (calibrated) samplers provided by the WB. PROMOAIR continued the results of the WB financed project “Air Quality Management in Vietnam—Consultancy Services for Air Pollution Source Apportionment Analysis and Capacity Building”, which FMI was implementing together with Hanoi Environmental Protection Agency and NCEM analysing the sources of the particulate concentrations in Hanoi city.

EQ 7. To what degree do the partner country agencies and higher-level authorities and decision-makers have responsibility and ownership of the projects?

Sources used:	Stakeholder interviews/FGD in Vietnam; Self-assessment.

- The project idea was initiated by FMI in consultation with the embassy. FMI contacted PCD/NCEM. However, the project was designed in close consultation with NCEM to ensure relevance of the intervention. NCEM could influence the project design and also the detailed activities during the implementation.
- The project document, including the RBMF was basically designed by FMI. Although managers at PCD and NCEM reported that the structure is clear with four outputs, the PCD/NCEM do not really use the RBMF and the final presentation by NCEM does not follow the RBMF structure in presenting the achievements.
- Technicians indicated that despite the agreed workplan it took time to get to know each other, but after some initial hurdles, the relationship was very good. Both NCEM and PCD emphasised that the direct interactions and personal relationships between NCEM and FMI experts were very fruitful.
- The ownership of the project by management and technical staff is high for certain outputs. Especially the SILAM forecasting has been well integrated. The technicians show high commitment, have further developed and maintained the system and are producing bi-weekly reports to PCD.
- The Deputy Director of PCD was said to be highly supportive and knowledgeable about the project. In the meeting with PCD it appeared that the knowledge mostly referred to the main results of the project but less regarding more detailed aspects of the intervention. However, she confirmed that air quality monitoring is highly supported by decision-makers. During the PROMOAIR project, MONRE invested in modernising air quality monitoring systems, including a new office and laboratory facilities, as well as advanced instrumentation for NCEM, indicating the relevance of the project to the government.

Efficiency

EQ 8. What is the progress against the work plan target and time schedule (implementation progress)?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Progress reports; Self-assessment.

- COVID-19 affected the implementation during the first years and main activities were implemented through remote support and on-line meetings/training events. Especially Output 3 (use of satellite-based information) got much emphasis in the beginning as well as more theoretical training on the SILAM model. The project got a non-cost extension.
- Restructuring processes (VEA to PCD and merging MONRE with the Ministry of Agriculture) have also affected the progress. In addition, some changes in leadership took place which further delayed some activities.

- Furthermore, difficulties were reported with respect to the hierarchical management structure and administrative procedures, which caused delays in implementation.
- Related to Output 1, the quality assurance and quality control processes for quality of air quality monitoring SOPs, auditing, calibrations, Demonstration of Equivalence (DoE)) were not operationalised, as they seemed to have been given less priority by NCEM management. Otherwise, most activities were implemented, some with higher outputs than planned and others slightly lower than the indicator targets.

EQ 9. To what extent are the results and processes feasible and cost-effective?

Sources used:	Project budget; Financial progress reports; Stakeholder interviews/FGD in Vietnam.

- The project's budget and implementation adhered to the ICI guidelines outlined in the 2021 ICI manual (main reference) and more or less to the 2023 ICI manual. Based on the financial figures in the last progress report, the total costs of technical assistance provided by FMI experts (e.g. fees, transport, accommodation and per diem) came to 65.8% of the total budget and equipment 11%.
- According to FMI, procurement decisions were made with a strong emphasis on cost-effectiveness, ensuring that resources were utilised efficiently while maintaining the high-quality standards necessary for the project's success. The equipment was bought from Vietnamese companies providing the cheapest options.
- The shift to remote training due to COVID-19 significantly reduced travel expenses as fewer expert visits were implemented than foreseen. The savings enabled the funding of an additional internship, in which five NCEM and PCD technical experts participated in a two-week hands-on training programme in Finland, which was considered highly effective.
- Due to COVID-19, less expert visits were implemented that foreseen, especially in the first years. In total, 23 FMI expert missions were conducted to Vietnam, two internships with nine Vietnamese participants, and a high-level study visit to Finland with 10 participants. Although a large number of FMI experts were involved (28), main inputs were provided by a few experts. Especially the project manager provided most inputs (195 days), combining technical support with management activities. Pre-mission remote meetings were organised before each mission to coordinate and discuss the implementation schedules of project activities and suitable times for the expert missions.
- Given the satisfactory achievement of most outputs and outcome, the project appears reasonably cost-effective.

EQ 10. To what extent is the project well managed and are M&E systems and risk analysis processes adequately designed and implemented?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Project document; Annual work plan; Progress reports; Board meeting minutes.

- Only four project board meetings were conducted, one in 2020, one in 2022, and two in 2023. Although no board meetings took place in 2024, several management level meetings were conducted between FMI and NCEM/PCD, one with the participation of MFA and the Embassy. These high-level meetings were replacing the board meetings.
- Overall, clear responsibilities and participatory planning have been reported, with close consultation between FMI and NCEM regarding the annual workplans.
- On the other hand, FMI also experienced some cultural issues regarding the Vietnamese hierarchical management system—which forced staff to wait for management orders, for example with respect to the SOP and automatic monitoring stations. In addition, some changes in leadership took place, and plans sometimes changed quickly. Furthermore, difficulties were reported with respect to administrative procedures, which caused delays in implementation.
- As with other ICI projects, the M&E system is very basic, reporting on the RBMF indicators. The weaknesses of the RBMF are reflected in the M&E system.
- The support of the Embassy and ICI FC was appreciated by the FMI manager and the workshops were considered useful. The emphasis on integrating HRBA and CCOs in project design and extensive reporting was considered a bit difficult and "artificial" for such projects. The support of the FMI in-house gender expert was therefore highly welcomed.

Effectiveness

EQ 11. What are the main results (planned and unplanned) and to what extent have capacity strengthening efforts been adopted and contributed to the provision of improved services?

Sources used:	Stakeholder interviews/FGD I Finland and Vietnam; Project document; Annual Work plan; Progress reports; Board meeting minutes; Self-assessment.

- At the start of the project, during COVID-19, main emphasis was put on Output 3, remote training on the use of satellite data and to some extent on the theoretical aspects of the SILAM model. At the later stages major input was provided to Outputs 1 and 2.
- Output 1:
  - Assessment report of current air quality monitoring network and recommendations for the development. FMI provided input to the Master Plan for air quality monitoring, locations of monitoring stations, and investments

by the government. The project also procured a new pilot air quality monitoring device and provided an automatic PM analyser for PM 2.5 and automatic PM sampler with a cooling storage.
    - Enhanced capacity of NCEM chemical laboratory and validated methodologies for analysing new pollutants.
    - Although the project also enhanced quality assurance and quality control processes for quality of air quality monitoring (SOPs, auditing, calibrations, DoE), NCEM reported that the operationalisation of the quality assurance and quality control SOP was not completed.
- Output 2:
    - Improved capacity on air quality forecasting through operation of SILAM air quality model. This was highlighted as a main project result, together with the air quality assessment report (Output 1). The model was adapted to the Vietnamese situation and has been in use for over two years. FMI purchased and installed a new server and laptops. Until now, the model was mostly used for in-house reporting.
- Output 3:
    - Enhanced capacity of NCEM experts on processing, visualisation and interpreting the satellite data and machine learning. NCEM experts are able to produce satellite retrieval figures to support air quality assessments and they produced satellite images for the air quality assessment report.
- Output 4:
    - A co-authored paper "Chemical Composition and potential sources of PM 2.5 in Hanoi" was published in Atmospheric Environment on 14.02.2023. https://www.sciencedirect.com/science/article/pii/S1352231023000766. A gender equality workshop was conducted. All the other activities under this output were related to other outputs.
- NCEM as well as PCD highlighted the high-quality and relevance of the capacity building process provided by FMI. The visits to Finland, internships, as well as the formal training in Vietnam and direct coaching were considered very useful, relevant and practical. The PCD emphasised the strength of the training approach through direct interaction between FMI experts and NCEM technical staff. Even after the project finished, the technicians remained in contact with FMI experts on an informal basis.
- However, some of the technical staff considered the SILAM a difficult model for which they would need more in-depth knowledge. They managed to keep the system running and undertook some self-learning but for further improvement they would require increased skills.
- The management of NCEM commented that the quality of the capacity building was very high, but in terms of quantity and frequency of the trainings and especially visits of the FMI experts it could have been better. "The FMI experts work on many projects, which makes it sometimes difficult to get hold of them or arrange their visits to Vietnam".
- In terms of the outcome, two of the three indicators were achieved. But more importantly, a certain level of adoption and utilisation of the outputs is noticed.
- The assessment report of the air quality monitoring network was an important input that is well aligned to the Master Plan for environmental monitoring in Vietnam and many of the recommendations have been adopted or earmarked for implementation by the government.
- The SILAM model has been adopted and used for two years by NCEM. The NCEM technicians consider that their new skills and the SILAM model have greatly improved the efficiency and quality of their reports. It is now much easier to produce the bi-weekly reports.
- However, according to PCD the results have so far mostly been used internally and not yet been made available to the wider public as they are in the process of validating the reliability and quality of the models with ground truthing data.
- The technicians apply strengthened capacity to use satellite imageries and machine learning to recognise pollutants—aerosol optical depth.
- While the services have improved, there is still need for further enhancement. NCEM confirmed that there are still some issues related to data input and gaps on different pollution sources, emission inventory, ad other aspects. The SILAM model requires various types of data, including hydrometrical data that was supposed to be provided by VNMHA (including the weather research and forecasting hydro model). But despite the support of PROMOSERV FMI expert to link the systems, the transfer of data has not succeeded due to various reasons including specific requirements of NCEM (higher frequency of data), and security concerns. Therefore, NCEM developed their own hydrometrical model, which is less accurate. In addition, the SILAM should be further developed to adapt it to a more localised, context specific analysis based on a higher resolution.

Sustainability

EQ 12. How sustainable are the results and approaches, in terms of institutional, technical, human and financial capacities, socio-economic conditions, governance and environmental/ climate resilience risks and potential trade-offs?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Project document; Annual work plan; Progress reports; Board meeting minutes; Self -assessment.

- Staff turnover has been substantial. At management level, the NCEM Director and Deputy Director changed in 2024. In addition, four people out of 10 trained staff (40%) left the organisation. As more people were trained on

the specific topics, the knowledge has not disappeared. There are no formal procedures for transfer of knowledge in place but all training materials have been retained and existing staff can train newly recruited personnel.

- The SILAM is operational and technical experts have tried to improve and include more parameters on their own. Frequent reports are generated and shared with the management of PCD. Other obtained skills are also used in daily work, including GIS.
- Since air quality is a major concern, the Government has allocated substantial funds for improving air quality monitoring, following the Master Plan, including the establishment of several new monitoring stations.
- NCEM was provided with a new office building and has enhanced laboratory facilities.
- Although there is restructuring taking place with MONRE and Ministry of Agriculture merging, stakeholders believe that this will not likely affect the operations of NCEM/PCD.
- The evaluation team was informed that the Director of PCD is highly interested in the project, and the PCD Deputy Director also showed recognition of the project results and importance of the achievements.

Key factors enabling sustainability:

- High importance and recognition of the air quality issues by decision makers at the highest political level, closely in line with the Master Plan to guide air quality monitoring and forecasting.
- Investments of the government in air quality monitoring facilities.
- Highly motivated technicians who want to further develop their skills and are engaged in some self-learning.

Key factors inhibiting sustainability:

- Risk of staff turnover and lack of formal procedures for knowledge transfer.
- Lack of further development of the models and reduced accuracy of the models and data gaps—issues of data transfer for example from VNMHA weather research and forecasting to SILAM.

Impact

EQ 13. In what ways has the project affected the work of partner country agencies both directly and indirectly, including intended and unintended effects, with regard to developed capacities, (incl. human rights, gender equality, reduction of inequalities, climate resilience, and low-emission development)?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Project document; Annual work plan; Progress reports; Board meeting minutes; Self-assessment.

- NCEM's mandate has not changed but the introduction of new technologies has changed/eased the way of working for the technical staff with regards to the air quality reporting process. The process is considered more efficient and the results more useful/accurate. NCEM is able to conduct new analysis methods for the pollutants that have not been analysed before.
- With respect to gender equality, the project implemented a gender equality workshop on 18.10.2023 with 42 participants (12 male, 30 female) and tried to work with an equal balance of male and female experts. According to NCEM, gender equality was already largely practiced with some of the leadership positions taken by women. The impact at institutional level is therefore difficult to measure.
- NCEM's increased expertise in air quality monitoring has been recognised. The project's assessment of national air quality monitoring networks and support to the Master Plan has probably enhanced the visibility of NCEM/PCD. For now, the distribution of air quality forecasting reports remains in-house but it is expected that a wider clientele will be reached in the near future.
- The government recognises the importance of the air quality services and has invested in upscaling the monitoring network (considering the recommendations of the project's assessment report).

EQ 14. What are the wider (indicative) impacts of the project on other stakeholders and beneficiaries in the partner country including aspects of HRBA and CCOs?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Project document; Annual work plan; Progress reports; Self-assessment.

- Air pollution is one of the biggest environmental risks to health. The project increases capacity to provide improved air quality information used for situation awareness and decision making, which is expected to contribute to taking corrective measures that will improve the health of the citizens.
- NCEM's improved capacity and the scientific co-authored manuscript "Chemical composition and potential sources of PM2.5 in Hanoi" are directly supporting the decision making and preparation of clean air action plans and to set up new policies and legislation.
- Air quality management is closely connected to climate sustainability. The activities that are targeted to reduce air pollution also reduce greenhouse gases. The project is likely to contribute to the transition to low-emission traffic and industry as the poor air quality is related to traffic emissions and to the polluting industry.

EQ 15. To what extent did the project have an impact on the Finnish institutions or Finnish private sector in terms of leveraging business opportunities and other linkages?

Sources used:	Stakeholder interviews/FGD in Finland and Vietnam; Progress reports.

- High-level study visit participants met with Vaisala in Finland, where the company introduced their innovative solutions for air quality monitoring. It is understood that no further business has resulted from this yet.

Annex 14: GTK – NR UZB

Strengthening the Mastering of Natural Resources for National Welfare in Uzbekistan

Project Name	Strengthening the mastering of natural resources for national welfare in Uzbekistan
Country	Uzbekistan
Finnish institution	Geological Survey of Finland
Duration	17.02.2022–31.12.2024
Budget	EUR 1,082,231
Partner institution(s)	Ministry on Mining Industry and Geology (MINGEOLOGY) (Before the year 2023, the name was State Committee of the Republic of Uzbekistan on Geology and Mineral Resources)
Impact	Advanced use of geoinformation generates increased economic benefits and living conditions for local people. Reliable, digital geoinformation is available and utilized for the sustainable use of groundwater resources and natural hazard risk reduction in Uzbekistan.
Outcome	MINGEOLOGY has advanced capacity in production and sharing geoinformation on natural resources and hazards.
Outputs	1. MINGEOLOGY staff has enhanced skills and knowledge on producing and assessing groundwater resources and observations of environmental impacts 2. Personnel's natural hazard prediction capacities strengthened 3. Strengthened skills in digitalisation, data management and sharing 4. Increased international and regional networking 5. Strengthened good governance practices via project implementation
Previous projects/phases (title, duration, main focus)	There have not been any previous projects. GTK prepared a cooperation project with Central Asian countries in 2009–2010, which also included Uzbekistan. However, during the process and despite the signing of the MoU, Uzbekistan remained outside the cooperation. In 2018, Uzbekistan expressed its interest in joining the Central Asian Geoportal, which had been developed through GTK's cooperation projects in Kyrgyzstan and Tajikistan, funded by MFA Finland. In 2019, a GTK delegation visited Uzbekistan to discuss cooperation opportunities.
Remarks	

Relevance	
EQ1. To what extent is the project aligned with–and responds to the development objectives/priorities of the partner country?	
Sources used:	Water Sector Development Concept of Uzbekistan 2020–2030; Development Strategy Centre – Issues of Digitalization in the New Development Strategy of Uzbekistan website; The Law of the Republic of Uzbekistan No. ZRU-987 "On Subsoil"; Project document; Stakeholders' interviews/FGD in Uzbekistan.

The project was well aligned with several policy priorities of Uzbekistan:

- There have been several presidential decrees for improvement of the activities of the State Committee of the Republic of Uzbekistan for Geology and Mineral Resources (GOSCOMGEOLOGY). The latest decree was given in 2023 and the GOSCOMGEOLOGY changed its name to MINGEOLOGY.[25]
- Uzbekistan has made notable investments and efforts developing the fields of geology, groundwater, and the mineral sector in recent years, and the project has responded to this development by providing advanced training and different tools to the organisation.
- Presidential decree on the Water Sector Development Concept of Uzbekistan 2020–2030[26], addresses the challenges in water management, and provides a roadmap for efficient land and water use, improvement of water management system, and modernising and developing water infrastructure. The concept includes also e.g. conservation and sustainable use of strategic groundwater resources and modernisation of groundwater monitoring. The project has enhanced the MINGEOLOGY's experts' capacities in the groundwater modelling and groundwater resource management.
- A presidential decree was issued in 2020 (Approval of the strategy "Digital Uzbekistan–2030") on the digitalisation of government sectors, affecting all ministries, including the Ministry of Geology[27]. The project contributed to this agenda by modernising hydrogeological data management. Support with the establishment of GIS-based digital

[25] See https://www.geoportal-uz.org/our-history/

[26] See https://aral.uz/en/blog/2020/07/23/decree-of-the-president-no-up-6024-on-approval-the-water-sector-development-concept-of-uzbekistan-for-2020-2030/

[27] See https://strategy.uz/index.php?news=1518&lang=en

maps aligned the project with national priorities, particularly the Ministry of Geology's directive to develop digital hydrogeological maps and the broader government strategy to integrate digital solutions across agencies. Additionally, the introduction of the new National Law on Subsoil Use (2024) highlights the increasing need for cadastral systems and digital mapping, further reinforcing the project's importance.[28]

EQ2. To what extent is the project aligned with–and responds to the development policies of MFA Finland (including HRBA and CCOs, and more recently benefits for Finnish actors)?

Sources used:	Report on Development Policy Across Parliamentary Terms (2021); Report on International Economic and Development Cooperation (2024); Theories of change and Aggregated Indicators for Finland's Development Policy (2023); Project document; Progress reports; Project's Human Rights assessment (2022).

- The project has been designed and planned under the previous development policy guidelines "Report on Development Policy Across Parliamentary Terms" (2021) and was aligned with one of its policy priorities: Climate change, biodiversity and sustainable management and use of natural resources. It was highlighted that Finland supports e.g. the sustainable water resources management as well as sustainable management and exploitation of mineral resources.
- MFA Finland's Theory of Change for the Priority Area climate and natural resources focuses on sustainable management and use of renewable natural resources, e.g. promoting integrated water resources management, which also includes groundwater (Output 4 under Outcome 1). Mineral resources are not directly mentioned in the ToC.
- The Quality Assurance Board of MFA requested a human rights assessment to ensure that the project was in line with the requirements stated in the guidance of HRBA in Finland's Development Cooperation. The assessment was carried out by the external consultants. The results of the assessment indicated that the project does not have significant immediate human rights implications at the right-holders' level, as it is a technical level intervention between two institutes. However, it recognised potential long-term human rights implications in sectors such as the environment, mining, water, land and livelihoods. The rights to information and participation were identified as important for project implementation. These aspects were addressed in the project document, progress reports and completion report.
- The project document addresses the CCOs. The contribution to the CCO on climate resilience by providing means for observing climate change impacts was pointed out. The project document mentions also raising awareness of the importance of mitigating emissions. In addition, attention to gender equality and non-discrimination have been discussed (ensuring the participation of women, collecting disaggregated data, ensuring non-discrimination and monitoring of it via discussions).
- The involvement of the Finnish private sector in the fields of environment and water management, exploration and mining—as far as possible—has been clearly highlighted in the project document, including seminars with the Finnish Water Forum and Mining Network Finland.

EQ3. To what extent does the project respond to the conditions and capacity development needs of the partner agency?

Sources used:	Project document; Stakeholder interviews/FGD in Finland and Uzbekistan.

- In 2019, a GTK delegation visited Uzbekistan and held several meetings with institutes and centres under the MINGEOLOGY (that time GOSCOMGEOLOGY). Cooperation potentials were discussed, particularly in geoinformation management, water know-how, natural hazards, hydrogeological data management, modelling of groundwater reservoir and managed groundwater recharge. The project document was prepared jointly based on these discussions.
- The representatives of MINGEOLOGY (especially top management and heads of institutes/centres) brought up in the interviews that they had discussed about the needs and focus of the project with the Finnish experts. They also mentioned that the strategic priorities of the MINGEOLOGY's institutes and centres were taken into account when discussing about the needs.
- The interviewees told that the project had a results-oriented approach that ensured that the staff members were not just trained but had also tools to apply their knowledge effectively. In addition, it was also pointed out that GTK was willing to listen the needs and shape the project accordingly.

EQ4. To what extent is the project design coherent and are the objectives and the intervention approach logically structured within the Results-Based Management Framework?

Sources used:	Project document; Results-based management framework; Presentation provided by MINGEOLOGY.

- The RBMF was logically structured, and the outputs, as well as the Outcome "MINGEOLOGY has advanced capacity in production and sharing geoinformation on natural resources and hazards" were set at relatively realistic levels. Although linkages between the outputs exist, and the outcome combines the intended effects of the outputs, the focus of the project appears somewhat stretched relative to the available resources and duration of the project. This was likely due to fact that the project included two institutions (Institute of Hydrogeology and Engineering Geology, and Institute of Geology and Geophysics) as well as two centres (Center for Subsoil Use, and Uzbekhydrogeology), and aimed to respond to their specific needs.
- The first part of the impact statement "Advanced use of geoinformation generates increased economic benefits and living conditions for local people" seems quite ambitious considering the set outputs and outcome and the number of people trained (50) at the national level. The latter part "Reliable, digital geoinformation is available and utilized

[28] See https://gov.uz/en/mingeo/news/view/26149

for the sustainable use of groundwater resources and natural hazard risk reduction in Uzbekistan" seems more realistic, since the project contributed to that (and cannot be achieved only with the results of the project).
- The indicators and the baselines and target values were set quite well, and included both quantitative and qualitative aspects which were assessed by using ranking scale of 1–5.

Coherence and aid effectiveness

EQ5. How coherent is the project with the Country Programme and other MFA supported initiatives, and other Finnish interventions and agencies in the partner countries?

Sources used:	Finland's Country Strategy for the Central Asian Countries of Kyrgyzstan, Tajikistan and Uzbekistan 2021–2024 (2021); Finland's Country Programme for the Central Asian countries of Kyrgyzstan, Tajikistan and Uzbekistan 2021–2024 (2021); Completion report.

- The project was very well in line with the Central Asian Country Strategy and Country Programme (2021–2024). The Country Programme included outcomes such as "Enhancing the capacity of environmental administration to monitor and assess natural resources" (included also groundwater) and "Enhanced knowledge of mineral resources and improved geohazard management."
- GTK also had another ICI project in the Central Asian region, in Kyrgyzstan. Regional networking was included in the project, with Output 4 focusing on increased international and regional networking. Uzbek and Kyrgyz representatives jointly promoted countries' natural resources and the project in the international congress in South Korea. Additionally, two regional workshops were held (including Kyrgyzstan, Kazakhstan, Tajikistan and Uzbekistan) focusing on groundwater themes and the Central Asian Geoportal.
- GTK and FMI and their local partners organised a climate resilience seminar in 2022 in Uzbekistan. In addition, two Uzbek experts also participated in the high-level conference "Climate change and sustainable management of natural resources" organised by GTK, Syke, and FMI together with their Kyrgyz partner institutions in Bishkek in autumn 2023.

EQ6. How coherent is the project with other initiatives, e.g. linkages, coordination, compatibility and synergy with other relevant interventions and agencies in the partner countries?

Sources used:	Stakeholder interviews/FGD in Finland and Uzbekistan; Website of UNESCO's "Central Asia region from glacier lake outburst floods in a changing climate" (GLOFCA) project.

Based on the interviews in Finland and Uzbekistan, there have been a few other relevant initiatives during the project implementation.

- UNESCO's (United Nations Educational, Scientific and Cultural Organization) GLOFCA project focuses on glacier meltwater and flooding risks, rather than landslides and groundwater. However, they do complement each other, since the glacier meltwater influences groundwater levels, and shared data enhances forecasting accuracy.29
- MINGEOLOGY has not cooperated with the UNDP's "Enhancing multi-hazard early warning system" project, but future cooperation could be possible.
- Strong collaboration with the Ministry of Emergency Situations, especially on landslide risk assessments, was highlighted. In addition, MINGEOLOGY has held joint seminars with Uzhydromet, focusing on data exchange and strengthening national hydrogeological studies.
- It seems that other countries' geological institutions and experts are now interested in cooperation with MINGEOLOGY and coordination processes are on-going with British, French and Finnish Geological Surveys to avoid overlapping projects.

EQ7. To what degree do the partner country agencies and higher-level authorities and decision-makers have responsibility and ownership of the projects?

Sources used:	Stakeholder interviews/FGD in Uzbekistan; Completion report.

- Strong top management support for the project, i.e. the commitment of MINGEOLOGY, which enabled smooth implementation of the project was highlighted in the interviews. The smooth implementation and mutual trust created were also pointed out in the completion report. In addition, it was mentioned in the interviews that the collaboration felt equal and truly joint, rather than one-sided or dictated by the funding partner. It was also pointed out that GTK was willing to listen to the needs and adapt the project accordingly.
- It was mentioned that MINGEOLOGY is now responsible for maintaining software, equipment, and services. Budget provisions have been discussed to ensure ongoing software renewals and equipment maintenance.

[29] https://glofca.org/

Efficiency	
EQ8. What is the progress against the work plan target and time schedule (implementation progress)?	
Sources used:	Stakeholder interviews/FGD in Uzbekistan and Finland; Progress reports; Completion report.

- The project was implemented according to the original plan without major deviations, as pointed out in the interviews and can be noticed from the progress reports and the completion report. It was mentioned that significant changes were avoided due to the thorough and well-structured planning phase.
- At the beginning of the project, the COVID-19 pandemic and related travel restrictions delayed its launch. In addition, the inception period and the subsequent human rights assessment took longer than expected.
- Despite several challenges—such as lower than expected ArcGIS knowledge and skills at the start of the project, delays in data sharing, poor quality of data and maps, budget constraints and limited availability of experts—the project fully achieved its three Outputs (1,4 and 5), almost fully Output 2 (one of out of the three target values reaching 80%) and relatively well Output 3 (five target values, out of which three fully reached, one 53%, and another 40% reached).

EQ9. To what extent are the results and processes feasible and cost-effective?	
Sources used:	Completion report.

- The total project costs were EUR 1,006,859.64. The major part (48%) was used for the fees of the Finnish experts (10 more permanent experts and 15 giving lectures). The capacity development provided by the project formed 74% of all costs. From the MINGEOLOGY side, altogether 50 experts were involved in the project. The partner institution's share of the costs was 33,5%, out of which the purchased equipment (e.g. the workstations, the drone with LiDar) and software (e.g. ArcGIS) formed 19%. Subcontracted work formed around 5% of the costs.
- Since the project achieved almost all if its target values (see EQ8), the cost-effectiveness is assessed to be at a very good level. In addition, the cost structure is well in line with the current ICI project's budget rules (ICI Manual 2023) where at least 60% of costs should focus on capacity building, and the costs directly benefitting the partner country should be at minimum 20% of the total costs (including allowances, travel costs, management fee, procured goods/equipment, share of the contingency).

EQ10. To what extent is the project well managed and are M&E systems and risk analysis processes adequately designed and implemented?	
Sources used:	Project document; Progress reports; Completion report; Stakeholder interviews/FGD in Uzbekistan.

Based on the information provided in the reports and received in the interviews, the project was very well managed.

- Board meetings were held twice a year, as agreed in the MoU. In addition, two additional meetings were held to discuss procurement issues (in 2022) and budget issues (in 2024). The first meeting of the year was always held in Uzbekistan and the second in summer/early autumn in Finland.
- The project conducted a baseline assessment and based on this, the M&E system included baseline values using a 1–5 scale. These values were re-assessed at both the mid-term and at the end of the project. The indicator values were updated and attached to each semi-annual report. In addition, the project carried out two self-assessments, in autumn 2023 and autumn 2024.
- The risk assessment was conducted, and the risk matrix included in the project document. According to the progress reports and self-assessments, the risks were discussed regularly in the board meetings, but the risk matrix itself was not updated. The completion report summarises that although institutional risks were identified as an important risk group—including e.g. changes in management and local experts—these risks did not materialise. There were some restructurings at the organisational level and changes in management, but it was concluded that they did not affect the implementation of the project. Identified contextual and programmatic risks did not materialised either.
- The local experts who participated in the training events and other capacity strengthening activities also got tasks ("homework") to be completed before the next phase of training. GTK's experts followed closely the progress and provided also feedback on the performance of the participants, giving also additional tasks and/or on-line training if needed. In the case of the Institute of Hydrogeology and Engineering Geology, this led to a new policy: all training participants had to report their learnings to the Scientific Board. This ensured that knowledge absorption was monitored and that the impact of the training was maximised.

Effectiveness

EQ11. What are the main results (planned and unplanned) and to what extent have capacity strengthening efforts been adopted and contributed to the provision of improved services?

Sources used:	Power Point Presentation on the results of the project received from the MINGEOLOGY; Completion report; Stakeholders' interviews/FGD in Finland and Uzbekistan.

- A groundwater flow model was created (Output 1) from the Akhangaran pilot site using existing geological, hydrogeological and hydrological data as well as data of geophysical measured carried out during project missions. MINGEOLOGY experts did not have much experience in groundwater flow modelling, and thus, their understanding of the requirement and applicability of groundwater flow modelling was greatly increased.
- Processing LiDAR survey data from a drone in a landslide area (Output 2). Uzbekistan's first drone with LiDAR scanning equipment was procured and local experts' capabilities were enhanced in predicting and studying landslides.
- Two ArcGIS geodatabases were created (Output 3). One database involved georeferencing and digitising hydrogeological map in the scale of 1:200 000 for the entire country. The hydrogeological map is the first of its kind in Uzbekistan. This work also supported the groundwater modelling work. Another one was a mineral exploration database which combined all exploration data into one database. This was created for three pilot areas. Local experts could independently create ArcGIS geodatabases, digitise geological data and conduct validation of geospatial data at the end of the project.
- Creation of Uzbek geoportal pages as a part of the geoportal cooperation between Central Asian countries (Output 3 and Output 4). On-line meetings and two regional workshops among four Central Asian countries' experts participated in the Geoportal's development. The portal presents and disseminates information on natural resources of Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan.
- International and regional networking (Output 4) was enhanced by participation in International Geological Conference where Uzbek and Kyrgyz representatives had a joint booth for promoting their natural resources, as well as by organising regional workshops (groundwater themes and Geoportal).
- The participants were highly satisfied with the quality of the capacity development. The capacity development was described as "highly effective and valuable", "truly exceptional", and "outstanding". Finnish experts were mentioned to stood out due to their high-level responsibility and strict standards for national experts. Their tailored approach was appreciated, where training was adapted based on local needs and knowledge gaps identified during the project. There was an appropriate focus on practical application, since the local experts received not only theoretical knowledge, but also real-life exercises and homework, which strengthened their skills. However, it was also pointed out that a more structured initial assessment could have led to a more detailed assessment of the national team's initial skill level, which would have made the training even more targeted.

The interviewees provided several examples how the knowledge and skills are now used:

- Digitising techniques have been applied in other projects, including local contract work. In the digitising process, topology rules—which had not been used previously—were adopted. These rules ensure data consistency and automate error detection, which significantly reduce the need for manual corrections. In addition, with automated code-based processing it is possible to correct errors directly within the database, and Microsoft Excel and other tools can be used to modify specific parts of the dataset. The completion report also highlights the creation of GIS-databases for other projects, as well as teaching digitising to university students.
- The trained staff have identified multiple sites where groundwater modelling—using the techniques and software acquired—can be applied. The methodology learned aligns well with on-going research, and the geophysical approaches and data processing optimisation techniques are now being integrated into routine work.
- The skills gained related to landslide monitoring are actively being used. The monitoring follows a structured three-year action program, where surveys are conducted for specific sites as part of the government or ministry funded project. In 2025, specialists are scheduled to conduct surveys at over 15 sites, utilising drone technology, including LiDAR imaging.
- Since there was a diverse group of participants from different agencies under MINGEOLOGY, they have fostered cross-sectoral learning and actively disseminated knowledge and skills within their organisations.

Sustainability

EQ12. How sustainable are the results and approaches, in terms of institutional, technical, human and financial capacities, socio-economic conditions, governance and environmental/ climate resilience risks and potential trade-offs?

Sources used:	Progress reports; Completion report; Stakeholder interviews/FGD in Uzbekistan.

- Although there were some changes in the management level (project manager changed in 2023) and some at staff level, they did not affect the implementation of the project. The following measures for the retention of the trained experts came up in the discussions: providing extra incentives for publishing in international journals; participation in research projects for career growth and promotion opportunities within the institutions. It was also mentioned that the geoscience field has limited private-sector opportunities which is reducing turnover.
- The degree of the institutionalisation of new skills seems to be on-going (see EQ11): digitalisation work has been continued in new locations, including local contract work; drone-based technology including LiDAR are scheduled to be used in new sites, and they are also expanding the drone applications beyond landslide assessments to geophysical surveys.
- It was highlighted that MINGEOLOGY is now responsible for maintaining software, equipment, and services. Budget provisions have been discussed to ensure ongoing software renewals and equipment maintenance.

- Continuous knowledge sharing among agencies e.g. in GIS-based mapping was mentioned as a factor enabling sustainability. MINGEOLOGY has also acknowledged that there is a need for further capacity building during the planned next project to ensure that the experts can administer, operate and maintain all the digital tools and skills. There is also a need to test groundwater modelling in different environments.
- Both continuous knowledge sharing among agencies as well as further capacity building are needed to ensure sustainability of the results, since there is a governmental order to circulate staff in different tasks.

Impact

EQ13. In what ways has the project affected the work of partner country agencies both directly and indirectly, including intended and unintended effects, with regard to developed capacities, (incl. human rights, gender equality, reduction of inequalities, climate resilience, and low-emission development)?

Sources used:	Stakeholder interviews/FGD in Finland and Uzbekistan.

- By moving to a digital system, the project supported improvement of data accessibility, accuracy and efficiency, in line with national goals for technological modernisation and improved decision-making in the water sector.
- The outputs of the project are directly used by various government agencies and stakeholders. The digital hydrogeological maps and models already serve as fundamental tools for planning and executing infrastructure projects, improving disaster risk management strategies, and optimising resource extraction efforts. For example, government agencies such as the Cadastral Department required to develop GIS maps. In addition, GIS maps were submitted to the OSGEO Fund.
- Recently, a joint research paper with Finnish experts was submitted as a part of the cooperation, highlighting the continued exchange of knowledge.
- The Geoportal has made geological data more accessible and has been well received, both in Uzbekistan and beyond.
- The human rights risk assessment, along with the project's focus on gender equality—including the involvement of both junior and senior experts—has raised stakeholder awareness of these issues.
- The project contributed directly to climate resilience by providing means for local experts to observe and model natural phenomenon caused by climate change and human activities. This included assessing the impact of climate change on groundwater resources by modelling the groundwater reservoirs in the pilot area. Additionally, the lectures included information on extreme weather events which can negatively influence water resources if not appropriately considered in the preparedness plans.

EQ14. What are the wider (indicative) impacts of the project on other stakeholders and beneficiaries in the partner country including aspects of HRBA and CCOs?

Sources used:	Stakeholder interviews/FGD in Uzbekistan.

- By providing policy makers and technical experts with accurate and up-to-date information, the results of the project (e.g. the digital hydrogeological maps, groundwater flow modelling) ensure more effective and sustainable management of water resources, ultimately benefiting industry, communities and the environment.
- The Geoportal platform enables users to explore country-specific geodata and facilitates potential investment in mining and geological projects.

EQ15. To what extent did the project have an impact on the Finnish institutions or Finnish private sector in terms of leveraging business opportunities and other linkages?

Sources used:	Completion report; Stakeholder interviews/FGD in Finland and Uzbekistan.

The project organised seminars together with Mining Finland Network and Finnish Water Forum. Altogether 13 companies presented their products and services. According to the interviews, new connections were established, and the project facilitated a new collaboration contract: Econet's water purification initiative led to cooperation with the Uzbek Mining Company.

Annex 15: GTK & Syke – NeAs

Towards Arsenic Safe Drinking Water in Nepal

Project title	Towards Arsenic Safe Drinking Water in Nepal (NeAs)
Country	Nepal
Finnish institution	Geological Survey of Finland and the Finnish Environment Institute
Duration	01.06.2020–31.12.2024
Budget	EUR 1,000,000
Partner institution(s)	Department of Water Supply and Sewerage Management (DWSSM)
Impact	Improved ability of water sector stakeholders in Nepal to seek and use relevant information in long-term Arsenic mitigation
Outcome	Improved capacity of DWSSM to guide and support the water supply actors in Arsenic mitigation
Outputs	1. DWSSM has better capacity for data management and institutionalized data sharing practices 2. DWSSM has strengthened capacity to utilise arsenic related conceptualisation and established recommendations to improved water sector planning, management and project implementation 3. Improved arsenic monitoring capacity and utilised practices in DWSSM 4. Improved communication, awareness raising and increased networking among DWSSM and relevant actors
Previous projects/phases (title, duration, main focus)	No previous projects/phases.
Remarks	The project was planned to be implemented in 2020–2023, but the implementation got delayed especially in the beginning of the project. The project requested a non-cost extension until the end of 2024, which was granted by MFA Finland in June 2023. During the first year of the project, the COVID-19 pandemic impacted project implementation considerably. Due to the travel restrictions, face-to-face meetings between the partners were replaced by virtual workshops. In addition, in autumn 2022 the project had to postpone several planned activities due to the disagreement related to the study tour participants.

Relevance	
EQ1. To what extent is the project aligned with–and responds to the development objectives/priorities of the partner country?	
Sources used:	Stakeholder interviews/FGD in Nepal; National policies on Water Supply.

- The project aligns with and responds to the development objectives of the Government of Nepal. The Constitution of Nepal has a provision to consider access to safe drinking water and sanitation as a fundamental right of the people. The Government has formulated a “National Water Supply, Sanitation and Safety Policy” in 2023 based on the previous policies and plans in the sector. The Local Governments, where the project worked, have also been formulating WASH plans and enacting relevant Acts. Furthermore, the policy of the Federal Government has added the safety of the water in addition to availability.
- A blanket testing conducted by DWSSM with the support of United Nations Children's Fund (UNICEF) and other stakeholders in 2005 to 2008 found that arsenic contamination of groundwater poses a significant risk to public health in 20 districts of Terai. Nepal’s and Finland’s bilateral project “Rural Water Supply and Sanitation Project” (RWSSP-WN) also raised the problem of arsenic contamination to some extent. Arsenic contamination continues to be a serious challenge in eight districts of Terai. In addition, experts in the field of arsenic contamination report that some places in Kathmandu valley have the problem of arsenic contamination. A few arsenic mitigation activities were implemented in the affected districts in the past.
- The Project has contributed to bringing the issue of arsenic contamination to the forefront in the government policy and practices.

EQ2. To what extent is the project aligned with–and responds to the development policies of MFA Finland (including HRBA and CCOs, and more recently benefits for Finnish actors)?	
Sources used:	Project document; Government Report to Parliament on Finland's Development Policy (2016); Report on Development Policy Across Parliamentary Terms (2021); Theories of change and Aggregated Indicators for Finland's Development Policy (2023).

- The project has been designed and planned as well as mainly implemented during the previous development policy guidelines (MFA, 2016 & 2021a) and it was well in line with the policy priorities (MFA, 2021b) of "Climate change, biodiversity and sustainable management and use of natural resources". This Priority Area included access to and sustainable use of safe and affordable drinking water and improvements in sanitation and hygiene.
- MFA Finland's Theory of Change Priority Area "Climate and natural resources" includes an Outcome 5, which focuses on drinking water and sanitation services. The project contributed especially to its Output 1 "Improved community, public and private sector capacity to deliver basic and safely managed drinking water".
- The project document discussed HRBA, bringing up the right to safe drinking water and access to safe water supply services as well as the principles of HRBA (participation, non-discrimination, accountability, transparency). It identified that the project especially strengthens the capacities of respective authorities but also raises awareness among people about their right to safe drinking water. Gender equality was also brought up in the project document, focusing mainly on participation of women and men in project activities. Climate sustainability and resilience was linked to seasonal water sampling in the project area which would also provide data on climate change impact on the arsenic concentration in groundwater. In the progress reports, participation of men and women was monitored and disaggregated data was provided. In addition, awareness raising materials on arsenic mitigation were produced for the use of female community health volunteers (FCHV), considering also accessibility of the materials.

EQ3. To what extent does the project respond to the conditions and capacity development needs of the partner agency?	
Sources used:	Progress reports; Stakeholder interviews/FGD in Nepal and Finland.

- Officials of the partner institution organisation perceived that the project responded to the capacity needs on understanding and generating hydrogeological data (safe aquifers, monitoring wells), generating and managing water quality data (including standard operation procedures), understanding arsenic mitigation plans (as practised in other countries), and in effective communication (related to arsenic contamination).
- The capacity development needs had been discussed in two missions. MFA Finland (including people from the Embassy in Kathmandu) had a mission related to water, sanitation and hygiene (WASH) to Nepal in 2018 during which the Finland's support to Nepal in WASH sector was discussed and the arsenic issue and needs for support related to it also came up. GTK and Syke had a fact-finding mission to Nepal in 2019. DWSSM organised an initial and final seminar in which arsenic issue and related needs were discussed with several national and international stakeholders. In addition, a stakeholder meeting was also organised in the pilot area.

EQ4. To what extent is the project design coherent and are the objectives and the intervention approach logically structured within the Results-Based Management Framework?	
Sources used:	Project document; Stakeholder interviews/FGD in Nepal.

- The project aimed to support DWSSM in its tasks related to arsenic concentration: (i) Preparation of an action plan for arsenic mitigating by identifying water sources prone to arsenic contamination; (ii) Monitoring and evaluation and the regulation of water quality by revising and preparing regulating standards and guidelines; (iii) Coordination in the operation of water quality laboratories; Management and operation of the Central Water Quality Laboratory; and (iv) Management of data related to water quality and service level. The four outputs of the project correspond to these objectives of the project. Results for each of the outputs are assessed with three to four indicators. Thus, the intervention approach was logically structured.
- Since the four outputs already aimed at increased capacity of DWSSM in data management and sharing practices (Output 1), arsenic related conceptualisation and providing recommendations (Output 2), monitoring capacity and utilized practices (Output 3), and communication, awareness raising and networking (Output 4), the set Outcome "Improved capacity of DWSSM to guide and support water supply actors in arsenic mitigations" seems a bit overlapping with them and could have been formulated towards use of this improved capacity. To some extent this expectation of using the new capacities was reflected in the outcome indicators.

Coherence and aid effectiveness

EQ5. How coherent is the project with the Country Programme and other MFA supported initiatives, and other Finnish interventions and agencies in the partner countries?	
Sources used:	Finland's Country Strategy for Nepal 2021–2024 (2021); Finland's Country Programme for Development Cooperation Nepal 2021–2024 (2021); Stakeholder interviews/FGD in Nepal.

- The project is very well in line with the Nepal Country Strategy and Country Programme (2021–2024). The Country Programme includes the Outcome "People in the municipalities supported by Finland have improved and equitable access to safe and sustainable water and sanitation services and improved hygiene practices in households and institutions", which includes an Output "Improved public sector and community capacity to deliver and sustain climate resilient, safely management and accessible drinking water services". The project is directly mentioned as an input for the Country Programme.
- The Government of Finland has supported the Government of Nepal in the sector of WASH since the 1980s. The ICI project also built on lessons learned from the "Rural Water Supply and Sanitation Project" (RWSSP-WN). The

RWSSP mainly focused on the hilly areas where arsenic issue was not that prominent, but it had also a few areas in Kailali, where arsenic is an important issue.

- It was also thought that the NeAs project and the bilateral "Sustainable WASH for All" project would create synergies, since they both worked with the DWSSM. However, this did not materialise, since the projects were quite different in nature (NeAs focusing strongly on technical capacity building and using capacity development methods typical for an ICI project), and these differences between the projects confused to some extent the partner institution. However, the projects did share information and e.g. representatives of "Sustainable WASH for All" project participated in NeAs missions as well as seminars.

EQ6. How coherent is the project with other initiatives, e.g. linkages, coordination, compatibility and synergy with other relevant interventions and agencies in the partner countries?

Sources used:	Project document; Stakeholder interviews/FGD in Nepal and Finland; WHO's website on Addressing Climate Risks in Supplying Safe Water (2021).

- The project was well aligned with other projects in the WASH sector, particularly those of focusing on water quality issues:
- UNICEF has long supported DWSSM in WASH sector, including issues related to arsenic mitigation. NeAs was planned in line with the UNICEF's actions related to water quality.
- The Japan International Cooperation Agency supported DWSSM for developing "Long Term Arsenic Mitigation Plan for the 15 Hotspot Districts in Nepal". This was used as a background material for planning the project.
- WHO is also working on supplying safe water[30]. A representative of WHO contributed to the project design and implementation.

EQ7. To what degree do the partner country agencies and higher-level authorities and decision-makers have responsibility and ownership of the projects?

Sources used:	Minutes of board meetings; Stakeholder interviews/FGD in Nepal.

- The management knew the project well, had ownership and were committed to the project:
- The Director General of the Department of Water Supply and Sewerage Department chaired the project board meetings. The Section Chief of the Water Quality Improvement and Service Regulation Section of the DWSSM was the ex-officio Focal Point for the project. The DWSSM was responsible for meeting the salaries and labour expenses for its human resources. In addition, the ministry level officials were involved in the missions to Finland.
- The project was jointly designed and planned in collaboration with officials from DWSSM, and the project activities were also revised together. For instance, when the NWASH-MIS (National Water Services, Sanitation and Hygiene Management Information System) water quality module was developed, the project activities initially intended for developing AIMS (Arsenic Information Management System) were adjusted to integrate the information into NWASH instead of developing the AIMS.

Efficiency

EQ8. What is the progress against the work plan target and time schedule (implementation progress)?

Sources used:	Progress reports; Completion report; Stakeholder interviews/FGD in Nepal.

- The first two years of the project implementation were affected by travel restrictions and lockdowns due to COVID-19. Virtual meetings were organised and literature review, procurement processes, preparation of metadata etc. were conducted during this restriction period. The delay in implementation due to COVID-19 was offset by the intensive implementation in the remaining period. The project was also extended till December 2024.
- The project had four outputs, each with well-defined indicators to monitor the progress. The first output aimed at capacitating the DWSSM for data management and institutionalised data sharing practices. Initially, the project wanted to develop Arsenic Information Management System which was later changed to integrating arsenic related data to NWASH Water Quality Module of the Department. The data sharing between DWSSM and other stakeholders is based on data requests and sometimes the data is not available. Thus, this target was partially reached. The DWSSM has formulated practices for data classification and data needs assessment, and the practices are in common use by the trained staff.
- The second output focused on strengthening the capacity to utilise arsenic-related conceptualisation. The target was partially reached as the DWSSM gained better understanding of the arsenic mitigation and geological setting. However, because of the limited data on hydrogeology, the conceptual model was not extensive. Sampling tours (five in total) were organised as planned. One of the indicators was the formulation of the arsenic mitigation guidelines. The guidelines were not formulated, but the officials were trained on arsenic removal technologies and sustainable management of arsenic mitigation projects in Bangladesh by the Centre for Water Supply and Waste Management ITN-BUET. Latest information on arsenic removal has been compiled in the "Review of Arsenic Removal Methods in Water Supply and A Case Study of Predesign Cost Estimation in Nepal" published by the project.
- The third output concentrated on improving arsenic monitoring capacity and utilisation of relevant practices within DWSSM. One of the activities planned under this output was the development of guidelines for sampling. The SOP for sampling and sample management was developed and utilised. In addition, a training video on groundwater field studies was produced. Another indicator under this output was the upgrading of practices and guidelines used in laboratories analysing arsenic. This target was reached. Interlaboratory comparison tests were conducted and

[30] See more information in https://www.who.int/nepal/news/detail/23-12-2021-addressing-climate-risks-in-supplying-safe-water

16 experts from DWSSM central laboratory and local laboratories were trained on Quality Control and Quality Assurance. Furthermore, 25 individuals (technicians/officials from the local governments in the project pilot sites) were trained on water quality testing and provided with test kits. A follow-up training was also conducted.

- The fourth output of the project aimed to improve communication, raise awareness and enhance networking between DWSSM and other actors involved in arsenic mitigation. One of the planned activities was the development of an arsenic awareness-raising video. It was produced in English, Nepali, and Bhojpuri languages and uploaded to YouTube. Additionally, an illustrative awareness raising flipchart was developed. Another activity under this output was the preparation of communication, interaction, and dissemination plan, which was successfully completed. Other planned—and implemented—activities included organising meetings with other stakeholders in Nepal, Finnish water sector stakeholders, and stakeholders from the pilot sites.

EQ9. To what extent are the results and processes feasible and cost-effective?

Sources used:	Progress Reports; Completion report; Stakeholder interviews/FGD in Nepal.

- The project used 97% of its budget (965 599 €), and the Finnish experts' fees formed a major part of the actual costs (68%). In total, the capacity development costs formed 86% of the costs. The partner institution's share of the funding was 24%. The cost structure is well in line with the current ICI projects' budget rules (MFA, 2023b) where at least 60% of the total costs should focus on capacity building, and the costs directly benefitting the partner country should be at minimum 20% of the total costs.
- According to the completion report, out of the 15 output level targets, 11 were reached and four were partially reached. The Outcome had three targets, which were partially reached. Based on this, the cost-effectiveness can be assessed to have been at a satisfactory level.

EQ10. To what extent is the project well managed and are M&E systems and risk analysis processes adequately designed and implemented?

Sources used:	Project document; Progress reports, Stakeholder interviews/FGD in Nepal and Finland.

The project seems to be effectively managed and monitored:

- A project board was established and it was coordinated by DWSSM, GTK and Syke. Representatives from MFA, the Embassy of Finland in Kathmandu, and WHO were invited to participate in these meetings. Altogether, eight project board meetings were organised. The responsibilities of each partner were clearly defined.
- The level of achievement of output indicators have been reported in the bi-annual progress reports by using progress rates (as percentages of the target value).
- Information on expectations, learning, and assessment/feedback results was collected during the missions, and documented in the mission reports. In addition, self-assessment of the project was conducted in January 2024.
- The project document included an analysis of potential risks and mitigation measures. These risks were monitored, and the risk table was updated accordingly.
- The project adopted adaptive management practices. The delays in the first two years of implementation caused by travel restrictions and lockdowns during COVID-19 were offset by intensive implementation efforts during the remaining project period. The management completed most of the preparatory work during these first two years. The adaptive management style of Finnish partners was seen as conducive to the effective management of the project.
- It is noted that frequent changes in the project focal person and Director General at DWSSM affected the project implementation.

Effectiveness

EQ11. What are the main results (planned and unplanned) and to what extent have capacity strengthening efforts been adopted and contributed to the provision of improved services?

Sources used:	Progress reports; Stakeholder interviews/FGD in Nepal.

- The main results of the project include the strengthening of DWSSM's capacity to adopt arsenic information management system within the NWASH water quality module; the preparation and practical application of a flow chart for data collection and analysis; the development and use of a SOP for sampling and sample management; and the training of DWSSM officials and stakeholders on arsenic removal technologies and the sustainable management of arsenic mitigation projects in Bangladesh, conducted by the Centre for Water Supply and Waste Management ITN-BUET. The project also resulted in the production of the "Review of Arsenic Removal Methods in Water Supply and A Case Study of Predesign Cost Estimation in Nepal", which compiled the latest information on arsenic removal. Further achievements included the strengthening of laboratory capacity through the provision of equipment; training of technicians from the DWSSM central laboratory and local laboratories on quality control and quality assurance; and training of technicians/officials from local governments from the project pilot site in water quality testing. The project also facilitated consultations with health officials and FCHVs from local governments, the preparation of communication, interaction, and dissemination plan, the production of an arsenic awareness raising video in English, Nepali, and Bhojpuri, and the development of an illustrated awareness-raising flipchart for dissemination at the local level.
- Each of the above listed results either had a capacity-strengthening goal in themselves or contributed to capacity strengthening in the process. Overall, the project was primarily focused on capacity strengthening of the DWSSM officials and officials from the local governments in arsenic mitigation.
- The training provided to DWSSM on data management, laboratory quality assurance and quality control, arsenic removal technologies and sustainable management of arsenic mitigation in Bangladesh, and communication and

dissemination materials was found to be effective. After the project, DWSSM has also a better conceptual understanding of the arsenic mitigation and geological setting in Terai. This work is reported in "Hydrogeology and groundwater quality in Nawalparasi District (West of Bardaghat Susta), Nepal: Report of the NeAs project". However, more data as well as groundwater monitoring are needed to deeply understand the issue and make data-driven decisions.

- The knowledge imparted on data collection and analysis, operation procedure for sampling and sample management were well adopted by the professional staff of DWSSM. The training on arsenic removal technologies (conducted in Bangladesh) exposed the participants to the practical mitigation measures but they could not be adopted. Training on quality control and quality assurance was well adopted.
- The training of local government officials was effective in raising awareness at municipality level towards the arsenic problem. However, during the evaluation field mission it was found that, apart from one municipality (Bardaghat), trainees from other municipalities did not use the test kits provided by the project. These local governments do not have dedicated WASH units, and designated WASH focal persons were primarily working as administrators. The most arsenic-affected municipalities (like Sarawal, Ramgram, Palhinadan) do not have dedicated WASH section and officials. In Bardaghat Municipality, there is a well-established and functioning laboratory and system to regularly test water.

Sustainability

EQ12. How sustainable are the results and approaches, in terms of institutional, technical, human and financial capacities, socio-economic conditions, governance and environmental/ climate resilience risks and potential trade-offs?

Sources used:	Progress reports; Stakeholder interviews/FGD in Nepal.

- Since the project focused on strengthening the institutional and human resource capacity, these efforts contribute to the sustainability of its results. The human resources strengthened in data management, arsenic management, operational guidelines, and the use of awareness-raising materials are expected to support not only the continuation of the project's results but also other arsenic mitigation initiatives.
- One of the institutional issues affecting the project implementation and sustainability was the frequent changes of project Focal Point and Director General within the DWSSM.
- Although the frequent turnover of project Focal Points affected the project implementation, the individuals remained within the department or ministry. As a result, the new Focal Points were able to reach out to their predecessors when needed. During the preparation of the completion report, former project Focal Points also actively contributed. Additionally, well-managed documentation of activities, meeting minutes—developed in partnership with the Finnish partner institutions—contributed to retaining institutional memory. Continued involvement of laboratory officials within DWSSM also contributed in maintaining institutional continuity.
- The effects of frequent changes of officials in DWSSM were mitigated to some extent by the continued involvement of representatives of other organisations (WHO representative), who participated in the project from the design stage through to completion.
- The development and application of guidelines and procedures for sample collection and management, as well as data collection and integration into NWASH are well institutionalised and will help sustain the knowledge generated by the project.
- In the project pilot site, the laboratory in Bardhaghat is very likely to sustain as the Water User Committee and the local government have strong ownership over it, and well-established system. However, in most of the arsenic-affected municipalities in the pilot area, it is unlikely that the local governments will initiate any arsenic mitigation measures. They are still preparing municipality WASH plans and do not have dedicated WASH units. The officials are aware of the problem of arsenic contamination in their jurisdiction but have not taken any initiatives thus far to address the problem. The provincial government has planned to construct water supply systems in these municipalities, but most of these planned systems have been significantly delayed due to insufficient financial resource allocation and poor management.

Impact

EQ13. In what ways has the project affected the work of partner country agencies both directly and indirectly, including intended and unintended effects, with regard to developed capacities, (incl. human rights, gender equality, reduction of inequalities, climate resilience, and low-emission development)?

Sources used:	Stakeholder interviews/FGD in Nepal and Finland.

- The project has contributed to bringing the issue of arsenic in the forefront among the agencies working in water supply. This is probably the most important impact of the project. The federal government officials and experts on arsenic contamination have recognised the need for launching initiatives on mitigating arsenic contamination in Kathmandu valley, as well and conducting more research on the practical aspects of hydrogeology, constructing monitoring wells and following up on their application.
- One of the important contributions of the project at a conceptual level has been the FCHVs who were identified as key actors in increasing awareness on the adverse impacts of arsenic in drinking water at the local level in their communities. FCHVs live in the communities where they work, giving them better access to women and children, and making them an effective medium for disseminating information related to health and sanitation. The project prepared an arsenic-related awareness-raising flipchart, incorporating feedback from the FCHVs.

EQ14. What are the wider (indicative) impacts of the project on other stakeholders and beneficiaries in the partner country including aspects of HRBA and CCOs?	
Sources used:	Stakeholder interviews/FGD in Nepal.
• The scale of the project was not large enough to create impact at a wider level. However, it has created enough momentum to encourage high level officials at the DWSSM to conceptualise initiatives for arsenic mitigation in Kathmandu valley and hydrogeological research.	
EQ15. To what extent did the project have an impact on the Finnish institutions or Finnish private sector in terms of leveraging business opportunities and other linkages?	
Sources used:	Mission reports; Stakeholder interviews/FGD in Nepal and Finland.
• Business opportunity events were organised during two project missions from Nepal to Finland. In these, some Finnish companies presented their equipment, and others their international activities. In addition, Finnish Water Forum participated in both events. It is not known if these interactions have led to business opportunities for Finnish companies.	

Annex 16: Stakeholders consulted

Stakeholders in Finland		
Organisation/Unit	***Position***	***Name***
Embassy/Astana/Kazakhstan	Roving Ambassador (for Central Asia)	Ilkka Räisänen
Finnish Water Forum	Project Director/Vietnam	Anh Thu Tran Minh
	Project Manager/Eastern Europe & Central Asia	Arvo Nerman
FMI/Expert Services	Project Manager	Edith Rodriquez
	Head of Unit/Expert Services	Harri Pietarila
	Project Manager	Julia Wagley
	Head of Air Quality and Energy / Project Manager	Katja Loven
	Head of Group/International Projects	Matti Eerikäinen
	Project Manager	Sami Kiesiläinen
GTK	Chief Expert	Jaana Jarva
	Senior Specialist	Jaana Lohva
	Head of International Projects	Phillipp Schmidt-Thomé
	Geologist/Team Manager	Anu Eskelinen
Luke	Project Manager	Veikko Möttönen
MFA/Department for Development Policy (KEO)/Project Management Unit	Development Policy Specialist managing ICI Instrument	Pekka Seppälä
MFA/Euro-Atlantic Department/Unit for Eastern Europe	Team Leader / Senior Adviser	Matti Väänänen
MFA/Unit for South Asia and South-East Asia	Senior Specialist	Riikka Miettinen
NIRAS	ICI Facilitator	Maria Kontro
Saliens/NIRAS	ICI Facilitator	Kristiina Lähde
Syke	Project Manager	Karri Eloheimo
	Project Leader	Katarina Björklöf
	Project Manager	Kati Pritsi
	Project Manager	Sirkku Tuominen
	Head of International projects	Tea Törnroos
	ICT Database management specialist in KGZ-Water project/Team Manager	Juha Riihimäki
	Intercultural Communication Expert	Oliviia Gruzdova
	Laboratory Expert in KGZ-water/Senior Specialist	Riitta Koivikko
Vaisala	Sales Manager	Dmitri Kramarenko
	Customer Solutions Architect | Program Manager for Customer Projects	Toni Stordell
	Head of Meteorological Infrastructure & Capability Development	Vesa Koivula

Kyrgyzstan			
Project	***Organisation/Unit***	***Position***	***Name***
KGZ-Water III	Bioresources Department under MNRETS	ex. Director of Karatal-Japaryk Nature Reserve (Naryn), currently Chief of Fauna Unit in Bishkek	Bakytbek Choroev
	Hydrometeorological Service under the Ministry of Emergency Situations (MES)	Deputy Director of the Hydrometeorological Service/Project Coordinator	Daniyar Bolotbekovich Tologonov
		Head of the Unit for Monitoring Environmental Pollution of Surface Water	Ainura Kachkynbaeva Baitanaeva
		Leading Specialist for Monitoring Environmental Pollution of Surface Water	Alia Soltonkulova
	Kyrgyz Accreditation Centre	Head of Laboratory Accreditation Department	Atyrkul Momukulova
	MNRETS	Director of the Department for Environmental Monitoring	Gulzat Zholchubekova
		Head of the Bilateral Cooperation Department	Gulzada Kutmanbaeva
		Head of the Coordination Unit for Sample Collection	Jenishgul Cherikbaeva
		Head of the Water Resources Department	Aynura Dobrakova
		Specialist on Bilateral Collaboration	Kanat Saryev
	State Enterprise "Central Laboratory" under MNRETS	Chief Specialist	Anna Polevaya
NR II KGZ	Bioresources Department under MNRETS	ex. Director of Karatal-Japaryk Nature Reserve (Naryn), currently Chief of Fauna Unit in Bishkek	Bakytbek Choroev
	MNRET - State Enterprise Kyrgyz Geological Service	Deputy Minister-Director	Marat Jusupbekov
	State Enterprise 'Kyrgyz Complex Hydrogeological Expedition (KCHE)' operated under MNRETS conducting groundwater monitoring which is in transition to the Ministry of Water Resources and Agriculture, still undergoing restructuring	Director	Tariel Sulaimanov
		Hydrogeologist	Asyraaly Kultegin
		Hydrogeologist	Dmitriy Plaksin
		Hydrogeologist	Gulzina Kochorbaeva
		Hydrogeologist	Nurlan Aidaraliev
	State Enterprise 'Kyrgyz Geology' under MNRETS	Head of Field Team, North	Rustam Nurseitov
		Head of Northern Geological Expedition in Bishkek	Turatbek Temirbekov
		Head of Southern Geological Expedition	Lev Ovsianikov
	State Enterprise Kyrgyz Geological Service (new name) under MNRETS	Deputy Director and Chief Geologist	Talant Asanbaev
		Head of the IT unit	Nurbek Albanov
		IT specialist	Kurmanbek Kultekov
		Leading specialist of the Geological Department	Nurai Bazarkulova

Tajikistan			
Project	***Organisation/Unit***	***Position***	***Name***
FINTAJ III	Tajikhydromet	Lab Technician	Ghaforov Khurshed
		Head of Information Department	Mavluda Qahorova
		Senior Specialist/Department of Air Pollution	Mijgona Isoeva
		Senior Specialist in Hydromet Agency in GBAO Region	Muzaffar Baidullaev
		Head of Forecasting Centre	Parvina Saidjamolova
		Deputy Head of the Forecasting Centre	Shahlo Rajabova/
	Tajikhydromet/ Forecasting Centre	Head of the Forecasting Department	Manzura Jumakhonova
		Leading Specialist in Forecasting Department	Nigina Ozodbekova
		Specialist in Forecasting Department	Sanavbar Abduhalim
		Senior Specialist in Forecasting Department	Sitora Ozodabekova
	Tajikhydromet/ Glaciology Centre	Head of Monitoring of Snow/Glaciers and Avalanches Department	Hojiev Adbusamad
		Head of the Glaciology Centre	Rahmonov ramazon
FINTAJ III; TJK Water Quality II	Tajikhydromet	Head of Hydromet Agency in Sughd Province/Khujand	Abduvali Khomitov
		Deputy Head of Agency for Hydrometeorology	Jamilya Baydulloeva
		Head of Environmental Monitoring Department	Samiev Sanginmurod
TJK Water Quality II	CEP	Head of International Relations Department	Firuz Qurbonzoda
	CEP/Aarhus Centre	Head of Arhus Centre under the CEP	Jamoliddin Yakubov
	CEP /Analytical Laboratory	Leading Expert	Kamila Kuchakshoeva
		Senior Expert	Marifat Hamodova
		Senior Expert	Ozoda Askarova
		Senior Expert	Roziya Amonbekova
		Head of the Analytical Laboratory	Sudurzoda Saidismon
		Head of Analytical Department	Tillokhon Odinabekov
		Head of the Regional Analytical Lab in Tursunzoda District	Tughral Akhmedov
	Consultant hired by Syke	ex.Project Coordinator (consultancy)	Nazokat Isaeva
		Project Coordinator (consultancy)	Shukhrat Igamberdyev
	GIZ	Project Administrator	Malika Sharipova
		Project Advisor	Saidova Husnoro

Uzbekistan			
Project	**Organisation/Unit**	**Position**	**Name**
FUME	Aviation Meteorological Station/Bukhara	Head of the Station	Tangrieva Ravilya
	Aviation Meteorological Station/Fergana	Head of the Station	Tsoi Natalia
	Aviation Meteorological Station/Nukus city	Engineer-Synoptic	Pirnazarova Azima
	HydroMeteorological College	Deputy Director	Azimova Gulnora
	NIGMI	Director	Doniyor Turgunov
		Deputy Director	Umurzakov U.
		Secretary on Science	Zukhra Tillakhodjayeva
	Regional Training Centre of Uzhydromet	Director	Davlatov A.
	UNDP	Task Manager/UNDP Project on Early Warning System	Alexander Mekoshkin
	Uzhydromet	Head of Aviation Meteorological Support Department	Albina Zaynitdinova
		General Director's Advisor	Firuz Safarov
		Head of Air quality Monitoring Department. (Air Quality Station review and Calibration laboratory visit)	Galina Grankina,
		Leading Specialist in the Aviation Meteorological Support Department	Liliya Gadilshina
		Head of the HydroMeteorological Service Department	Narzullayev Azimjon
		Senior Engineer in Air Quality Monitoring Department.	Natalia Teryaeva,
		Head of Climate Monitoring and International Projects Department	Natalya Agaltseva
		Head of Meteorological Monitoring Centre	Rustam Rustambekov
		Senior Specialist/HydroMeteorological Service Department	Smolyanova Natalia/
		Leading Specialist/Department of Hazardous Phenomena Monitoring	Suraye Athamova
		IT Specialist	Tajibaev Abror
		Manager of UNDP Project on Early Warning System	Ulugbek Dedabaev
		Senior Specialist/HydroMeteorological Service Department	Vedernikova Viktoria
		Leading Specialist/Participant of Comprehensive Training by FMI on the use and development of the system for IT personnel and forecasters	Viktoriya Vedernikova
		Senior Specialist/HydroMeteorological Service Department	Zaitseva Irina
NR UZB	Uzbekhydrogeology	Leading Specialist	Hidirov V.
	Uzbekhydrogeology/Geological Monitoring Service	Leading hydrogeologist	Abdullaev G.
		Head of Department	Ekubjonov O.
	Centre of Subsoil Use	Senior Engineer	Karimov I.
		Senior Engineer	Saidova N.
		Deputy Director	Varisov A.
	Centre of Subsoil use/State Geological Fund	Head of Department	Oktamov U.
	Institute of Geology and Geophysics	Head of Geophysics Laboratory	Nurtaev B.

Uzbekistan			
Project	**Organisation/Unit**	**Position**	**Name**
	Institute of Hydrogeology and Engineering Geology	Head of Laboratory Groundwater Horizons	Abdullaev Sh.
		Head of Department on International Cooperation and Marketing	Akramov B.
		Director	Bimurzaev G.
		Junior Researcher	Mamirov F.
		Intern/Junior Researcher	Motornyi I.
		Deputy Director	Ohunov F.
		Senior Researcher	Umarova Z.
	Institute of Mineral Resources	Head of Analytical Department	Kirezidi S.
	Ministry of Mining Industry and Geology	Chief Specialist of the Consolidated Analytical Department	Golovko E.
		Head of the Department on Science and Innovation	Kodirov O.

Indonesia			
Project	***Organisation/Unit***	***Position***	***Name***
INDFIN	BMKG	Director of Climate Change Information	A. Fachri Radjab
		Director of Aeronautical Meteorology	Achadi Subarkah Raharjo
		Acting Head of Centre for Human Resources Development on MCG	Adityawarman (last name not recorded)
		Coordinator Team at the Directorate of Applied Climate Information Services	Alberth C. Nahas
		Deputy Head for Infrastructure on MCG	Andreas Michael Purwoadi
		Coordinator of International Activities Team at Centre for Human Resources Development on MCG	Anni Arumsari Fitriany
		Deputy Head for Climatology/	Ardhasena Sopaheluwakan
		Coordinator Team at the Bureau for Planning	Asri Susilawati
		Coordinator of International Cooperation Team at the Bureau for Legal/Public Relations/and Cooperation	Bagus Rachmat Rievan
		Coordinator Team at the Centre for Standardization of Instrumentation on MCG	Donaldi Sukma Permana
		Coordinator Team at the at the Bureau for Legal/Public Relations/and Cooperation	Evi S. S. Rumondang
		Acting Executive Secretary/ Head for Meteorology/	Guswanto (last name not recorded)
		Head of Subdivision for Management Office of Deputy Head for Geophysics	Ida (last name not recorded)
		Coordinator Team at the Directorate of Climate Change Information	Indra Gustari
		Director of Applied Climate Information Services	Marjuki (last name not recorded)
		Acting Head of Bureau for Legal/Public Relations/and Cooperation	Mohamad Muslihhuddin
		Staff of International Cooperation Team at the Bureau for Legal/Public Relations/and Cooperation	Name was not recorded
		Head of Subdivision for Management Office of Deputy Head for Infrastructure on MCG	Name was not recorded
		Deputy Head for Geophysics as the BMKG Project Manager of INDFIN	Nelly Florida Riama
		Acting Head of Centre for Standardization of Instrumentation on MCG	Rahmat Triyono
		Expert/Meteorology	Richard Mandala Putra
		Coordinator Team at the Directorate of Aeronautical Meteorology	Tri Setyo Hananto
	Finnish Embassy	Deputy Head of Mission/Minister	Teemu Lakkonen

Nepal			
Project	***Organisation/Unit***	***Position***	***Name***
NeAs	Bardaghat Municipality/Nawalparasi	WASH Officer	Krishna Hari Poudel
		Mayor	Sambhu Lal Shrestha
	Bardaghat Water Supply and Sanitation User Committee	Manager	Bishnu Bhusal
		Chairperson	Deepak Lamsal
		Secretary	Shovakant Koirala
	Central Water Quality Testing Laboratory/DWSSM	Chemist	Anuradha Gyawali
	DWSSM	ex.Focal Point NeAs	Narayan Prasad Acharya
		ex.Focal Point NeAs	Purna Prasad Upadhyaya
		Deputy Director General	Ram Chandra Kaphley
		Director General	Ram Kuma Shrestha
		Senior Divisional Engineer/NeAs Focal Point	Sanju Lamichhane
	Embassy of Finland/Kathmandu	Special Adviser/Natural Resource Management and Climate change	Pallab Nepal
		Senior Specialist/Head of Cooperation	Sara Alanen
	Maheshpur Water Supply and Sanitation User Committee	Manager	Ramesh Prasad Loniya
		Chairperson	Sanajay Kumar Kanu
	Ministry of Water Supply	Secretary	Pramila Devi Shakya Bajracharya
		Joint Secretary	Ramakant Duwadi
	Palhinandan Rural Municipality	Water Supply Technician	Govind Prasad Gupta
	Ramgram Municipality	IT Officer	Jit Jung KC
		WASH Focal Person	Ram Lal Bhusal
	Sarawal Rural Municipality/Nawalparasi	WASH Focal Person	Bhoj Bahadur Kohar
		Health Officer	Om Narayan Devkota
		Chairperson	Sukhadi Prasad Chaudhary
	Sunawal Water Supply and Sanitation User Committee	Chairperson	Bishnu Prasad Neupane
	WHO/Kathmandu	Environmental Health Officer	Sudan Raj Panthi

Vietnam			
Project	***Organisation/Unit***	***Position***	***Name***
All Projects in Vietnam	Embassy of Finland Hanoi	Special Advisor	Le Thi Thu Huong
		Counsellor/Development Policy	Maija Seppälä
PROMOAIR	NCEM/Division of Automatic systems and Equipment Inspection	Officer	Hoang Cong Huy
		Officer	Hoang Van Vuong
		Officer	Pham Ngoc Hai
		Officer	Tran Anh Duy
		Officer	Tran Hoai Nam
		Officer	Vuong Nhu Luan
	NCEM/Division of Environmental Analysis/Dioxin and Toxic Substances	Vice Head of Division	Nguyen Thi Minh Hue
	NCEM/Division of Environmental Monitoring and Warning	Head of Division	Nguyen Nhu Tung
	NCEM/Office	Officer/International Cooperation	Nguyen Thuy Quynh
	NCEM	Deputy Director	Nguyen Huu Thang
	Pollution Control Department (Ministry of Natural Resources and Environment)	Deputy Director General	Nguyen Thi Thien Phuong
PROMOSERV III	Department of Personnel and Organization	Official	Nguyen Thu Hai
	Hydro-Meteorological Information and Data Centre	Deputy Director	Ngo Van Manh
		Deputy Chief	Pham Duc Thang
	National Centre of Hydro-Meteorological Forecast	Deputy Director	Hoang Phuc Lam
		Deputy Chief	Pham Le Hang
		Forecaster	Pham Thi Thanh Hoa
	National Centre of Hydro-Meteorological Network	Deputy Director	Do Huy Duong
		Deputy Chief	Nguyen Duc Phuong
	Northern Delta and Midland Regional Hydro-Meteorological Centre	Deputy Director	Nguyen Van Hiep
	VNMHA	Previous Project Coordinator	Vu Thi Phuong Thanh
	VNMHA/Department of Science Technology and International Cooperation	Official	Le Thi Thuong
		Deputy Director	Nguyen Dang Quang
VietMAR	BGR – Climate Resilient Management of Groundwater and Geohazards Project	Team leader	Andreas Renck
		Senior Hydrogeologist	Anke Steinel
	Centre for Water Resources Warning and Forecast (CEWAFO)	Manager Groundwater	Dang Tran Trung
		Groundwater Modeler	Nguyen Kim Hung
		Field Survey Surface Water Data Collection	Nguyen Tat Tuan
		Climate Change Groundwater Modeler	Nguyen Thanh Kim Hue
	National Centre for Water Resources Planning and Investigation (NAWAPI)	Vice Director General	Nguyen Ngoc Ha
		Director of Science/Technology and International Cooperation Division	Duong Du Bui
		Director of Water Resources Investigation Division	Hoang Van Hoan
	SIHYMECC	Researcher	Le Xuan Hoa
		Researcher	Nguyen Thao Hien
		Deputy Director	Nguyen Van Hong
		Director	Pham Thanh Long
		Researcher	Tran Dieu Trang

		Researcher	Tran Minh Son
WOODVN	Department of Forestry (DOF)/Ministry of Agriculture and Rural Development	Deputy Head of the International Cooperation Division	Dat (last name not recorded)
		Deputy Director General	Pham Hong Luong
	Research Institute of Forest Industry (RIFI)	Vice-director	Nguyen Bao Ngoc
	RIFI/Wood Industry and Services Division	Head	Ha Tien Manh
	RIFI/Wood Preservation Division	Head	Bui Thi Thuy
		Researcher	Doan Thi Bich Ngoc
	RIFI/Wood Processing Division	Researcher	Nguyen Thi Phuong
	Thanh Tam Interior Wood Processing Joint Stock Company	Director	Nguyen Van Thu
	Vietnam National University of Forestry	Associate Professor Vice-Director of International Cooperation Division	Le Xuan Phuong
	Vietnam Timber & Forest Products Association (VIFOREST)	Vice President & Secretary General	Ngo Sy Hoai