

ANNEX 5 SUMMARIES OF RESPONSES

RESPONDENTS AND COURSES ATTENDED

Field mission Country	No of resp.	F	M	Courses attended		NACD	Workshops (ASD, CW-La- bex, CW-LSE, ACW-Rep etc.)	Intern- ship
				Basic	Advanced			
Ethiopia	3	1	2	2		1	1	
Kenya	7	3	4	1	1	2	5	
Malaysia	8	6	2	3		1		1
Vietnam	4		4	1	1	2	3	1
Mexico	7	5	2	1		2	5	
Panama	1	1		1	1			
<i>Sub-Total</i>	<i>30</i>	<i>16</i>	<i>14</i>	<i>9</i>	<i>3</i>	<i>8</i>	<i>14</i>	<i>2</i>
Other countries								
Botswana	1	1		1				
Burundi	1		1	1				
Uganda	2		2	1	1	1		
Ghana	1	1					1	
Zambia	1		1	1				
Zimbabwe	1		1	1	1	1		
Bangladesh	1		1				1	
Mongolia	1		1	1	1	1		
Cambodia	1		1	1	1			
Indonesia	3	1	2	2			1	
Pakistan	1		1				1	
Philippines	1	1		1	1	1		
Sri Lanka	1	1		1				
Belarus	1		1	1	1			
Turkey	1		1	1				
Tunisia	1	1		1				
Costa Rica	2	1	1	2				
Jamaica	1		1	1			1	
Brazil	2		2	2			2	
<i>Sub-Total</i>	<i>24</i>	<i>7</i>	<i>17</i>	<i>19</i>	<i>6</i>	<i>4</i>	<i>7</i>	<i>0</i>
Grand total	54	23	31	28	9	12	21	2

EDUCATIONAL LEVEL OF THE RESPONDENTS

Field mission countries	BA	MA	PhD	Other, what?
• Ethiopia	1	2		
• Kenya	3	4		
• Malaysia	3	3	1	1 (Diploma in mechanical engineering)
• Vietnam	4			
• Mexico	5	2	1	1 (Computer engineering,
• Panama		1		
Other countries				
• Botswana	1			
• Burundi		1		
• Ghana				1 (Higher diploma)
• Uganda	1	1		
• Zambia				1 (Diploma in Laboratory Science)
• Zimbabwe		1		
• Bangladesh		1		
• Mongolia		1		
• Cambodia	1			
• Indonesia	2	1		
• Pakistan			1	
• Philippines			1	
• Sri Lanka		1		
• Belarus	1			
• Turkey		1		
• Tunisia		1		
• Costa Rica	1	1		
• Jamaica		1		
• Brazil			2	
• Total	23	23	6	

IMPACT OF THE TRAINING

Using the learned skills	YES	NO	REMARKS
• Ethiopia	3		Capability of using the analytical skills
• Kenya	7		Work with the GC/FID in analysis, using GC/FID to analyse and quantify omega3 polyunsaturated fatty acids in fish samples from lake Victoria as part of my MSc research work. Learned troubleshooting of the GC. Train students on the use of GC for analysis of various samples e.g. pesticide residues using GC/ECD and hydrocarbons using GC/FID. Learned to do declarations electronically and to access chemical databases. Proper sample preparation, operating Gas Chromatography in the right way and interpreting results.

• Malaysia	6	2	<p>In the CWC proficiency test. Helping the NA in declaring to OPCW. I am identifying the facilities that are using, producing, manufacturing, importing, and exporting Schedule 1,2&3 as well as DOCs and deliver the information to the NA. Capability to operate GC/MS and FTIR.</p> <p>My confidence increased in making decision to approve or reject an analytical result pertaining with screening of unknown compounds in traditional medical products that are hazardous to public health.</p> <p>Learned on chemical databases useful in finding information about chemicals in pharmaceutical industry.</p> <p>Organising training in basic GC-MS workshop in the university annually.</p>
• Vietnam	4		<p>Learned to use instruments (GC-MSEI, etc) and maintenance, analysis skills, sample preparation</p> <p>Learned to prepare reports and declaration to the OPCW assigned by the NA</p>
• Mexico	6	3	<p>Sample preparation, interpretation of the results, Not useful for everyday work, but participated in proficiency test but not successful,</p> <p>Helpful in making declarations to the OPCW, using internet to find databases.</p> <p>Better understanding of the GC analyses, Pesticide, sediment samples, environmental checks (birds)</p> <p>The lab does not perform the CWC tasks, does not meet the cleanliness requirements</p>
• Panama		1	<p>Training was not relevant to my work. I am a biochemistry professor and my main job is teaching. The instruments in the department are for teaching purposes.</p>
Sub-total	26	6	
• Botswana	1		<p>Use of GC/MS to make temperature programme. Also improvement in the use of searching results through the library</p>
• Uganda	2		<p>Very often in my routine work and special analytical tasks;</p> <p>Improved sample preparation methods, better application of GC techniques, good laboratory practices, interpersonal and presentation skills, report writing, quality system documentation</p>

• Zambia	1		Using GC/MS (donated by the OPCW) at the NA laboratory in the local university. Also part of the team using the HPLC/MC at the Zambia agricultural research institute where I have been helping in the sample preparation and measurements for pesticides and other organophosphates
• Zimbabwe	1		General laboratory management, analytical skills (sample preparation and analysis) calibration and performance checks on analytical instruments for local industry such as GC, GC-MS and FTIR and others
• Mongolia	1		
• Indonesia	1		Laboratory participated in proficiency testing and the skills were useful in that. My institute and me disseminate the knowledge to other institute in Indonesia which focus their work on chemical weapons.
• Philippines	1		The skills applied directly in my research work, in teaching my students on instrumentation techniques and in training and supervising of research personnel as the Manager of the Analytical Services Lab of IC-UPD.
• Sri Lanka	1		I work in the Forensic Toxicology lab. and analyse specimens for poisons including pesticides, drugs, and metals etc. Other suspected poisonous chemicals are also analysed. The Basic training was useful in using GC and GC-MS.
• Turkey	1		I work in Refik Saydam Hygiene Centre in Consumer safety and Health Effects Research Laboratories Dept. as the lab chief and analyst. Sample preparation was a very useful skill.
• Tunisia	N/A		
• Costa Rica	1		Sample preparation, development of analytical techniques, background in theoretical aspects in mass spectroscopy and gas chromatography,
• Jamaica	1		During lecture of GC-MS
• Brazil	1	1	I work in one of the 27 units of the Brazilian Federal Police. I was invited to write a project to build the necessary infrastructure to analyse CWC related chemicals. Also I joined a research project of the Paraiba Federal University-Chemistry dept. to analyse fuel components with GC. I act as a consultant to choose the GC equipment to be acquired.
Sub-total	12	1	
GRAND TOTAL	38	8	

IMPACT OF THE TRAINING

Training others in the lab where working	YES	NO	REMARKS
<i>Field mission countries</i>			
• Ethiopia	2	1	
• Kenya	5	2	
• Malaysia	5	2	
• Vietnam	3	1	
• Mexico	5	2	
• Panama	1		
<i>SUB-TOTAL</i>	<i>21</i>	<i>8</i>	
<i>Other countries</i>			
• Botswana	1		
• Burundi	1		
• Uganda	3		<i>Team coaching once a month, only university</i>
• Ghana	1		
• Zambia	1		
• Zimbabwe	1		
• Bangladesh			
• Mongolia	1		
• Cambodia	1		<i>training military staff, no lab</i>
• Indonesia	1	1	
• Pakistan		1	<i>university</i>
• Philippines	1		
• Sri Lanka	1		
• Belarus	1		<i>Basic- a new method, Adv – quality system</i>
• Turkey	1		
• Tunisia	N/A		
• Costa Rica		1	
• Jamaica	1		
• Brazil	1	1	
<i>SUB-TOTAL</i>	<i>10</i>	<i>3</i>	
<i>GRAND-TOTAL</i>	<i>38</i>	<i>12</i>	
Promotion after training	YES	NO	
<i>Field mission countries</i>			
• Ethiopia	2	1	New posts: Head of NA, Director of Research laboratory of TIDI
• Kenya	2	5	New posts: Principal chemist, Chief Chemist
• Malaysia	3	4	Promotions not to do with VERIFIN (2)
• Vietnam	1	3	Promotion: deputy manager
• Mexico	2	5	Promotions not because of VERIFIN

• Panama	1		Promotion not because of VERIFIN training
<i>SUB-TOTAL</i>	<i>11</i>	<i>18</i>	
<i>Other countries</i>			
Botswana	1		
Burundi	1		
Uganda	3		Senior Occupational Hygienist, Principal Government Analyst, Commanding Officer
Ghana		1	
Zambia		1	
Zimbabwe	1		Research Director in Scientific and Industrial Research and De- velopment Centre-National Me- trology Institute
Bangladesh		1	
Mongolia	1		Inspector OPCW
Cambodia		1	
Indonesia		2	
Pakistan		1	
Philippines	1		Safety Officer, Manager of An- alytical Services Labs
Sri Lanka	1		Deputy Government Analyst
Belarus	1		
Turkey	1		Laboratory Chief in Refik Say- dam Hygiene Center in Con- sumer Safety and Health Ef- fects Research laboratories De- partment
Tunisia			
Costa Rica		1	
Jamaica		1	
Brasil	1	1	Major
<i>SUB-TOTAL</i>	9	5	
GRAND-TOTAL	23	28	

INSTRUMENTATION IN THE LABORATORIES OF THE RESPONDENTS

Field mission Country	No. of resp.	Lab exists		Instrumentation				
		Yes	No	GC/FID	GC/NPD	GC/MS	LC/MS	NMR
Ethiopia	3	1	2			1		
Kenya	7	7		6		5		1
Malaysia	8	6	2	2	1	2	2	
Vietnam	4	3	1	3	3	3		
Mexico	7	5	2	4	3	4	1	4
Panama	1	1		1				
Sub-Total	30							
Other countries								
Bangladesh	1	1		1		1	1	1
Belarus	1			1				
Botswana	1	1		1		1		
Burundi	1	1		1				
Cambodia	1		1					
Ghana	1			1		1		
Uganda	2	1	1	1	1	1		
Zambia	1	1				1		
Zimbabwe	1	1		(1)		(1)		
Mongolia	1		1					
Indonesia	3	3		3		3	1	1
Pakistan	1	1						
Philippines	1	1		1	1	1	1	1
Sri Lanka	1	1		1	1	1		
Turkey	1	1		1	1	1	1	
Tunisia	1	1		1	1	1	1	
Costa Rica	2	2		1		2		2
Jamaica	1	1		1				
Brazil	2	2				1(1)		1
Sub-Total	24							
Grand total	54							

(1) can use the instrument in another laboratory

Note: Most of the respondents that do not work in the laboratory attended the NACD course. 4 out of 10 that attended some of the laboratory courses, even though they did not have a laboratory.

RECOMMENDATIONS ON IMPROVING OF THE VERIFIN TRAINING

Mexico	<ul style="list-style-type: none"> • Maybe more exercises (declarations and chemical) NACD • Increase the practical section of the course (NACD) • Identify the real needs of the students (CW-Labex)- fine tune the selection process • General principles of NMR
Panama	<ul style="list-style-type: none"> • Difficult to comment since I have not been able to use what I learnt in those courses
Botswana	<ul style="list-style-type: none"> • The training is adequate and useful if only the whole of our staff was given a chance to attend. Or if possible the VERIFIN staff could come to our lab and give us the two week training it would be very much appreciated
Uganda	<ul style="list-style-type: none"> • Provision of some vital reference materials • Increase the number of individual projects to build confidence in trainees • Following up the trainees systematically, e.g. automatic promotion to the Advanced Course after the Basic Course • Recognize the participants' different levels of exposure to GC techniques to ensure special consideration of the less advantaged.
Zambia	<ul style="list-style-type: none"> • VERIFIN to be funded adequately to smooth their operations. They could replace other instruments like the FTIR/MS in order to enhance practical experience in the operations and data analysis related to CWA
Zimbabwe	<ul style="list-style-type: none"> • The training programme is fine. Follow-up of previous participants is needed to help them to implement what they have learned at VERIFIN, e.g. through assistance with analytical equipment since most of the trainees are from a country which cannot afford modern analytical instruments. Equipment donations are needed.
Philippines	<ul style="list-style-type: none"> • The basic and advanced courses are excellent. No need to improve anything.
Sri Lanka	<ul style="list-style-type: none"> • It is more appropriate to have short courses on use of different instruments like GC-MS, LC-MS, FT-IR etc. with relations to their use in CWA analysis than as conducted at the moment. Background knowledge on each instrument and maintenance issues will also be very useful.
Costa Rica	<ul style="list-style-type: none"> • More practical work is needed for basic training course even though the course was good.
Jamaica	<ul style="list-style-type: none"> • The training (ASD) was a good primer in GC/FID, NPD and to an extent MS. Participants were made aware of the Scheduled chemicals, their schedule, names, and their degradation pathways and products. More in-depth analysis of previously prepared samples as well as a longer time to properly interpret the chromatogram. If possible, a third week could be used for instrument use, analysis of data and interpretation.