

ANNEX 8 HAZARDOUS WASTE MANAGEMENT PROJECT IN ALEXANDRIA

Background

The hazardous waste management project (HWMP) in Alexandria, Phase I was operating between 1999 and 2008. The project location is Alexandria largely because 40% of the industries are there. The project is a 'niche choice' among the donors funding allocations to Egypt's as within the environment sector only 2% goes for solid and hazardous waste management.

The project site selection in Nasreya, one hour drive from Alexandria City centre, had caused some delay to the project as it implied a relocation during the first phase from an original remote desert site. Following building of a landfill then and subsequent change of the contractor, the Project Phase II was implemented from October 2003 till September 2006. Finally, as a transition stage follow up in 2007–2008, occupational safety training and plant process inspection teams turned up altogether four times.

Project objective

The objective was to develop a pilot of an environmentally sound and sustainable hazardous waste management system under the Egyptian Environmental Affairs Agency (EEAA) and to minimize the associated negative environmental, social and health impacts. To its manager, the Governorate of Alexandria, this meant to establish a replicable system for prevention, minimization, storing, collection, transportation, recycling, treatment and disposal of significant groups of hazardous - industrial waste, either organic or inorganic.

An estimate was given during the evaluation visit that some 30% of the inorganic waste is currently being collected. This was perhaps optimistic, but gives us a rough estimate on the relevance of the project. The information however, on the organic waste in particular, is very vague.

Implementation and Results

Four Components of the Project phase II were associated to hazardous waste materials management: (1) minimization and handling at source, (2) administration, (3) recycling, treatment and disposal and (4) collection systems. The fifth component is the laboratory and sixth the dissemination of results and experience, i.e. reflecting a well thought out Phase out strategy. The first component is sensitive, conflicting with the third one of treatment, the Steering Committee agreed that "a package of information" to the industries will be postponed till the end of project. For sure this is something the environmentalists (if not EEAA) would disagree with!

The project success is dependent on law enforcement; illegal dumping takes place if law enforcement is weak. Some industrial waste also ends up to the communal dump site. The Project Work plan (07/2004-06/2006) states it is of great importance to

refuse receiving any waste to the site which cannot be treated in Nasreya”. If a particular waste parcel cannot have legitimate address, or it ends up to illegal or wrong dumpsite, it surely is difficult to judge how to attract more polluters as customers. Should one use stick or carrot and what the division of responsibilities with the EEAA? Does the proposed counselling role towards potential clients rather than the traditional control and sanctions (they are fines, albeit too small) suit HWMU better?

It is obvious that as a marketing strategy outside of the province borders, control mindset and sanction tools are out of place. Therefore the HWMU should have more operational independence; privatisation or joint venture have been proposed. The management for sure is capable to extend the service area and thus generate higher revenue; a Governorate unit as operator is not legitimate to work outside its own borders.

Although the environment law (4/1994) was finally upgraded (7/2009), neither had the old law any chapter to disallow HWMU from operations. Situation is overdue, because a positive affirmation to replace the old temporary permit should first come from the Ministry of Housing to the EEAA, following the selected location. The temporary permit disallows receipt at Nasreya site of lead oxides as well as location and operation of a physical-chemical plant, already built. Nowadays, there is also a small incinerator and another, also small unit is to be built soon.

Among the Completion Report-Plan proposals there was a fluorescent lamp treatment facility, which now is subject to a USD 3 million grant from Korea. With consequent staff increase by ten, thus also crucial steps towards consumer awareness on waste and related recycling can be taken. At the Nasreya site there is also a new state of the art landfill under preparation, to meet increased demand.

No doubt with the national industrial policies spelled out and environmental laws enforced, (including stronger local EEAA) there will be scope for being more ambitious: the HWMU is beneficiary from stronger environmental management of industry in Egypt.

Future

A great part of the project sustainability is due to foreign owned industries in Egypt being the principal customers. They need the environmental certificate to be able to export. There are such industries also across the borders. With the appropriate institutions present in Alexandria (RIPECAP with UNEP and SYKE only until 2009 and a related University faculty) and Cairo (EPAP II, Basel Convention), Alexandria as a port city could gain a status of a hub, Centre of Excellence or a cluster in industrial waste management, to serve Egypt as well as the countries in the region.

Regional ambitions require partnering on awareness creation with NGO institutions. Positive quests in Alexandria on environment match with the other impending spirits of foreign institutions led by Alex-Med Centre, which seek eventually to recreate the ancient city image Alexandrism: cosmopolitan minds, diversity, tolerance and coop-

eration. But before those projections come true, we will be on a closer lookout for this notorious port city Customs Authorities' action to sort out any attempted waste exports, of reverse flow of materials!

Efficiency

1. Was there a phase out plan formulated for the project

Ad 1. There was a detailed Project document to cover the Phase II, years 2003–2006. At the end, it was audited and the contractor presented the 'outstanding issues' in the Project Completion Report. In September 2006 a follow up programme at ca. € 60.000 was presented. The contractor had prepared the ToR focusing on occupational safety training, on a review on the physical-chemical processes and on fire and other safety systems. This was perhaps well justified due to actual project emphasis on treatment of non-organic waste. However, in an email as late as March, 2008 the beneficiary CEO makes a request for a feasibility study expert for an incinerator plant and for a chemist with experience in safe disposal and laboratory analysis of chemicals!

2. Was there a monitoring system in place? What was monitored? (E.g. output indicators)

Ad 2.

Through correspondence, the original project document had been changed within years 2002 to 2003. The monitoring system includes many output indicators and a Supervisory Board and Steering Committee are in place. The SC had approved comprehensive budget changes. Also Phase I Project completion report 2002 had been commented and finally, external audits that had been carried out both in 2003 and in 2006.

3. Was the project phased out according to plan?

Ad. 3

Yes. The certificate of the Completion of the Project was signed 31 July, 2007. It included the document on assets' handovers from September 2006 and April 2007. In some correspondence with the Embassy 2007 there were contemplations whether the Completion Report was part of the handover documentation.

4. Was there enough time to phase out the project?

Ad 4.

The Project Phase II was completed one year before end of the transition period. Remaining funds of € 60.000 were used mainly only in 2008, when work safety training, simulation and inspection were carried out, (besides ad 1 issues).

5. Has the level of grant aid to the project been discontinued after end of 2007?

Ad 5.

No; the funds granted were partly used as per a separate plan in the years 2007-2008.

6. Has additional development aid been granted to the project after end 2007?

Ad 6.

No additional funds have been granted. There has been discussion on further investment under Concessional Credit Scheme, either independently or perhaps in a com-

prehensive plan encompassing a solution for the Metropolitan Cairo. Whether HWMU would qualify for a CC investment funding to set up an incinerator, would largely depend on the institutional set up and on the continued capability of the Plant to apply appropriately independent tariff policies and provide for a service to the industries at reasonable rates. For the Finnish CC, the project should be 'commercially unviable' whereas the Egyptian guarantee criteria call for viability in order for such a project to get a bank guarantee. But if and when such a loan application was addressed to the Danish scheme of mixed credits, the financial appraisal would zoom on the [lacking or inadequate] financial independence.

7. What measures have been taken to guarantee its continuity?

Ad 7.

The Project Completion Report (dated August 2007) included a well thought out Plan for transition. It was projected under seven headings like 'sustainability', 'alternatives', 'further analysis', 'need for further assistance', 'policy relevance', 'lessons learnt' as well as 'recommendations for further actions'. The report was preceded by a Lessons learnt seminar in June 2007.

It is possible that it has a future national role for physical-chemical treatment of non-organic waste as a component of Greater Cairo HW master plan, according to a feasibility study carried out in 2008.

8. Were other donors involved in the handing over of the project to the Egyptian counterparts?

Ad 8.

No other donors were involved. Cooperation with other donors was through EEAA.

9. What actions were taken by the Egyptian side to guarantee the sustainability of the project, especially concerning the funding?

Ad9.

The project Phase II risks were related to institutional and financial frameworks. Also the physical-chemical plant was scheduled to be commissioned only at the end of November 2005. A precondition for the Finnish support in 2003 had been presentation of plans on the specific roles of the private and public sectors in the management systems. This included a waste collection, transportation, treatment and disposal, licensing and monitoring, including the contracting in a transparent manner of a private operator for the landfill, and sustainable financing of the HW management systems, based on gradual application of the principle polluter/waste producer pays, thus minimising subsidies.

The latter has come true as the project - or rather the Hazardous Waste Management Unit of the Governorate (HWMU) – is technically feasible and economically viable as it is able to cover operational costs with a surplus for investments and a hefty 40% transfer to the Governorate. It has a characteristically fluctuating annual net income at over € 100.000 p.a. Yet the audit report from 2006 calls for better transparency and financial independence of the Nasreya landfill site as well as overall development of financial management. This - and financial autonomy up to EGP 1000 only - is some-

what conflicting with the Governorate decision “HMWU can act as an independent entity” (PR Jan-Mar 2004). Although the income in the past five years of operations does not show any upward trend, some 13.000 tons of waste have been collected so far, from some 240 customers. About $\frac{3}{4}$ of the customers are from Alexandria Region and the rest from elsewhere. ‘Customers’ is a high figure compared to marketing cum control visits only to 168 firms by mid 2005 (SC 8 June 2005).

10. Check in the field whether the project is still functioning in terms of service delivery?

Ad 10 Yes it is functioning

11. What number and level of staff is now taking care of the project in comparison with those involved end 2007.

Ad11 the number is about the same but expected to increase by ten with additional fluorescent lamp treatment facility.

12. What follow up activities have there been from this project in which Finland was engaged, possible funded through new instruments of cooperation (institutional cooperation, concessional credits)?

Ad12

The Phase out Plan did not include any training needs analysis, but occupational safety training that was offered 2008 perhaps complemented an earlier, strictly technical project focus? The training given, also ended bilateral grants from the Government of Finland.

Despite Nasreya being the showcase, the CEO lately has had surprisingly few contacts with the Finns.

13. What have been the consequences of the phasing out of the project for the implementing organisation?

Ad13

Organic waste treatment by incinerator was addressed in the Plan, either by use of a cement factory kiln or by studying the option for a dedicated furnace. Now on its own, resisted by the Phase II Team Leader, the HWMU has a small 50kg per hour incinerator and another, ‘somewhat bigger and more sophisticated unit’ is soon to be built. The current operation for organic waste, transfer of materials 300 kms to Al Soukhna is uneconomical. The ‘polluter pays’: even though organic waste is fuel for the cement kilns, it is not received free. But we expect that in the near future a local cement plant in Alexandria will get a licence and a pledge for adequate quantities to offer its kilns. Wouldn’t this be a topic of EEAA and Ministry of Industry involvement as accordingly, also the current transport risks would also be avoided?

14. What have been the consequences of the phasing out of the project for the project beneficiaries?

Ad14

The plant was about to increase charge rates per tonne. This is likely to increase complaints from those complying with the law, the customers. On the other hand, the

EEAA has upper hand sometimes to order waste to be dumped at Nasreya free of cost, which is a worrisome practice (and may explain the increase in the total customers)!

Overall:

- Relevance: The plant serves well selected customers like foreign firms that need certificate for exports, at rates that may be relatively high. Before deployment of an in-house and outsourced incinerator great part of the organic waste material cannot be received: –
- Effectiveness: once law enforcement on waste collection improved and institutional status sorted out, huge development is foreseen: –
- Efficiency: Higher capacity utilisation will improve efficiency:-
- Sustainability: The plan is already able to carry out its function and there is scope for various further development: ++
- Impact: There have been concrete proposals to set up a similar unit to Cairo for which the HWPM serves as a model. It also will serve as an icon of recycling to consumers who will recycle fluorescent lamps and car batteries through collection points at retail shops: +