

**Comments on the revised Asian Storage Study
'Analysis of options for the environmentally sound management of surplus
mercury in Asian and the Pacific' (November 2010)**

Zero Mercury Working Group

14 December 2010

The ZMWG welcomes the opportunity to submit comments on the first draft of the revised Asian Storage Study, as this was presented at the UNEP storage meeting on 1 December 2010 in Braunschweig, Germany. These comments are based mainly on the executive summary and the presentations provided at this meeting; due to time constraints there was no time at this stage to analyse all details of the full report.

Before the report is finalised, we would therefore appreciate that the following points are taken into account:

1. In the executive summary, it needs to be explained how and why this report was developed – enhancing the initial AIT study.
2. In this present report (GRS study) it has to be made clear when references are made to the AIT study and when new proposals are offered.
3. A short presentation of the findings and gaps of the AIT report could also be included either at the beginning or as an annex – considering that mainly the recommendations but also the report were in principle discussed amongst the Asia-Pacific governments of the Executive committee or others which followed the developments of the study. These have to be considered seriously also in this present revised report.

It has to be made clear in the GRS study, that the main objective for the Asia Pacific study was the management of surplus mercury. The issue of managing mercury-containing waste and discussing relevant options, which was brought up at the Latin America and Caribbean storage study and meetings, although relevant, was not asked to be studied in the initial Asia Pacific - AIT study. Therefore, any introduction of new “waste” concepts, and extensive discussions and analyses of hazardous waste landfills, should be carefully considered and selectively discussed, given the clarity which previously existed in the Region about the need to focus on elemental mercury. Management of waste in the region could be addressed with a complementary set of recommendations, without demeaning the importance of sequestering elemental mercury.

The priority to manage surplus mercury should be clearly reflected in the Executive summary and the core report. Therefore expressions such as ‘an even more urgent problem is the management of mercury containing waste’ should better be rephrased or avoided.

4. As it is explained, both the AIT and GRS studies, are based on the ‘Assessment of Excess mercury in Asia, 2010-2050’ carried out by Concorde in 2008 (published in May 2009) (Concorde report). As indeed explained, several scenarios were discussed in this assessment. Nevertheless it has to be noted that:
 - i. The Concorde report predates the GC Decision 25/5 to start treaty negotiations, so it must be read in that political context.
 - ii. The (2nd) scenario assuming that significant surplus mercury is expected only in 2029, assumes no supply controls to address artisanal small scale gold mining (ASGM), but only a 50% reduction in demand over 10 years, and 5% reductions thereafter until 2050.

- iii. The (3rd) scenario developed, assumed supply controls to discourage mercury use in ASGM after 10 years. This scenario required "some limited storage capability by 2017 or shortly thereafter."
- iv. It needs to be noted that supply and demand in the Region are in rough equilibrium around 2017 without a treaty according to Concorde. It would appear reasonable therefore, given current developments, that if supply restrictions are used as a policy tool around this time, and no mercury can go to ASGM, some mercury in the region must be stored.
- v. Equally important, on a national level, Japan and Indonesia are likely governments that will need a storage option soon, given the by-product mercury they generate for which there is not a similar size of non-ASGM demand.

As a result the need of management options for the surplus mercury should be seen in the short-medium rather than the long term, contrary to what the GRS study appears to be reflecting. These issues above need to be discussed to put the assumptions and baseline studies made, in the right context.

5. In relation to the above the 'export options' which is currently proposed by the GRS study as a "temporary or limited measure" has to therefore be seriously reconsidered, also taking into account that this was one of the options discussed and welcomed by the Regional governments when discussing the AIT study. This option should be addressed as an at least 'equal' option to the stabilization and underground disposal of solidified mercury, and both should be discussed and analysed including relevant costs or sub-scenarios.

There are serious concerns, as also discussed in the LAC related meetings, that stabilization may still be difficult to apply in developing countries because of cost and other constraints. Concerns also arise with respect to assuring safety, monitoring and maintenance related to storage options for mercury, in developing countries. This is why the export option needs to be well discussed in the report.

Such concerns should be reflected in both the executive summary and core report.

6. Extensive discussion on the stabilization technologies of mercury waste (except elemental mercury) may not be necessary in the context of the study – nevertheless since it is developed, it could be useful for information. It could however be referenced and be included in annex rather than the main report.
7. When discussing disposal options it has to be clarified when we are talking about liquid elemental mercury and when about solid mercury containing waste, or solidified mercury. This also needs to be underlined when talking about underground disposal at the beginning of the chapter - discussing that the experiences we have so far , e.g. in Europe, refer to solid hazardous waste and not to any liquid waste.
8. Discussion of the underground storage option appears quite extensive in the report. Considering that this option was initially decided not to be pursued by the Region, devoting lots of time and effort to this may be questionable, although as general background information it could be useful.

As discussed during the December,1st, meeting, when discussing disposal of solidified mercury in underground disposal facilities, consideration should be taken that such disposal is not likely to be pursued for mercury only, given the costs and other challenges and if it remains true that there are no underground facilities at the present time. It will then have to be seen if the Region would decide to put such an option back on the table, considering that the LAC region chose not to prioritize the underground option for this very reasons.

Also comments under point 5 need to be taken into consideration in relation to the above.

Such considerations, should be included in the present study - since countries would also need to appreciate the wider benefit of potentially investing in the development of such an underground facility - for better management of their solid hazardous waste.

9. Due to the above reasons and the respective difficulties that solidification and underground storage solution may entail in the region, the option of time limited storage of mercury in the Region and export of mercury to a foreign facility, needs to at least be analysed to similar depth as the underground disposal options, including cost estimates.
10. For the cost estimates and cost comparisons between all proposed options it would be preferable that all assumptions are clearly described and elements are broken down separately, so these can be combined if needed. For example - temporary storage of metallic mercury and solidification in the region, and export to a foreign facility for disposal, or temporary storage and export to a foreign facility for solidification and disposal.

In addition, bearing in mind that there are no existing effective collection infrastructure in the region, there is need to include the costs associated with this element of the overall excess mercury management options.

11. Furthermore, in reference to all potential solutions proposed, attention needs to be taken since those may presume a level of cooperation between governments in the region, which to date has not unfortunately surfaced. Pursuit of a regional stabilization facility for mercury and/or waste in the short-term may be a very difficult challenge. The concepts of determining the availability of existing capacities in the region for hazardous waste treatment/mercury recovery/temporary storage of mercury as well as funding options for elemental mercury management in the region (including the role of the private sector) warrant strong consideration. Therefore in some cases the options and economics may need to be considered at a national level. Such discussions, also need to appear in the report.
12. Whether and how mercury will be transported within or outside the region if an export solution is selected, and whether this may entail conflicts with Basel based on characterizing the mercury as waste or not needs to be considered and decided upon only by the countries, because the elemental mercury is quite likely to be sequestered and subsequently managed without regard to "waste" classification (see Article 4 of the Elements Paper). Questions of coordination with Basel should not be "decided" in this paper since this is the countries' responsibility. It may be also the case that regional solutions would run afoul of the Basel waste export provisions if the mercury is managed in that legal construct, as it came up under the LAC relevant meetings.
13. The report further needs to discuss the Polluter Pays Principle considering that the private sector will need to take its responsibility and participate in the management solutions for surplus mercury and mercury containing waste.
14. Finally, the recommendations, should present a set of options to the Region, and not only one solution. The time by which management of elemental mercury would be needed should also be considered in the short-medium rather than the longer term, as discussed above. Recommendations for management of the surplus elemental mercury should be mainly presented and management of waste containing mercury could be presented complementary or in conjunction with that. The policy and practical context of how these will take place in the Region should be carefully considered and discussed, since it might prove more important than the technical approaches proposed.