

# Scientific and Technical Advisory Panel

The Scientific and Technical Advisory Panel, administered by UNEP, advises the Global Environment Facility  
(Version 5)

## STAP Scientific and Technical screening of the Project Identification Form (PIF)

Date of screening: May 04, 2012

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Panel member validation by: Hindrik Bouwman  
Consultant(s):

### I. PIF Information *(Copied from the PIF)*

**FULL SIZE PROJECT GEF TRUST FUND**

**GEF PROJECT ID:** 4611

**PROJECT DURATION :** 4

**COUNTRIES :** Regional (Ghana, Madagascar, Rwanda, Tanzania)

**PROJECT TITLE:** Reducing UPOPs and Mercury Releases from the Health Sector in Africa

**GEF AGENCIES:** UNDP

**OTHER EXECUTING PARTNERS:** WHO

**GEF FOCAL AREA:** POPs

### II. STAP Advisory Response *(see table below for explanation)*

Based on this PIF screening, STAP's advisory response to the GEF Secretariat and GEF Agency(ies): **Minor revision required**

### III. Further guidance from STAP

This proposal seeks to address the challenges Sub-Saharan countries face with respect to the sound management and disposal of health care waste, reducing mercury emissions, and meeting obligations under the Stockholm Convention. Activities will include, inter alia: (i) dissemination of technical guidelines, and building of BAT/BEP expert teams at regional level; (ii) development of national plans, implementation strategies, and national policies for each country; (iii) increasing the availability of affordable, non-incineration HCWM systems and mercury-free devices that conform to BAT and international standards (complete with demonstration at model facilities of these HCWM systems, recycling programmes, mercury waste management and reduction schemes, with complementary national training infrastructure put in place at national level); (iv) evaluation of the capacities of recipient countries to absorb the new technologies (to help devise where to allocate the technology provided under the project), and creation of a mechanism to enhance uptake of the new technologies in countries, and disseminate results in the African region.

The PIF notes that Tanzania is also part of the ongoing UNDP global project "Demonstrating and promoting Best Techniques and Practices for Reducing Health-Care Waste to avoid Environmental Releases of Dioxins and Mercury (Global: Argentina, India, Lebanon, Latvia, Philippines, Senegal, Tanzania, Vietnam)". The WHO is also involved in execution of this project, and the aim is to come up with WHO-supported, standardised guidelines for health care waste handling and disposal, with attention to mercury and dioxins. As relates to Tanzania, the older project description states that Tanzania through an "additional" component, will "develop, test and disseminate affordable and effective alternative health-care waste treatment technologies appropriate to conditions in much of sub-Saharan Africa", in line with the overall project objective "to demonstrate and promote replication of best environmental practices and techniques for health-care waste management through model facilities and programmes, and to reduce barriers to national implementation of these strategies." The current PIF states that the approach of the new project incorporates lessons learned from the older project, including strategies to improve cost-effectiveness and provide incentives to improve HCWM practices through additional technology allocation. STAP commends this positive step towards building on past activities and lessons learned.

There is also effort to phase out the use of mercury containing equipment to help limit the problem of mercury release at source, thereby complementing the efforts to implement cleaner HCWM technologies and management practices. However the overall assumption that the large equipment purchase under the project (and associated awareness creation and info dissemination to national stakeholders) will ensure future demand at national/regional level, as well as interest by manufacturers and distributors to make the technologies available and, more importantly, affordable, in the long run, may need more attention. STAP encourages examination of projects from other focal areas, such as Climate technology transfer and market transformation projects to find ways of stimulating markets for the long term by making

technologies affordable for the developing country context. Technologies are often produced in developed countries, with higher labour costs, such that barring manufacturers moving their production (at least in part) to a cheaper part of the world, or into the project region itself (eg as happened in the recently approved GEF/GIZ/ Solar Chill project). STAP suggests considering applying the learning from this project to investigate the feasibility of a longer term regionalized procurement or purchase coordination. Greater efficiencies may be obtained through longer term coordinated purchase, and the vendors of technologies may also find incentive to remain engaged with the new market. Similarly, the risk table could include the longer term risk of access to technologies ending with the project, halting growth of sustainable HCWM technologies in the region. This needs to be considered.

STAP observes that different countries may have different definitions of waste intended for HCWM by this project (also called Medical Waste in some instances) (Table 2). It may be a good idea to have a definition of HCW more refined than a general Hazardous Waste or Medical Waste classification from the inception of the project to ensure that selected technologies can deal with the items and volumes meant for destruction. Such a definition could inter alia include infectious materials, drugs, laboratory waste, etc. This could also maximise the use of the technologies being introduced since in theory, other Persistent Toxic Substances, both organic and inorganic, such as antibiotics, invalid drugs, genotoxic, and other chemicals from laboratories, might be included for destruction.

Some hospitals may have coal-fired power and steam generators that may also be used for co-combustion of waste. This may be an additional source of POPs and mercury that may need additional consideration.

The STAP sees a potential threat to maximising global environmental benefits in the absence of an effective, continuous, monitoring mechanism to better understand and address unforeseen barriers to implementation of technologies, and to help countries that are inherently "behind the curve" to step up. Depending solely on the evaluation process to find out the status of uptake could potentially mean that the country that falters will have little chance of catching up or getting meaningful allocations of technology to generate noticeable benefits at country level, if mid and end-of-project evaluations are the only ones expected. The PIF states that status of implementation will be the main determinant of outcome for an allocation formula that will be used to decide how much each country receives of equipment procured. STAP does not wish to be engaged in project management aspects of project review, and understands the need for fiscal responsibility; however, if a country with a huge medical waste problem also has the steepest "learning curve", one runs the risk of GEBs not being maximised due to late recognition of the extra effort necessary to build a platform for technology uptake. Similarly, countries like Tanzania that have already had - or is getting - assistance in this area (since the older GEF project is still ongoing), will most likely have the advantage, securing more resources because it has a head start. This should be considered by the project, so that any difficulty in technology uptake is tagged at the earliest stage, the playing field is indeed level for all countries concerned, and there is a better chance that resources will end up targeted where the largest problems will be addressed, and GEBs maximised

Finally, the STAP has published a guidance document "Selection of Persistent Organic Pollutant Disposal Technology for the Global Environment Facility: A Stap advisory document (2011), with a focus on environmentally sound disposal of POPs. This follows initial contributions from the GEF (through the STAP) in 2003/2004 in relation to available non-combustion technologies for POPs disposal; and apart from this, the Basel Convention, acting in concert with the Stockholm Convention, has issued and periodically updates technical guidelines on POPs management. This guidance includes disposal requirements and listings of technologies that may be applicable to GEF projects. There have also been comprehensive reviews of technologies which are periodically published, and on-line libraries of technology data sheets are maintained by the Basel Convention and supporting organizations. The Fifth Conference of the Parties (COP-5) to the Stockholm Convention invited the Basel Convention to continue this work, specifically with respect to establishing the levels of destruction and irreversible transformation of chemicals to ensure POPs characteristics are not exhibited; considering methods that constitute environmentally sound disposal; defining low POP-content in wastes; and updating general technical guidelines as well as preparing or updating specific technical guidelines for environmentally sound waste management (SC-5/9). Likewise, in its decision SC-5/20, COP-5 further encourages the GEF and parties in a position to do so to facilitate the transfer of appropriate technologies to developing countries and countries with economies in transition (CEITs).

The STAP advisory document observes, inter alia, that:

".... the destruction or irreversible transformation of POPs in an environmentally sound manner is not limited by the availability of appropriate technologyâ€”there are a number of such technologies. Rather, it is limited by the practical ability to assemble and apply them--particularly in developing countries and CEIT's - in a manner that is environmentally effective, timely, and cost effective.... Destruction cannot be addressed in isolation. The application of POPs disposal technology should be viewed as one part of an overall POPs management process or system. This

system includes steps taken in advance of the actual disposal or destruction to identify, capture, secure, and prepare POPs stockpiles and wastes for disposal. It also includes post-destruction steps to manage emissions, by-products and residuals. The management process depends upon high-quality information regarding POPs stockpiles and waste, and the effectiveness of the institutional and regulatory framework under which POPs management is undertaken."

Taking into consideration all of the above, the following recommendations should be addressed prior to CEO endorsement:

- a) Though perhaps implied, there is no discussion of handling of destruction residues (e.g. ash) in the PIF. The project should be developed recognising the need to address potentially toxic residues from health care waste destruction.
- b) In building on the previous UNDP Health care waste project, the STAP hopes that the lessons of the older project will be clearly elaborated in the new project document, along with specific improvements and alterations in approach being made to improve deliverables and benefits.
- c) The project could consider a definition of Health Care Waste (HCW) that is more refined than Hazardous Chemical Waste (HCW) to be adopted for this project, to ensure consistency across Nations involved in the project.
- d) The project developers are advised to examine projects from other focal areas that deal with market transformation and technology transfer (as is frequent under the Climate Focal Area) to strengthen the replication mechanism of the project.
- e) The Stockholm Convention Toolkit on dioxin emissions may be used by the project to track reductions in emissions.
- f) It is strongly recommended that a stringent ongoing monitoring mechanism be made a part of this project, so that trouble-shooting is ongoing, and countries have a better chance at implementing the appropriate preparatory steps for implementation of technologies.
- g) STAP kindly requests feedback on the usefulness of the STAP guidance document on POPs disposal.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
<b>1. Consent</b>	STAP acknowledges that on scientific/technical grounds the concept has merit. However, STAP may state its views on the concept emphasising any issues that could be improved and the proponent is invited to approach STAP for advice at any time during the development of the project brief prior to submission for CEO endorsement.
<b>2. Minor revision required.</b>	STAP has identified specific scientific/technical suggestions or opportunities that should be discussed with the proponent as early as possible during development of the project brief. One or more options that remain open to STAP include: <ol style="list-style-type: none"> <li>(i) Opening a dialogue between STAP and the proponent to clarify issues</li> <li>(ii) Setting a review point during early stage project development and agreeing terms of reference for an independent expert to be appointed to conduct this review</li> </ol> The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement.
<b>3. Major revision required</b>	STAP proposes significant improvements or has concerns on the grounds of specified major scientific/technical omissions in the concept. If STAP provides this advisory response, a full explanation would also be provided. Normally, a STAP approved review will be mandatory prior to submission of the project brief for CEO endorsement. The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement.