

# 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: March 02, 2016  
Screener: Christine Wellington-Moore  
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Consultant(s):

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

FULL SIZE PROJECT	GEF TRUST FUND
GEF PROJECT ID:	9189
PROJECT DURATION:	5
COUNTRIES:	Jordan
PROJECT TITLE:	Reduction and Elimination of POPs and Other Chemical Releases through Implementation of Environmentally Sound Management of E-Waste, Healthcare Waste and Priority U-POPs Release Sources Associated with General Waste Management Activities
GEF AGENCIES:	UNDP
OTHER EXECUTING PARTNERS:	Ministry of Environment
GEF FOCAL AREA:	Chemicals and Waste

### 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 issues to be considered during project design**

### III. Further guidance from STAP

The proposed project seeks to promote protection of human health and the environment through reduction and elimination of POPs, and other chemicals through implementation of environmentally sound management (ESM) for e-waste, healthcare waste and priority U-POPs release sources associated with general waste management activities. The PIF itself is well researched and well written, providing a good picture of the situation on the ground, and shortcomings in the current waste management system in Jordan. However there are issues with the theory of change that STAP feels could undermine success of the project; though if they are considered during preparation of the CEO endorsement package, the project should have excellent opportunities for success.

The PIF does not draw out any intention to include measures to decrease the Health Care Waste generated at source, which would also act to reduce uPOPs. STAP wishes to make broad suggestions to improve the project development process:

(a) The resource materials from the 2008- 2014 UNDP/WHO Health Care Waste project should be of utility. The website for this project provides a resource overview page (currently with no active links), as well as an extensive list of downloadable training modules (<http://www.gefmedwaste.org/trainings-overview>).

(b) The WHO Chapter on health care waste minimisation and management ([http://www.who.int/water\\_sanitation\\_health/medicalwaste/058to060.pdf](http://www.who.int/water_sanitation_health/medicalwaste/058to060.pdf) ). There is practical advice to minimize waste such as reducing the use of injections and hence generation of PVC waste through use of pills. Other useful resource may be the WHO book on the issue released in 2014, with some specific recommendations for situations where resources are limited, providing some examples for addressing the

issue [http://www.who.int/water\\_sanitation\\_health/medicalwaste/wastemanag/en/](http://www.who.int/water_sanitation_health/medicalwaste/wastemanag/en/). See also case studies such as "Best Practices in Health Care Waste Management: Examples from four Philippine Hospitals" ([http://www.noharm.org/lib/downloads/waste/Best\\_Practices\\_Waste\\_Mgmt\\_Philippines.pdf](http://www.noharm.org/lib/downloads/waste/Best_Practices_Waste_Mgmt_Philippines.pdf))

(c) In addition, the USEPA website gives links to "Hospital Prevention (P-2) strategies" (California Department of Health Services), and a "Guide to Mercury Assessment and Elimination in Health Care Facilities" (<http://www.epa.gov/region9/waste/p2/hospart.html>) which gives a breakdown of equipment of concern, methods of planning and implementation of HCW strategies and plans, and could be a good practical guide of past experience, complete with cost-benefit analyses. The page also includes a section on Pollution Prevention for Health care Professionals, which could help inform any training packages put together for doctor and nursing staff.

STAP strongly recommends that developers should examine appropriate non-GEF baseline experience in this field, given that the GEF has limited experience in this area of work.

Another aspect explicitly stated in the project is the reduction of the municipal type of waste generated by hospitals, which can make up about 80% of the total waste. Incineration of such waste leads to uPOPs as well, and it should be targeted in the overall training of the medical staff (see suggested guidance from EPA et. al.). Of course if municipal waste is simply shunted to the municipal waste stream, then this point is moot to some extent, though waste minimization should continue to be a goal for all.

In the Risk table, though rated low, there is risk associated health care system persons reverting to tradition incineration techniques. However, cost-benefit analysis to show savings to the hospitals, and ultimate reduction of burden to workers managing smaller quantities of waste have often been the "selling point" that leads to successful implementation of HCWM in facilities. Acknowledging the stated intent to explore other project experiences, the STAP again emphasizes the need to do a thorough search of case studies, and to find ways to incorporate these benefits meaningfully into the various stakeholder trainings and awareness activities, such that each group can see the benefits brought to bear for their particular group and the facility as a whole.

The risk table does not take into account any risks to transportation routing to centralized facilities associated with possible seasonal threats due to Climate Change. Should there be long distances be involved, this increases the chance of mishaps, spills and environmental and population exposure, which can be compounded by natural, weather-related events that may threaten transport (eg dust storms).

In addition, STAP suggests that the risk associated with inappropriate use of non-combustible, decontamination techniques (e.g., infectious waste might "slip through the cracks" as the waste handlers learn new techniques) should also be considered. There needs to be some mention of this, and the risk mitigation protocols that will be put in place to make sure that the overall HCWM runs as planned.

The Dioxin Toolkit might be used to obtain a more detailed and appropriate TEQ emission number for medical wastes disposed. STAP would like to see this being done as it would provide better quantitative indicators for project monitoring via the POPs tracking tool.

The proposed project design is unintentionally creating a tension within component 3, in trying to create a rationale for Refuse Derived Fuels whilst simultaneously trying to find financial tools and incentives (taxes and the like) to support recycling (in Component 1). Fundamentally, the inclusion of RDF could disincentivize recycling since the former at its core requires a sustained feedstock of waste. Indeed there is literature that explores this very issue, such as the EU Commission Report on Refuse Derived Fuel, Current Practice and Perspectives (<http://docplayer.net/10821846-European-commission-directorate-general-environment-refuse-derived-fuel-current-practice-and-perspectives-b4-3040-2000-306517-mar-e3-final-report.html>), work by the Global Alliance for Incinerator Alternatives (GAIA) (<http://www.no-burn.org/downloads/RDF%20Final.pdf>) and the USEPA (<http://www3.epa.gov/warm/SWMGHGreport.html>) who have created the Waste Reduction Model (WARM) to help solid waste planners and organizations track and voluntarily report greenhouse gas (GHG) emissions reductions from several different materials management practices, thereby providing some objective way of calculating the best waste management strategy. WARM calculates and totals the relative GHG emission and energy impacts of baseline and alternative materials management practices—source reduction, recycling, combustion, composting, and landfilling—using emission factors that EPA has developed based on a materials life-cycle approach. STAP proposes a thorough review of the literature on this topic, especially since the project is also seeking to enhance recycling.

Finally, there should be some risk consideration to contemplate the transition from "business as usual" to a regulated waste market system.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
<b>1. Concur</b>	In cases where STAP is satisfied with the scientific and technical quality of the proposal, a simple “Concur” response will be provided; the STAP may flag specific issues that should be pursued rigorously as the proposal is developed into a full project document. At any time during the development of the project, the proponent is invited to approach STAP to consult on the design prior to submission for CEO endorsement.
<b>2. Minor issues to be considered during project design</b>	<p>STAP has identified specific scientific /technical suggestions or opportunities that should be discussed with the project proponent as early as possible during development of the project brief. The proponent may wish to:</p> <p>(i) Open a dialogue with STAP regarding the technical and/or scientific issues raised.  (ii) Set a review point at an early stage during project development, and possibly agreeing to terms of reference for an independent expert to be appointed to conduct this review.</p> <p>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.</p>
<b>3. Major issues to be considered during project design</b>	<p>STAP proposes significant improvements or has concerns on the grounds of specified major scientific/technical methodological issues, barriers, or omissions in the project concept. If STAP provides this advisory response, a full explanation would also be provided. The proponent is strongly encouraged to:</p> <p>(i) Open a dialogue with STAP regarding the technical and/or scientific issues raised; (ii) Set a review point at an early stage during project development including an independent expert as required.</p> <p>The GEF Secretariat may, based on this screening outcome, delay the proposal and refer the proposal back to the proponents with STAP’s concerns.</p> <p>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.</p>