



## GEF-6 GEF SECRETARIAT REVIEW FOR FULL-SIZED/MEDIUM-SIZED PROJECTS THE GEF/LDCF/SCCF TRUST FUND

GEF ID:	9421		
Country/Region:	Regional (Kyrgyz Republic, Tajikistan)		
Project Title:	Demonstration of Non-thermal Treatment of DDT Wastes in Central Asia		
GEF Agency:	UNEP	GEF Agency Project ID:	
Type of Trust Fund:	GEF Trust Fund	GEF Focal Area (s):	Chemicals and Waste
GEF-6 Focal Area/ LDCF/SCCF Objective (s):	CW-2 Program 3;		
Anticipated Financing PPG:	\$300,000	Project Grant:	\$15,120,000
Co-financing:	\$32,500,000	Total Project Cost:	\$47,620,000
PIF Approval:		Council Approval/Expected:	
CEO Endorsement/Approval		Expected Project Start Date:	
Program Manager:	Lulwa Ali	Agency Contact Person:	Kevin Helps

PIF Review			
Review Criteria	Questions	Secretariat Comment	Agency Response
<b>Project Consistency</b>	1. Is the project aligned with the relevant GEF strategic objectives and results framework? <sup>1</sup>	Yes, it is aligned with CW-2 Program3	
	2. Is the project consistent with the recipient country's national strategies and plans or reports and assessments under relevant conventions?	Yes. The project is in line with the priorities in the NIPs of the respective countries. These NIPS prioritizes clean-up of the burial sites containing DDT.	
<b>Project Design</b>	3. Does the PIF sufficiently indicate the drivers <sup>2</sup> of global environmental degradation, issues of sustainability,	Yes.	

<sup>1</sup> For BD projects: has the project explicitly articulated which Aichi Target(s) the project will help achieve and are SMART indicators identified, that will be used to track the project's contribution toward achieving the Aichi Target(s)?

<sup>2</sup> Need not apply to LDCF/SCCF projects.

## PIF Review

Review Criteria	Questions	Secretariat Comment	Agency Response
	market transformation, scaling, and innovation?		
	4. Is the project designed with sound incremental reasoning?	Please see comments in question 5 below. LA, 23 March 2016	
	5. Are the components in Table B sound and sufficiently clear and appropriate to achieve project objectives and the GEBs?	<p>No.</p> <p>Upon review of the PIF, the following issues are noted:</p> <ol style="list-style-type: none"> <li>1. There are large numbers of DDT and other legacy POPs pesticide contaminants burial sites in Tajikistan and Kyrgyz Republic. The deterioration of the sites, coupled with the illegal extraction and trade of these hazardous chemicals for agricultural use, pose a serious threat to the environment and human health, and should thus be seriously addressed.</li> <li>2. The above countries do not possess adequate capacities (financial, institutional and know how) to handle the above wastes in an environmentally sound manner, and hence warrant further urgent international support in this regard.</li> <li>3. The restrictions posed by the Eurasian Customs Union (ECU) on the transit of waste across the Eurasian region countries borders should be reconsidered to enable/</li> </ol>	

## PIF Review

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		<p>facilitate the export of wastes for possible disposal/ destruction abroad.</p> <p>4. The option for the development of waste management capacity using thermal treatment cement kilns has been technically assessed in these countries, but will not be feasible in the short term to meet the needs for disposing the large amounts of DDT and other POPs waste present in the countries.</p> <p>5. The project proposes an alternative non-thermal technology option via the "Super Critical Water Oxidation (SCWO) technology" for the irreversible destruction of the DDT waste. This option is proposed along with other measures including development of EMPs for ESM of DDT waste and institutional strengthening including needed waste management policy and legislation.</p> <p>6. The project aims at cleaning up contaminated sites with POPs waste, especially DDT, in at least three high-risk sites in Kyrgyzstan and Tajikistan. It also aims at reducing the risks in other contaminated sites in both countries.</p>	

## PIF Review

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		<p>Based on the above and the BRS secretariat feedback, please revise the PIF to address the following comments:</p> <p>A. Basic pre-requisites to ensure successful implementation of the project proposed activities:</p> <p>Section 1.3 of the PIF indicates that a number of key important activities are yet to be defined and developed during the PPG stage. As the project is expected to be a country driven, a prior thorough analysis of the current problems should have been carried out to enable better identification of the required activities for the project supported with clear and feasible implementation plans. This is necessary to ensure project success and reduce potential risks and failure. Unfortunately, most of the proposed activities lack the above-mentioned prerequisite/ analysis and puts the project successful realization at high risk (e.g.: licensing requirements for deployment of the proposed technology, supporting national legislation, contaminants transboundary constraints, etc.).</p> <p>B. Feasibility and applicability of proposed technology:</p>	

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		<p>1. Although the SCWO technology is a promising technology and is well suited to effectively process and irreversibly destroy POPs, commercially operated facility for handling POPs is not available yet, particularly in developing countries. Hence, the deployment of such technology in Tajikistan and Kyrgyz republics warrant further clarification/elaboration on the following issues:</p> <p>i. The deployment of the technology in developing countries such as Tajikistan and Kyrgyz Republic may require technology transfer licensing which may take some time to obtain, if granted. Hence, these matters need to be verified prior to the PPG phase to avoid associate risks and/ or project implementation time delays, as also indicated in (A) above.</p> <p>ii. The technology, if successfully transferred, will require the undertaking of a comprehensive testing program on the effectiveness, cost implications (both capital cost and recurring expenditures) What measures will be taken to ensure these aspects.</p>	

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		<p>iii. What is the level of commitment/ interest of the concerned private companies (i.e. General Atomics) to deploy the technology in Tajikistan and Kyrgyz Republic?</p> <p>iv. What is the overall estimated cost per ton for the destruction of DDT inside the country (using a commercially established facility for the purpose).</p> <p>v. What measures will be taken to ensure public acceptance of the technology prior to the establishment of this facility.</p> <p>vi. What are the risks associated with the deployment, operating and managing the wastes associated with the technology and how these risks will be managed to ensure cost effectiveness, sustainability, reducing of health risks, managing wastes and other by-products.</p> <p>vii. How long would it take to test the destruction efficiency of DDT waste collected from the two countries, planned to be undertaken by the manufacturer/ supplier based outside the country.</p>	

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		<p>viii. What is the time frame for the set-up, licensing and trail processing under local conditions?</p> <p>ix. What is the level of personal and institutional capacity needed to operate, maintain and sustain the operation of the technology? How will such capacity be ensured?</p> <p>x. Will there be a feasibility study to support the decision for the deployment of the facility before considering it establishment?</p> <p>2. The plan indicates the disposal of a minimum of 5,000 metric tons of POPs waste. What is the basis for specifying this amount? What is the size of the problem of POPs waste in the countries, and what are the amounts identified, so far, are in contaminated soils. It is important to have a sound understanding of POPs/ DDT tonnes.</p> <p>3. Are there any sites available/ ready to deal with the amount of DDT contamination associated with the clean-up of the contaminated sites? What if the amount exceeds the 5,000 tones proposed for disposal by the project?</p>	

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		<p>C. Addressing the Trans-boundary Restriction of Hazardous Waste:</p> <p>1. It is not clear how component 2 and related outputs will help countries deal with the restrictions imposed by the Eurasian Customs Union on the transboundary of hazardous waste as well as facilitate the ratification of Basel convention. The transboundary restriction is a major challenge for these countries and resolving it would be a very important outcome expected from this project. Please clarify what concrete measures will be taken with the countries, the ECU and other concerned parties to allow potential movement of the waste across the borders of these countries.</p> <p>2. It has been indicated that the project will look at transboundary movement in the context of blended fuels. As this might be applicable to PCB oil waste, it is not clear how it would solve the barriers placed on transboundary movement of POPS pesticides waste, such as DDT, which is being addressed by this project.</p> <p>3. The close inter-relation of the DDT issues between the Stockholm,</p>	



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		<p>Basel and Rotterdam conventions should be highlighted and emphasized. This is particularly important for the facilitation of Tajikistan's ratification of the RC and BC Conventions and related obligations including the imports of POPs into the country.</p> <p>4. There is no reference to the POPs waste technical guidelines under the Basel Convention. Please include and elaborate at the relevant section of the PIF document.</p> <p>D. Project Cost:</p> <p>1. Requested GEF project financing is substantially high and warrants further detailed cost breakdown and justification. Please note that GEF provision financing would generally cover interventions for site characterization and risk reduction of high priority contaminated sites, and strengthening institutional capacity. GEF would also support technology demonstration for deployment of POPs destruction with the aim to be up-scaled by concerned governments through public-private partnership.</p> <p>2. Provide estimate cost/ per ton</p>	

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		<p>of DDT treatment.</p> <p>3. The project co-financing included a 1.5 million dollars from the BRS secretariat. Please clarify the role of BRS in this project and note that the BRS secretariat has indicated that it is not aware that it can be serving as a co-funding donor for this project.</p> <p>4. What is the role of IHPA as co-financier of the project?</p> <p>E. Stakeholders:</p> <p>The involvement of any of the 3 regional centers (Moscow, Czech Rep or Slovakia) would be recommended so that the knowledge and experience gained during the project disseminated/ used in similar activities in other countries in the region.</p> <p>F. Conclusion:</p> <p>Overall, the project document requires a thorough revision of several key issues raised by GEF SEC above, which may require necessary changes and further development of the PIF document. Hence, it is strongly recommended that the PIF be</p>	

## PIF Review

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		<p>revised in accordance with the above and resubmitted again for further consideration.</p> <p>LA, 23 March 2016</p> <p>GEFSEC would like to thank UNEP for the additional information provided in the revised PIF and for its responses to GEFSEC comments. Upon the review of the above, GEFSEC still has concerns regarding the likelihood of success of the proposed approach for the DDT disposal in the countries covered by this project, particularly with regards to ownership driverless, available infrastructure and capacity, technology deployment applicability and cost effectiveness. Accordingly, the below issues warrant further consideration in this regard:</p> <ol style="list-style-type: none"> <li>1. A country-driven approach that ensures ownership and sustainable management and mitigation of the contaminated land should be established and strongly demonstrated. This would include among others, government commitment to timely development/enactment of related legislations, availing needed manpower and resources during and after completion of the project, and</li> </ol>	

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		<p>active public participation and awareness.</p> <p>2. There is little evidence, if any, of the availability of adequate infrastructure (institutional, legal, financial, others) to support the deployment of the proposed non thermal SCWO technology in the two countries covered in this project (this is generally the case in the CCA region). Such limitation coupled with high capital, operating and maintenance costs associated with the deployment of such advanced technology would highly imply great challenges and entail inherent substantial risks. Furthermore, if the said technology is to continue to operate post-project and/or to be up-scaled thereafter, adequate capacity building and national training plans should be included and executed within the project scope.</p> <p>The GEFSEC foresees that a more realistic systematic approach could be used for the management of the pesticides POPs/ DDT contamination burial sites. Such approach should integrate detailed site characterization, use of low cost remedial solution as and when feasible, and assessment/ identification of the most feasible</p>	

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		<p>disposal options in this respect. This would require:</p> <ul style="list-style-type: none"> <li>- Evaluation of the burial/contaminated sites including mapping, detailed characterization of the contamination levels and the distribution of these contaminants (zoning). This would provide a reliable information for the development of potential site specific risk reduction strategies to minimize the release of contaminants into environment. Furthermore, based on the level of contamination and associated risk, low cost solutions could be used (i.e. capping, secured fencing, etc). In case of highly contaminated DDT waste, the recovery of the waste (excavation, packaging, secure storage facility, etc) could be undertaken in the meantime, while most feasible/ suitable disposal option for the countries could be considered.</li> <li>- A feasibility (Economic, Environmental, Social) assessment would need to be carried out to assess, feasibility, local acceptability and affordability of the remediation/ disposal option. There is an array of technologies that can be used in this respect and the selected option would be based on the outcomes of these studies within the country.</li> </ul>	

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		<p>In conclusion, it is recommended that the Project approach be revised to focus on:</p> <ol style="list-style-type: none"> <li>1- Comprehensive sites characterization and risk reduction plans including interim ESM storage facility</li> <li>2- Feasibility studies to identify the best possible disposal options of the DDT waste.</li> </ol> <p>LA, 12 April 2016</p> <p>Based on the revised resubmitted PIF dated May 6, 2016, the agency further clarifications and elaboration responses to GEFSEC comments were adequately provided. These responses indicated:</p> <ol style="list-style-type: none"> <li>1. The project aims at the removal and ESM disposal of a minimum of 5000 metric tons of DDT waste from the two countries covered by this project. It also aim to put in place a sustainable process including development of the necessary intentional and regulatory infrastructure (waste management policy and legislation, technical capacity) which should provide a sustainable long-term results beyond the life time of the project. A "road map to sustainability" is also expected</li> </ol>	

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		<p>as an output from the project to help the countries manage additional POPs waste not included in the project scope.</p> <p>2. The selection of the technology (i-SCWO) is said to be based on the assessment of the infrastructure requirements of the technology. However, further assessment and development of the needed infrastructure and requirements to support effective adaptability/ efficient operability of the technology on the site at local conditions are imperative. Hence the agency is encouraged to put effort to insure adequate activities are explored during the PPG phase to enhance the successful project implementation. The outcomes of these activities are expected to be detailed in the full project document and will be reviewed by GEFSEC when the document is submitted to CEO endorsement to assess conformity.</p> <p>3. A feasibility/ economic/ technology study for development of a sustainable national hazardous waste management strategy will be elaborated during the PPG stage.</p> <p>Comments cleared. LA, 14 May, 2016</p>	
	6. Are socio-economic aspects,	Not quite. There is only a brief section	

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	including relevant gender elements, indigenous people, and CSOs considered?	on this in the PIF. For example on the gender aspects, it is not clear if there is women empowerment strategy or any activity that will ensure a gender balance in the regions of the project implementation. An elaboration on this issue among other socioeconomic aspects are therefore needed when developing the project document.  LA, 23 March, 2016	
<b>Availability of Resources</b>	7. Is the proposed Grant (including the Agency fee) within the resources available from (mark all that apply):		
	• The STAR allocation?	NA	
	• The focal area allocation?	Yes	
	• The LDCF under the principle of equitable access	NA	
	• The SCCF (Adaptation or Technology Transfer)?	NA	
<b>Recommendations</b>	8. Is the PIF being recommended for clearance and PPG (if additional amount beyond the norm) justified?	No. Please revise the PIF to address above comments.  LA, 23 March 2016 No. The PIF needs to be re-designed as per GEFSEC comments. LA, 12 April 2016  Yes. PM recommend PIF approval. Please ensure that the following issues are adequately elaborated/	



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		<p>addressed in the full project document when submitted for CEO approval:</p> <ol style="list-style-type: none"> <li>1. To optimize the cost effectiveness of the funds used for the DDT disposal so that higher quantity than 5,000 tons can be achieved.</li> <li>2. The provision of detailed information on the i-SCWO requirements in terms of site operating needs (electricity, water, manpower, supervision, safety and health), environmental safeguard, methods for the management/ disposal of residual waste, contingency plans.</li> <li>3. Highlight the project positive social impacts on the local communities living in the vicinity of the POPs burial/ dumpsites.</li> <li>4. Further coordination/ streamlining with relevant ongoing/ under implementation projects in the region during the design and development of the project document. This is important to avoid duplication and maximize synergies/ expected GEB benefits with regard to elimination of POPs. A mechanism to ensure this coordination throughout the project cycle should be devised and included in the document.</li> <li>5. The anticipated support provided by the private sector (financial and technical) should be</li> </ol>	

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		<p>further defined and elaborated in the project document to demonstrate how such support will help the engagement of this sector in scaling up actions pertinent to the management of POPs in the region.</p> <p>6. RECETOX role, as Stockholm Convention regional center for POPs, in the project should be further elaborated in terms of what products, activities the center will carry out to support the projects/ countries in the region.</p> <p>7. The knowledge products expected to be produced from the project (type, material, methods, etc) to inform other similar situation in other countries in the project and to allow the scale up and replicability, lessons learned should also be further defined and quantified with particular reference to the use of the i-SCWO technology as one of the recommended disposal options under the Basel convention.</p> <p>LA, 14 May, 2016</p>	
<b>Review Date</b>	Review	March 23, 2016	
	Additional Review (as necessary)	April 12, 2016	
	Additional Review (as necessary)		

## CEO endorsement Review

Review Criteria	Questions	Secretariat Comment at CEO Endorsement	Response to Secretariat comments
<b>Project Design and Financing</b>	1. If there are any changes from that presented in the PIF, have justifications been provided?		
	2. Is the project structure/ design appropriate to achieve the expected outcomes and outputs?		
	3. Is the financing adequate and does the project demonstrate a cost-effective approach to meet the project objective?		
	4. Does the project take into account potential major risks, including the consequences of climate change, and describes sufficient risk response measures? (e.g., measures to enhance climate resilience)		
	5. Is co-financing confirmed and evidence provided?		
	6. Are relevant tracking tools completed?		
	7. <i>Only for Non-Grant Instrument:</i> Has a reflow calendar been presented?		
	8. Is the project coordinated with other related initiatives and national/regional plans in the country or in the region?		
	9. Does the project include a budgeted M&E Plan that		

## CEO endorsement Review

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	monitors and measures results with indicators and targets?		
	10. Does the project have descriptions of a knowledge management plan?		
<b>Agency Responses</b>	11. Has the Agency adequately responded to comments at the PIF <sup>3</sup> stage from:		
	• GEFSEC		
	• STAP		
	• GEF Council		
	• Convention Secretariat		
<b>Recommendation</b>	12. Is CEO endorsement recommended?		
<b>Review Date</b>	Review		
	Additional Review (as necessary)		
	Additional Review (as necessary)		

<sup>3</sup> If it is a child project under a program, assess if the components of the child project align with the program criteria set for selection of child projects.