



Global Environment Facility

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November 14, 2008

Dear Council Member:

The FAO and UNDP, as the Implementing Agencies for the project entitled ***Vietnam: Building Capacity to Eliminate POPs Pesticides Stockpiles***, has submitted the attached proposed project document for CEO endorsement prior to final Agency approval of the project document in accordance with the FAO/UNDP procedures.

The Secretariat has reviewed the project document. It is consistent with the project concept approved by the Council in November 2007 and the proposed project remains consistent with the Instrument and GEF policies and procedures. The attached explanation prepared by the FAO/UNDP satisfactorily details how Council's comments and those of the STAP have been addressed.

If by December 12, 2008, I have not received requests from at least four Council Members to have the proposed project reviewed at a Council meeting because in the Member's view the project is not consistent with the Instrument or GEF policies and procedures, I will complete the Secretariat's assessment with a view to endorsing the proposed project document.

We have today posted the proposed project document on the GEF website at www.TheGEF.org. If you do not have access to the Web, you may request the local field office of UNDP or the World Bank to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,

Attachment: Project Document

cc: Alternates, GEF Agencies, STAP, Trustee



REQUEST FOR CEO ENDORSEMENT/APPROVAL

PROJECT TYPE: FULL-SIZE PROJECT

THE GEF TRUST FUND

Submission Date: 31 July 2008

Re-submission Date:

PART I: PROJECT INFORMATION

GEFSEC PROJECT ID: 3105

GEF AGENCY PROJECT ID: 3578

COUNTRY(IES): Vietnam

PROJECT TITLE: Building capacity to eliminate POPs pesticides stockpiles in Vietnam

GEF AGENCY(IES): UNDP, FAO

OTHER EXECUTING PARTNER(S): Vietnam Environmental Protection Agency

GEF FOCAL AREA(S): POPs

GEF-4 STRATEGIC PROGRAM(S): POPs SP1

NAME OF PARENT PROGRAM/UMBRELLA PROJECT:

Expected Calendar	
Milestones	Dates
Work Program (for FSP)	Dec. 2007
GEF Agency Approval	Sep. 2008
Implementation Start	Nov. 2008
Mid-term Review (if planned)	Nov. 2010
Implementation Completion	Nov. 2012

A. PROJECT FRAMEWORK (Expand table as necessary)

Project Objective: To remove capacity barriers to the sustainable elimination of POPs pesticides in Vietnam								
Project Components	STA or TA	Expected Outcomes	Expected Outputs	Indicative GEF Financing*		Indicative Co-financing*		Total (\$)
				(\$)	%	(\$)	%	
1. Improved capacity facilitates elimination of POPs pesticides stockpiles and treatment of contaminated sites, through training, development of action plans, awareness raising, and mainstreaming into normal activities of stakeholders	TA	International standards met in management of pesticide stockpiles Government budget allocations adequate to destroy stockpiles and manage contaminated sites	1.1. Qualified agencies selected 1.2. Staff of selected organizations trained. 1.3. Monitoring plan for disposal of stockpiles. 1.4. Testing and licensing of facilities 1.5. Consultation and coordination mechanism. 1.6. A POPs pesticide management information system. 1.7. POPs incorporated in programmes of key ministries and sectors. 1.8. Regulations covering communities and the business sector. 1.9. Awareness among government officials and the general public. 1.10. Technical and managerial guidelines. 1.11: Stakeholder commitment to empty container management programme	693,530	41	1,014,770	59	1,708,300
2. All known stockpiles are destroyed and impacts on human health	TA	All known stockpiles, consisting of at least 1140 tonnes of	2.1. Pesticides re-packaged. 2.2. Stocks tested for destruction. 2.3. Stocks transported	2,637,450	50	2,686,100	50	5,323,550

relieved, by excavation (where required), re-packaging, safe transportation and safe destruction		DDT, eliminated	to destruction facility 2.4. Stocks destroyed 2.5. Related contaminated media treated					
3. Improved chemicals management prevents importation and use of POPs pesticides, through establishment of standards, training and cross-border cooperation	TA	Volumes of pesticides illegally imported reduced from 10 tonnes/month to less than 2 tonnes/month	3.1: National chemicals safety standards 3.2: Line agency staff trained in management of POPs pesticides. 3.3: A compendium of legal documents 3.4: Bilateral border task forces 3.5: Storage facilities for illegal pesticides	547,220	20	2,189,239	80	2,736,459
4. Project management				422,600	39	650,000	61	1,072,600
Total project costs				4,300,800		6,540,109		10,840,909

B. FINANCING PLAN SUMMARY FOR THE PROJECT (\$)

	<i>Project Preparation*</i>	<i>Project</i>	<i>Agency Fee</i>	<i>Total at CEO Endorsement</i>	<i>For the record: Total at PIF</i>
GEF	350,000	4,300,800	465,080	5,115,880	5,115,880
Co-financing	75,000	6,540,109		6,615,109	6,615,109
Total	425,000	10,840,909	465,080	11,730,989	11,730,989

* Please include the previously approved PDFs and PPG, if any. Indicate the amount already approved as footnote here and if the GEF funding is from GEF-3. Provide the status of implementation and use of fund for the project preparation grant in Annex D.

C. SOURCES OF CONFIRMED CO-FINANCING, including co-financing for project preparation for both the PDFs and PPG. (expand the table line items as necessary)

<i>Name of co-financier (source)</i>	<i>Classification</i>	<i>Type</i>	<i>Amount (\$)</i>	<i>%*</i>
Government of Vietnam	Government	Cash	2,090,109	32
Government of Vietnam	Government	In-kind	4,315,000	64
UNDP	GEF Agency	Cash	110,000	2
FAO	GEF Agency	In-kind	100,000	2
Total Co-financing			6,615,109	100%

* Percentage of each co-financier's contribution at CEO endorsement to total co-financing

D. GEF RESOURCES REQUESTED BY FOCAL AREA(S), AGENCY(IES) OR COUNTRY(IES)

GEF Agency	Focal Area	Country	(in US\$)			
			Project Preparation	Project	Agency Fee	Total
UNDP	POPs	Vietnam	350,000	3,957,580	430,758	4,738,338
FAO	POPs	Vietnam		343,220	34,322	377,542
TOTAL GEF RESOURCES			350,000	4,300,800	465,080	5,115,880

* For details, see Total Budget and Workplan and Incremental Cost table in Project Document

E. PROJECT MANAGEMENT BUDGET/COST

Cost Items	Total Estimated person weeks	GEF (\$)	Other sources (\$)	Project total (\$)
Local consultants*	694	193,020	100,000	293,020
International consultants*	0	0	0	0
Office facilities, equipment, vehicles and communications**		130,000	300,000	430,000
Travel**		99,580	250,000	349,580
Total		422,600	650,000	1,072,000

* Provide detailed information regarding the consultants in Annex C.

** Provide detailed information and justification for these line items.

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Estimated person weeks	GEF(\$)	Other sources (\$)	Project total (\$)
Local consultants*	200	70,000	103,000	70,000
International consultants*	70	180,000	0	180,000
Total	270	250,000	103,000	353,000

* The choice of service provider might be national or international.

G. DESCRIBE THE BUDGETED M&E PLAN:

Type of M&E activity	Responsible Parties	Budget US\$ Excluding project team Staff time	Time frame
Inception Workshop	<ul style="list-style-type: none"> ▪ Project Manager ▪ UNDP CO ▪ UNDP GEF 		Within first two months of project start up
Inception Report	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP CO 	None	Immediately following IW
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	<ul style="list-style-type: none"> ▪ Oversight by Project GEF Technical Advisor and Project Manager ▪ Measurements by regional field officers and local IAs 	To be determined as part of the Annual Work Plan's preparation. Indicative cost \$50,000	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP-CO ▪ UNDP-GEF 	None	Annually
TPR and TPR report	<ul style="list-style-type: none"> ▪ Government Counterparts ▪ UNDP CO ▪ Project team ▪ UNDP-GEF Regional Coordinating Unit 	None	Every year, upon receipt of APR
Steering Committee	<ul style="list-style-type: none"> ▪ Project Manager 	None	Following Project

Meetings	<ul style="list-style-type: none"> ▪ UNDP CO 		IW and subsequently at least once a year
Mid-term External Evaluation	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP- CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team) 	\$20,000	At the mid -point of project implementation.
Final External Evaluation	<ul style="list-style-type: none"> ▪ Project team, ▪ UNDP-CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team) 	\$30,000	At the end of project implementation
Terminal Report	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP-CO ▪ External Consultant 	None	At least one month before the end of the project
Lessons learned	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP-GEF Regional Coordinating Unit (suggested formats for documenting best practices, etc) 	\$15,000 (average 3,000 per year)	Yearly
Audit	<ul style="list-style-type: none"> ▪ UNDP-CO ▪ Project team 	\$4,000 (average \$1000 per year)	Yearly
Visits to field sites (UNDP staff travel costs to be charged to IA fees)	<ul style="list-style-type: none"> ▪ UNDP Country Office ▪ UNDP-GEF Regional Coordinating Unit (as appropriate) ▪ Government representatives 	\$15,000 (average one visit per year)	Yearly
TOTAL INDICATIVE COST <i>Excluding project team staff time and UNDP staff and travel expenses</i>		US\$ 134,000	

PART II: PROJECT JUSTIFICATION

A. DESCRIBE THE PROJECT RATIONALE AND THE EXPECTED MEASURABLE GLOBAL ENVIRONMENTAL BENEFITS :

1. Information on Rationale as in the PIF.

2. The global environmental benefits to be secured by the project are likely to be greater than the destruction of 1140 tonnes of POPs pesticides identified in the PIF. This is because test excavations undertaken since the submission of the PIF revealed amounts of stock-piled POPs pesticides that were almost three times the amounts estimated from test borings undertaken during the PDF. If this result is consistently repeated at other sites, the total amount of POPs pesticides destroyed is likely to approach 3000 tonnes.

B. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH NATIONAL PRIORITIES /PLANS :

3. The elimination of stockpiles of POPs pesticides is one of the top priority actions identified in Vietnam's National Implementation Plan (NIP). Another area that was highlighted was the transfer and promotion of technology for the safe and full disposal of POPs Pesticides

C. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH [GEF STRATEGIES](#) AND STRATEGIC PROGRAMS :

4. The GEF's goal in the POPs focal area is to protect human health and the environment by assisting countries to reduce and eliminate production, use and releases of POPs, and consequently contribute generally to capacity development for the sound management of chemicals. The project is consistent with SPI under this goal, as it will build

the capacity to implement their Stockholm Convention, while building upon and contributing to strengthening a country's foundational capacities for sound management of chemicals

D. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES :

5. The project builds on the GEF-supported NIP preparation process and is consistent with NIP priorities 2 and 5, as mentioned above. In this regard it will help Vietnam to meet its obligations under the Stockholm Convention. By promoting environmentally sound use of hazardous chemicals (and taking obsolete pesticides out of use) the project will also contribute to the objectives of the Rotterdam Convention. Activities under Outcome 3 will reduce transboundary movement of hazardous chemical, thus contributing to the objectives of the Basel Convention.

6. The project is part of a portfolio of GEF-funded interventions to address POPs in Vietnam. The portfolio is managed by VEPA, even though other government and business sector agencies will be responsible for implementation of different projects. As such, this project will be coordinated with other GEF-funded projects, such that lessons can be shared and overall cost savings of the portfolio secured. These will include the ongoing Global Medical Waste Programme and the pipeline project on Agent Orange, to name just a few.

7. The project will also build links to the GTZ project "Sound Chemicals Management for a Healthier Environment in Vietnam". The project also builds on successful results from an FAO- IPM project implemented since the 1990's and a recent DANIDA-IPM funded project

8. UNDP is working with the Government to initiate a project funded by the Quickstart Programme as it relates to the Strategic Approach for Integrated Chemicals Management (SAICM). This would allow amongst other, a further mainstreaming of the specific GEF programmes within the National Vietnamese policies as they relate to chemical management. The Government is currently considering appointing a SAICM Focal Point, further to which this effort will be further pursued.

E. DESCRIBE THE INCREMENTAL REASONING OF THE PROJECT:

9. In the absence of a GEF project, some POPs pesticides stockpiles would be destroyed, but, there would continue to be short-comings with this situation:

- Destruction procedures would not necessarily meet international standards, both in terms of handling and transportation of the pesticides, but also in terms of the quality of incineration, with poor technology and lax standards resulting in the production of significant quantities of dioxins from an incomplete combustion process
- Many stockpiles would remain untreated

10. Compounding these problems, the continued movement of illegal pesticides across borders from neighboring countries, which may include POPs components, will result in an on-going environmental and human health threat. With GEF funding, 1140 tonnes of POPs pesticides will be destroyed and the capacity established to destroy further stockpiles, treat contaminated sites, and prevent importation of illegal pesticides which may contain POPs

F. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS, THAT MIGHT PREVENT THE PROJECT OBJECTIVE(S) FROM BEING ACHIEVED AND OUTLINE RISK MANAGEMENT MEASURES :

Risk		Risk Mitigation Measure
Existing inventories have significantly under-estimated total stockpiles, and post-project funding is inadequate to eliminate newly-found stockpiles.	M	Both the NIP and PDF-B inventories targeted provinces known to have been the location of large POPs pesticides historically. Government funding for treatment of chemical "hotspots" has been increasing in recent years
During project implementation,		The project will utilize independent monitors to ensure that international

standards specified by the project document are not adhered to.	M	standards for handling, re -packaging, transportation and destruction are adhered to
No acceptable bids are received for destruction of the POPs pesticides within Viet Nam, or bids are more expensive than budgeted.	L	Based on previous testing, it is believed that acceptable facilities exist, and that the costs likely to be quoted fall within the budget figures used. In the event that no acceptable facility is found, options for export of the POPs pesticides to a regional hazardous wastes facility will be explored. In the event that the costs of export exceed the budget for Output 2.5, or acceptable bids quote substantially higher prices, project interventions under Outcome 3 will be down-scaled in order to move financial resources to Outcome 2. In this case, the Government of Vietnam will also be invited to reconsider its co-financing contributions.
Environmental and human health issues associated with transportation and destruction of POPs pesticides	M	Inevitably there are risks associated with excavation, transportation and destruction of POPs pesticides. These risks apply no matter what destruction technology is selected. The call for tenders following international accepted guidelines will minimize this risk, which is considered lower than the risk of future environmental and human health problems if the pesticides are left untreated.
Lack of stakeholder acceptance (local, national) for selected destruction technology	L	The Peoples Committee will handle the permit application officially and involve local experts and local people. They will also appoint stakeholders who must be involved in the entire process, including Central Government official and academia experts. The project will also involve the best internationally experts available, for technical feasibility approval, technical design criteria, supervision and reporting of the project. Output 1.9 will support a process of stakeholder communication to build support for the destruction of POPs pesticides
Reputational risk to UNDP and the GEF if the project fails	L	Project facilitates the final step on establishing national capacities for hazardous waste destruction according to international standards. This is one of the obligations under the Basle Convention, stating that if a sovereign nation has the capacity to destroy a toxic chemical within their national borders, they are obligated to do so. By the fulfilment of international standards, the project will set new national standards for other existing facilities and create strong incentives for these facilities to achieve the same standards
Novel bio-remediation technologies prove not to be fully effective in eliminating POPs pesticides.	L	Exchange of lessons learned with a team developing similar technologies in India will improve the quality of the novel technologies. The biochemical basis of bio-remediation is not inherently better suited to dioxins than to POPs pesticides
Overall Rating	M	

H. EXPLAIN HOW COST-EFFECTIVENESS IS REFLECTED IN THE PROJECT DESIGN:

11. As noted in the PIF, the destruction of POPs pesticides was estimated at approximately \$900/tonne, based on the inventories conducted during the PDF and the NIP preparation process. Test excavations undertaken since the submission of the PIF have revealed greater than expected volumes of POPs pesticides, yet the excavation and transportation were still achieved within budget. If these results are replicated, the cost of destruction will likely approach \$500/tonne, which is well below the international average. With the added complexity of dealing with buried stockpiles, this unit cost is considered highly cost-effective

PART III: INSTITUTIONAL COORDINATION AND SUPPORT

A. PROJECT IMPLEMENTATION ARRANGEMENT:


12. UNDP will be responsible for managing the overall project implementation, and specifically for those Outputs to be managed by VEPA. FAO will take responsibility for implementation of Outputs where they have a comparative advantage. Based on tri-lateral discussions between UNDP, FAO and VEPA, these Outputs are:

Output 1.2. Staff of government agencies trained in appropriate technologies and application of standards and guidelines.
Output 1.3. A monitoring plan for disposal of stockpiles.
Output 1.6. A regular and systematic monitoring programme covers POPs pesticides inventories.
Output 1.9. Regulations covering responsibilities of communities and the business sector provide incentives for involvement in POPs management and treatment.
Output 1.11. Technical and managerial guidelines are prepared governing treatment of contaminated sites.
Output 1.12: Stakeholder platform is established for preparation for a nation-wide empty container management programme
Output 3.2: Line agency staff trained in management of POPs pesticides.
Output 3.3: A compendium of legal documents on POPs pesticides management for use by Customs and other key agencies involved in management and destruction of POPs pesticides.

PART IV: EXPLAIN THE ALIGNMENT OF PROJECT DESIGN WITH THE ORIGINAL PIF:

The project design conforms to that described in the PIF. The project document expands the explanation of expected global environmental benefits and elaborates on sources and amounts of co-financing (the totals remaining unchanged from those indicated in the PIF). These elaborations are explained above. The total GEF grant requested remains the same, with the incremental reasoning further elaborated, as described above.

PART V: AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for CEO Endorsement.	
 <i>John Hough</i> Deputy Executive Coordinator UNDP-GEF GEF Agency Coordinator	Project Contact Person Dr. Suely Carvalho, PTA Chemicals BDP-EEG UNDP New York
Date: 31 July 2008	Tel. and Email: +1-212-906.6687 suely.carvalho@undp.org
Shivaji Pandey Director Plant Production and Protection Division FAO (signed letter received on 17 Oct 08)	Project Contact Person Mark Davis Coordinator & Chief Technical Advisor – Obsolete Pesticides Programme Plant Production and Protection Division (AGP) FAO
Date: 17 October 2008	Tel and Email: +39 06 5705 5192 mark.davis@fao.org

ANNEX A: PROJECT RESULTS FRAMEWORK

RESULT	INDICATOR	BASELINE VALUE	TARGET	MEANS OF VERIFICATION	RISKS AND ASSUMPTION
Goal	“To support sustainable development in Vietnam through the elimination of POPs from the environment”.				
Objective : To remove capacity barriers to the sustainable elimination of POPs pesticides in Vietnam	Number of sites posing threat to human health	At least 6 sites with known or potential adverse human health impacts	By the end of the project the inventory of POPs pesticides sites in Vietnam contains no sites posing known or potential threats to human health	Project reports, field surveys	External changes do not affect the viability of selected technologies
Outcome 1. Improved capacity facilitates elimination of POPs pesticides stockpiles	International standards met in management of pesticide stockpiles Government budget allocations adequate to destroy stockpiles and manage contaminated sites	Management and destruction of POPs pesticides follows no set standards Government expenditure (2006) \$382,000; resulting in few stockpiles destroyed	Within 9 months of the start of project implementation, international standards have been adopted for management of pesticide stockpiles From 2008 onwards, government expenditure on destruction of POPs pesticides is at least \$600,000 (until stockpiles destroyed)	Project reports; government policy papers Project reports, government budgetary figures (MONRE)	Improved capacity addresses the demand-side dynamics for use of POPs pesticides Government maintains Decision 64 funding
Output 1.1. Qualified agencies selected to provide excavation, re-packaging, temporary storage, transportation and sampling/testing services	Existence of qualified agency	No qualified agency	Within 6 months of the start of project implementation a qualified agency has been identified and selected	Project reports	There are agencies in Vietnam able to meet international standards
Output 1.2. Staff of government agencies trained in appropriate technologies and application of standards and guidelines.	Number of staff completing training courses	No staff trained	Within 9 months of the start of project, at least 20 staff of government agencies trained in international standards for handling and destruction of POPs pesticides	Training reports	Training by FAO can be mobilized in a timely fashion
Output 1.3. A monitoring plan for disposal of stockpiles.	Existence of a monitoring plan	No plan exists	Within 6 months of the start of project implementation a participatory monitoring plan to ensure application of international standards has been developed	Project reports and monitoring plan	Government is will to accept participatory and transparent monitoring system
Output 1.4. Testing and licensing of destruction facilities	Existence of license	No facility licensed	Within 6 months of the start of project implementation the selected facility has been issued with a license to destroy	Project report, license document	A facility can be selected that is able to meet licensing requirements

			POPs pesticides		
Output 1.5. MONRE/VEPA establishes an effective consultation and coordination mechanism to oversee management of POPs in Vietnam.	Existence of consultation mechanism	Consultation on POPs pesticides is <i>ad hoc</i>	Within 6 months of the start of project implementation a formal inter-ministerial, multi-stakeholder consultation mechanism has been established and functions on a regular basis	Government reports; reports generated through the consultation mechanism	Commitment among all government agencies remains high; agencies are willing to cooperate
Output 1.6. A regular and systematic monitoring programme covers POPs pesticides inventories.	Adaptation of MONRE's chemicals monitoring system to incorporate POPs pesticides	Inventories are <i>ad hoc</i> and irregular	Within 9 months of the start of project MONRE procedures for annual chemical surveys have been adapted to explicitly record presence of POPs pesticides	MONRE chemical survey guidelines	MONRE commitment to annual chemical inventories continues
Output 1.7. Establishment of a POPs pesticide management information system.	FAO's management information system adopted for use in Vietnam	No management information system available	Within 9 months of the start of project FAO's management information system is adopted for use in Vietnam	MONRE reports and procedures	
Output 1.8. Specific activities associated with sound management, reduction and elimination of POPs incorporated in development strategies and programmes of key ministries and sectors.	Sectoral and ministerial plans addressing POPs pesticides	No sectoral or ministerial plans address POPs pesticides	By the end of 2009, at least 3 sectoral and ministerial plans address the need to eliminate POPs pesticides; by the end of the project this number is 5	Project reports; ministerial plans and strategy documents	Commitment among all government agencies remains high; agencies are willing to cooperate
Output 1.9. Communications strategy covering responsibilities of communities and the business sector.	Existence of communications strategy	No communications strategy exists	By the end of 2009 a communications strategy covering responsibilities of communities and the business sector has been developed and implemented	Project reports; MONRE reports	Communications strategy is successful in building stakeholder support
Output 1.10. Awareness of the legal provisions governing importation and use of POPs pesticides among government officials and the general public supports efforts to prevent importation and use.	Survey assessment of level of awareness	To be established	By the end of the project the level of awareness among government officials and the general public has increased by 50% of the baseline value	Survey	Raised awareness translates into sustained commitment to eliminate POPs pesticides
Output 1.11. Technical and managerial guidelines are prepared governing treatment of contaminated sites.	Existence of guidelines	No guidelines exist	By the middle of 2009 guidelines have been prepared, endorsed by the government and disseminated to all line agencies	Project reports, government reports, surveys	Guidelines are consistently applied
Output 1.12: Stakeholder	Detailed plans for	No plans exist	By the end of the project a	Project reports,	Government

commitment for a nation-wide empty container management programme	empty container programme		detailed, costed plan with firm milestones has been prepared for implementation of a nation-wide empty container programme	empty container plan	commitment to implementation of empty container programme remains high
Outcome 2. All known stockpiles are destroyed and impacts on human health relieved	All known stockpiles, consisting of at least 1140 tonnes of DDT, eliminated	Stockpiles slowly destroyed, but not applying international standards	By the end of 2009, all known stockpiles destroyed	Project reports	Government maintains application of international standards to minimize potential impacts on human health
Output 2.1 Buried POPs pesticides are excavated, where needed separated from contaminated soil and deposited for repackaging					
Output 2.2. POPs pesticides in degraded containers are re-packaged on-site in preparation for transportation and disposal.	Volume re-packaged	No re-packaging	Within 6 months after licensing of the destruction facility, all pesticides requiring re-packaging have been re-packaged	Project reports; reports of monitoring plan (Output 1.3)	Monitoring plan is effective in ensuring international standards are maintained
Output 2.3. Stocks are tested for destruction.	Completion of tests	No tests	Within 6 months of the start of project implementation tests have been completed at the selected destruction facility	Project reports of tests	Tests reveal anticipated levels of POPs pesticides
Output 2.4. Stocks are transported to the destruction facility (ies)	Speed of delivery to destruction facility	No delivery	For all stockpiles, materials for destruction are delivered to the destruction facility within one month of completion of excavation and re-packaging	Project reports	Monitoring plan is effective in ensuring international standards are maintained
Output 2.5 Stocks are destroyed	Speed of destruction	No destruction applying international standards	For all materials, incineration occurs within 48 hours of delivery to the destruction facility	Project reports	Monitoring plan is effective in ensuring international standards are maintained
Output 2.6. Related contaminated media will be treated using bio-remedial and phyto-remedial technologies	Initiation of remedial measures	No remediation	By the middle of 2009 remediation treatments have been initiated at all sites requiring remediation	Project reports; site visits	Local communities accept remediation technologies
Outcome 3: Improved chemicals management prevents importation and use of POPs pesticides	Volumes of pesticides illegally imported	At least 10 tonnes per month	By the end of the project, the volumes of illegal pesticides confiscated are no more than 2 tonnes per month (based on equal level of effort)	Project reports, surveys	Mainstreaming POPs pesticides into improved chemical management eliminates illegal importation
Output 3.1: National chemicals safety standards	Adoption of national chemical	No national chemical safety	By the end of 2008 national chemical safety standards have	MONRE and other government reports	Safety standards are effectively implemented

	safety standards	standards	been adopted and staff of all line agencies trained in their application and enforcement		and cover importation of POPs pesticides
Output 3.2: Line agency staff trained in management of POPs pesticides.	Completion of training courses	No training in management of POPs pesticides	By the end of 2008 staff of all line agencies trained in management of POPs pesticides	MONRE and other government reports, training reports	Staff are subsequently encouraged by management to apply skills learnt through training
Output 3.3: A compendium of legal documents on POPs pesticides management for use by Customs and other key agencies involved in management and destruction of POPs pesticides.	Dissemination of compendium	No compendium exists	By the end of 2008 a compendium of legal documents on POPs pesticides management has been disseminated to all Customs offices	Survey of Customs offices	Customs staff and staff from other agencies utilize compendium to improve scrutiny of imported chemicals
Output 3.4: Bilateral task forces between Vietnamese border provinces and their Chinese counterparts	Task forces functioning	No task forces exist	By the end of 2009 bilateral task forces with Chinese authorities have taken specific steps to reduce illegal importation of pesticides	Government reports; government statistics on illegal pesticide seizures; interviews with Vietnamese Customs personnel	Cooperation from Chinese officials is effective in addressing supply-side dynamics of illegally imported pesticides
Output 3.5: Facilities for handling and storage of illegal pesticides developed at key border sites	Volume of storage facilities at selected sites	Storage at Lang Son limited to 20m ³	By the middle of 2009, storage facilities of at least 50 m ³ built at five or more key sites	Ground survey; project reports	Facilities remain committed for storage of confiscated pesticides and other hazardous chemicals

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF)

RESPONSE TO GEFSEC COMMENTS

- ❖ Is the project objective really to “remove capacity barriers to the sustainable elimination of POPs pesticides in Vietnam”? I’m not sure what “capacity barrier” is. I appreciate that UNDP is in the business of capacity development, but still, can you not come up with a more straightforward objective statement?

Response: The statement of the Objective has been revised and simplified to read “*To remove barriers to the elimination of POPs pesticides in Vietnam*”.

- ❖ The statements for “project components” very much read like statements of outcomes. It would help the reader I believe if the statement for project components was more descriptive of the type of activities to be carried out.

Response: The logical framework methodology used by UNDP includes a Goal, the Project Objective, Outcomes and Outputs. The concept of a project “component” is not included in this methodology. It was the understanding of UNDP/GEF that the term “project component” as used in the new-format PIF was equivalent to the term “Outcome” in the logical framework methodology, while the term “Expected Outcomes” in the new-format PIF was equivalent to a description of Outcome indicators. It was on the basis of this understanding that the PIF was formulated. It is evident that there is a need for further consideration of these issues, as other PIFs submitted by UNDP applying the same philosophy have not been questioned by GEF Sec’t reviewers. However, some additional text has been added in the column “Project Components” to emphasize the approach to be adopted by the project.

- ❖ Component 1. I wonder if there is such a thing as an “international standard in management of pesticide stockpiles”. If there is, I don’t see how the “expected outputs” for that component will lead you there. In short, that component lacks clarity for me.

Response: Yes, international standards do exist. For the management of pesticides stockpiles international standards providing guidance for the environmentally sound management (ESM) of wastes containing or contaminated with persistent organic pollutants (POPs) are pursuant to decisions IV/17, V/26, VI/23, VII/13 and VIII/16 of the Conference of the Parties to the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal, I/4, II/10, III/8, IV/11 and V/12 of the Open-ended Working Group of the Basel Convention, resolution 5 of the Conference of Plenipotentiaries to the Stockholm Convention on Persistent Organic Pollutants, decisions INC-6/5 and INC-7/6 of the Intergovernmental Negotiating Committee for an International Legally Binding Instrument for Implementing Action on Certain Persistent Organic Pollutants and decisions SC-1/21 and SC-2/6 of the Conference of the Parties to the Stockholm Convention.

Furthermore, there are 2 specific technical guidelines for pesticides:

1. Technical guidelines for the environmentally sound management of wastes consisting of, containing or contaminated with 1,1,1-trichloro-2,2-bis(4-chlorophenyl)ethane (DDT)
2. Draft technical guidelines on the environmentally sound management of wastes consisting of, containing or contaminated with pesticides aldrin, chlordane, dieldrin, endrin, heptachlor, hexachlorobenzene (HCB), mirex or toxaphene or with HCB as an industrial chemical

The last draft guidelines refer also to more detailed Guidance documents. For example the FAO Guidance Document, 2004 The Selection of Waste Management Options for the Disposal of Obsolete Pesticides and Contaminated Materials (Draft under preparation). These guidelines can be found at <http://www.basel.int>

- ❖ Component 2 is better defined. But: how to interpret the 2 outcomes of “at least 1140 tons of pesticides destroyed” and “all known stockpiles eliminated”? Are these 2 outcomes the same or not? ? if so please delete one. And “all known” is ambiguous. All known today? Here I have a substantive question: what are these pesticides? see review sheet.

Response: An inventory of POPs pesticides stockpiles was conducted while the PIF was being prepared, and indeed is still continuing. The Outcome indicator “All known stockpiles eliminated” was an initial indicator pending confirmation of the actual amounts. At a late stage of preparation, the figure of 1140 tonnes was determined, although this is still subject to further change. Therefore, a combined indicator might be “*All known stockpiles, consisting of at least 1140 tonnes, eliminated*”. The term “all known” does indeed refer to all known today. As noted in the PIF, not only is the PDF inventory continuing, but in any case it does not cover all provinces of Vietnam, though it was designed to cover all provinces known or expected to have stockpiles. Consequently, it is possible that further stockpiles will be discovered in the future. Whether these are destroyed by the project depends both on the timing of their discovery and funding available. If, due to a combination of these factors, newly-discovered stockpiles cannot be destroyed by the project itself, the capacity developed through Outcome 3 will enable the government to eliminate these stockpiles. With regard to this point, see also the Response to the question on action plans, below.

All pesticides discovered so far are DDT. Estimates of quantities given in the PIF are for quantities of DDT. In some stockpiles, containers of DDT (often in a degraded state) are mixed with containers of other, non-POPs pesticides. In such circumstances, the entire stockpile will be destroyed as attempts to separate DDT from other pesticides would compromise the safety of personnel involved in the destruction. In cases where DDT is not mixed with other pesticides, only DDT will be treated.

- ❖ Component 3. Earlier point on component statement worded as an outcome applies. As well as on “international standards”.

Response: The situation on contaminated land is a somewhat complicated, as soil issues have been dealt with by virtually all countries at a national level only. However, internationally there is a long tradition and much experience on the management of contaminated land. Many countries that lack such experience (such as Vietnam) make use of the standards which are most internationally used such as those in the US, and the Western European countries like the Netherlands, Germany and Denmark, which have been the leading countries in this field, and as such secure the quality of the management and the treatment works.

- ❖ Why do we have “Action plans to eliminate stockpiles” as an outcome, and “Monitoring plan for disposal of stockpiles” as an output for component 1. It might bring some logic to merge components 1 and 3.

Response: There is a clear distinction between Outcomes 1 and 3. Outcome 1 will establish the capacity to destroy all known stockpiles (which will be destroyed by the project). This includes the testing and licensing of a destruction facility, and training of agencies to be involved in the destruction in the application of international standards. The monitoring plan is necessary to ensure that agencies abide by and follow those international standards during the destruction of all known stockpiles. When these stockpiles having been destroyed, as noted above, Vietnam will be left both with the need to treat contaminated sites and the need to identify and safely destroy additional stockpiles, as and when they are found. Outcome 3 will establish the capacity to deal with these issues – in effect, this is the sustainability Outcome of the project. One of the Outcome indicators is that an Action Plan is established to destroy additional stockpiles safely. In summary, therefore, Outcome 1 builds the capacity to destroy all known stockpiles immediately, and Outcome 3 builds the capacity to deal with future discoveries and contaminated sites. However, in line with the GEFSEC suggestion, Outcomes 1 and 3 have been combined into Outcome 1.

- ❖ Component 4. What are “national chemicals safety standards”? Why do they appear here as output for this component on illegal import?

Response: When it comes to dealing with illegal imports, it has to be recognized that POPs pesticides, or indeed pesticides in general, are only one component of a broader issue, namely the illegal importation of chemicals. The establishment of national chemicals safety standards is one step in establishing a national system of chemicals management that can, amongst other things, ensure that illegally imported chemicals (including POPs pesticides) can be located, stored and destroyed safely. Having said so, much of this Outcome is funded through co-financing.

- ❖ What is a “stakeholder platform for empty container management program”? And why does it show up under this component, and not components 1 or 3?

Response: In this context, the word “platform” means “commitment and consensus”. A stakeholder platform for empty container management program is a platform that has to be established in order to set up a national strategy to deal with empty containers, as empty containers are the wastes that are presently generated during the use of pesticides. In case the issue of empty containers is not dealt with, the chances of recurrence of obsolete pesticides in the future will increase. The empty container program will become a major tool to prevent such occurrence. All stakeholders that are dealing with pesticides have to be involved. Stakeholders are producers and formulators, distributors, extension services, agricultural cooperatives and associations, ministries of Environment and Agriculture among others. However, this Output has been moved to Outcome 3 (now Outcome 1).

ANNEX C: CONSULTANTS TO BE HIRED FOR THE PROJECT

<i>Position Titles</i>	<i>\$/ person week</i>	<i>Estimated person weeks</i>	<i>Tasks to be performed</i>
For Project Management			
Local			
National Project Director (NPD)	650	70	<ul style="list-style-type: none"> • Ensures that the expected results of the project are of satisfactory substantive quality and that they contribute to the achievement of the intended outcome identified in the UNDP Country Programme Document (CPD). This will be discharged through the (i) approval of project workplans, TORs, reports, (ii) follow-up on the implementation of recommendations made by regular project reviews and/or external evaluations, and (iii) conduct of internal reviews and evaluations as/if needed. • Ensures that project resources, national as well as international, are effectively utilized for their intended purposes through the (i) verification of project budgets and payments, (ii) approval of budget revisions within the agency flexibility limit, (iii) follow-up on the implementation of recommendations made by external audits and (iv) conduct of internal audits as/if needed. • Ensures that counterpart funds are made available by the Implementing Partner in sufficient quantities and in a timely manner to support project implementation. • Ensures that project parties, particularly national parties (including the Implementing Partner) fully participate in project implementation, effectively collaborate in project activities and duly benefit from project results. • Ensures that the results achieved and lessons learned by the project are properly documented, proactively disseminated to and duly shared with all project parties, particularly national parties. • Selects, arranges for the appointment of and supervises the Project Manager, in consultation with UNDP, to make sure that the PM and other national project staff are empowered to effectively perform their day-to-day project duties. • Selects, arranges for the appointment of International Consultants, in consultation with UNDP, to make sure that international project personnel contribute expert inputs of the highest quality to the expected outputs of the project. • Represents the Implementing Partner at major project reviews, evaluations, audits and other important events. • Provide regular updates to the PEB.

National Project Manager	520	208	<ul style="list-style-type: none"> ▪ Assumes operational management of the project according to the project document and policies and procedures for nationally executed projects; ▪ Prepares ToR for all project personnel identified by the PEB to be recruited to assist in implementation of the project and secures endorsement of the ToR from the PEB; ▪ Prepares and updates project workplans, and submits these for clearance to the UNDP Country Office; ▪ Assumes direct responsibility for managing the project budget, ensuring that: <ul style="list-style-type: none"> - Project funds are made when needed, and are disbursed properly; - Accounting records and supporting documents are kept; - Required financial reports are prepared; - Financial operations of the project are transparent and stand up to audit at any time; - Generally ensures that financial procedures and regulations for NEX projects are applied; - International and National consultants are hired and deliver their outputs on schedule; ▪ Supervises the project staff and local or international experts/consultants working for the project; and ▪ Reports to the UNDP Country Office on a regular basis.
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Project Assistant	340	208	<ul style="list-style-type: none"> • Provide necessary assistance in the operational management of the project according to the project document and the NEX procedures. • Draft correspondence on administrative and program matters pertaining to the Project Office responsibilities; • Undertake all preparation work for procurement of office equipment, stationeries and support facilities as required; • Undertake preparation for project events, including workshops, meetings (monthly, quarterly and annual), study tours, trainings, etc. This also includes preparation of background materials for use in discussions and briefing sessions on project matter; • Logistical arrangements. This includes visa, transportation, hotel bookings for project staff, consultants and invited guests coming for project activities; • Assist in preparation of project work plan and reports; • Be responsible for project filing system. This includes setting up the filing, numbering and filing all incoming and outgoing correspondence. • Prepare regular list of events for sharing of information within project staff and outside; • Take care of project telephone, fax, and email system; • Assist with project communication activities, including publications; • Assist with preparation of TORs and contracts for consultants/experts for project activities; • Calculate and prepare staff time records;
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Accountant	330	208	<p>Planning</p> <ul style="list-style-type: none"> • Participate in preparation of project work plans • Prepare quarterly advance requests to get advance funds from UNDP in the format applicable. • Participate in quarterly work planning and progress reporting meetings with the NPD, PMU, and UNDP <p>Accounting/ Reporting</p> <ul style="list-style-type: none"> • Set up accounting system, including reporting forms and filing system for the project, in accordance with the project document and the NEX procedures. • Maintain petty cash transactions. This includes writing of receipts, preparation of payment request form, receipt and disbursement of cash and clearance of advances. • Prepare project financial reports and submit to PM and NPD for clearance and furnish to UNDP as required. • Enter financial transactions into the computerised accounting system. • Reconcile all balance sheet accounts and keep a file of all completed reconciliation. <p>Control</p> <ul style="list-style-type: none"> • Check and ensure all expenditures of project are in accordance with NEX procedures. This includes ensuring that receipts are obtained for all payments; • Check budget lines to ensure that all transactions are correctly booked to the correct budget lines; • Ensure documentation relating to payments are duly approved by the NPD; • Ensure Petty Cash is reviewed and updated and records are kept up-to-date; • To continuously improve system & procedures to enhance internal controls are satisfy audit requirements. <p>Bank reconciliation</p> <ul style="list-style-type: none"> • Bank accounts should be reconciled and reported on or before the 8th of each month; • Prepare monthly bank reconciliation statements, including computation of interests gained to be included into reports. <p>Inventory Register</p> <ul style="list-style-type: none"> • Maintain a proper inventory of project assets register, including numbering, recording, and reporting; • Maintain the inventory file to support purchases of all equipment/assets. <p>Administration</p> <ul style="list-style-type: none"> • Calculate and prepare staff time records; • Provide assistance to organization of project events, including workshops, seminars, and meetings.
International			
N/A	N/A	N/A	

For Technical Assistance			
Local			
Monitoring of demonstration model of elimination of POPs Pesticides stockpiles	300	110	<ul style="list-style-type: none"> • The consultant must work with officials of VEPA's Pollution Control Division to obtain latest provisions for handling of hazardous waste in general and POP Pesticides waste in particular. • The consultant must follow all safety requirements of transport service provider when at site. • The consultant will monitor the compliance to safety standards by the staff of transport service provider. • The consultant will record quantity of pesticide waste that is packaged by the transport service provider and make sure that all handling and transportation documents are duly filled. For the list of sites please see the Annex. • The consultant will check repackaging process to avoid packaging and loading of waste with mercury, zinc compounds and other non-pesticides hazardous wastes including unexploded ordnance, hospital wastes and PCB oils. • After completion packaging and loading of each site, the monitoring consultant must check that the storage is cleaned by the transport service provider to accepted standards. • The consultant will check that the waste truck(s) is sealed before departure to incinerating facilities/sites. • The consultant will verify the quantities received by the final elimination company and the quantities that left storage sites. • The monitoring consultant will supervise to make sure all the waste has been fed into the incinerator kiln. • The consultant will obtain data from continuous monitoring system for entire period when the POP waste is incinerated to be included in a final report submitted to VEPA. • The consultant should give his/her own independent observations of the whole process, including observation of health and safety requirements by all agencies engaged in the process, in the final report.

<p>Collection and Transportation of POPs obsolete Pesticides from storages/stockpiles to incinerating/eliminating facilities site</p>	<p>2000</p>	<p>80</p>	<ul style="list-style-type: none"> • The service provider will study the locations (see table 1) and specifications of stockpiles sites and draft a plan of work to be informed to the project management and local stakeholders. • The service provider must provide personal protective equipment for all of its staff and workers and ensure that it is used. • Locally hired workers must also be provided with personal protective equipment and the service provider must ensure that the workers use the equipment appropriately. • The service provider will provide packaging materials as specified by final elimination company. • The service provider will collect all stockpiled pesticides and repackage in standard 200 liter steel drums lined with thick plastic materials and having tight cover as specified by the elimination service provider. • Storage areas must be cleaned after collection. Collected dust and old packaging materials suitable for incineration should be repackaged for final elimination with stockpiled pesticides. • In two places the service provider must dig up and repackage pesticides waste into drums. The service provider will arrange in advance to have clean soil to fill the dug-up space. • The service provider will make sure that stores with small quantities will be collected together to fill one truck at a time. • The service provider will transport all collected and packaged drums to the elimination site indicated by the final elimination company (the final elimination company will decide where to unload the waste). • The service provider will follow all guidelines on handling of hazardous waste transportation.
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Incineration of POPs obsolete Pesticides	2000	80	<ul style="list-style-type: none"> • The service provider must provide all necessary protective equipment to its staff and hired workers and ensure that it is used. • The service provider will work closely with the transport service provider selected by VEPA to work out an action plan including a delivery schedule. • The service provider will provide details of packaging requirements to the transport service provider. • During preparation process, the service provider will take samples of POPs Pesticides waste to ensure its requirement for input into incineration process. • The service provider will receive whole POPs pesticides packages at the agreed sites of the incinerating facilities/ factory. • The amount of waste will be incinerated should match with the amount of waste stated in the transportation manifest according to regulations on hazardous waste. • The service provider will incinerate the waste within a time frame agreed between the service provider and VEPA so that the whole process can be monitored. • Data from continuous monitoring system for entire period when the POP waste is incinerated should be provided to VEPA and monitoring team to be included in a final report by that team. • Access to the incinerator should be allowed to the extent that not to break health and safety rules so that monitoring team can observe and collect ambient samples and data. •
International			
Note: The service providers described above might be national or international service providers – the choice will be determined by tender			

ANNEX D: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS

A. EXPLAIN IF THE PPG OBJECTIVE HAS BEEN ACHIEVED THROUGH THE PPG ACTIVITIES UNDERTAKEN.

The PPG (PDF-B) objective has been achieved

B. DESCRIBE IF ANY FINDINGS THAT MIGHT AFFECT THE PROJECT DESIGN OR ANY CONCERNS ON PROJECT IMPLEMENTATION.

Findings of the PDF-B that were relevant to the project design were incorporated into the project design. Risks have been analyzed as described above.

C. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES AND THEIR IMPLEMENTATION STATUS IN THE TABLE BELOW:

<i>Project Preparation Activities Approved</i>	<i>Implementation Status</i>	<i>GEF Amount (\$)</i>				<i>Co-financing (\$)</i>
		<i>Amount Approved</i>	<i>Amount Spent To-date</i>	<i>Amount Committed</i>	<i>Uncommitted Amount*</i>	
Act. 1. Survey and Inventory	Completed	183,000	169,780	0	0	30,000
Act. 2. Destruction Action Plan	Completed	37,000	24,041	0	0	10,000
Act. 3. Selection of Technology	Completed	52,000	42,656	0	0	2,000
Act. 4. Stakeholders Consultation	Completed	2,000	4,920	0	0	19,951
Act. 5. Project Document Preparation	Completed	36,000	67,038	0	0	0
Project Management	Completed	40,000	41,565	0	0	11,622
Total		350,000	350,000	0	0	76,622

* Uncommitted amount should be returned to the GEF Trust Fund. Please indicate expected date of refund transaction to Trustee.

D. What are the major achievements of the programme or project vis-à-vis the expected results? Please explain them in detail in terms of potential impact, sustainability of results and contribution to capacity development

The Government of Vietnam has faced serious constraints in dealing with stockpiles of POPs pesticides, including constraints due to funding, access to appropriate technologies, and coordination among multiple ministries and agencies. While the largest numbers of stockpiles are housed in sheds or other buildings, in some communities with particularly large stockpiles, the lack of suitable infrastructure resulted in the burial of POPs pesticides stockpiles. An estimated 1140 tonnes of POPs pesticides have been located in five such sites, and again it is certain that there are more such sites in the country. The buried stockpiles are of far greater concern than above-ground stockpiles both because of their size and because there is far less control over storage conditions, resulting in much larger potential and actual human health problems.

According to PDF-B project document, project activities were performed in order to support the development of Full-size GEF project document to seek grant for elimination of POPs Pesticides stockpiles in Vietnam. The project had five main activities and a project management component.

- Activity 1: Review and improvement of information regarding stockpiles and contaminated sites

The review and ground survey of stockpiles has revealed that the most serious threats to population and environment are buried stockpiles. The survey also found that stockpiles above the ground are mainly confiscated smuggled pesticides with a small amount of POPs. There were many reasons for stockpiles to be buried including lack of destruction technologies, lack of funding sources, poor awareness of POP issues and historical problems. The project then changed the survey strategy and made drilling studies of three buried sites to estimate the amount of underground POPs pesticides. The survey received feedbacks from many government agencies and helped raise the awareness.

- Activity 2: Design of Plan as to how to destroy POPs pesticide stockpiles.

Activities on destruction plan conducted assessment of available treatment facilities in the country and international practices. This created cost estimate for the destruction part in the project document.

- Activity 3: Selection of methodologies for treatment of contaminated sites

Site treatment technologies were reviewed. Consultants visited pilot treatment sites undertaken by local institutions.

A general consensus was reached that each site would require combination of methods from manual separation to repackaging, destruction and site bio and phyto-remediation.

- Activity 4: Stakeholder consultations

Survey results were shared with a large number of stakeholders from local authorities to Ministries. Survey results and proposed destruction methods were discussed at a number of workshops

- Activity 5: GEF documentation prepared and co-funding commitments confirmed.

The project concept has changed from destruction to capacity building so that national stakeholders can avoid new stockpiles and handle buried stockpiles should they be discovered in the future.

E. What factors affected the achievement of programme or project results?

The project was supposed to be based on the result of previous inventory of POPs Pesticide stockpiles. However, the progress of survey showed that the main threat in Vietnam was from buried stockpiles. It forced the change of the whole survey strategy while time was limited.

Given the historical complication of Vietnam, these stockpiles dated back from 1960s and had no ownership or control of the storage and contamination situation.

The survey work also faced reluctance from local population who opposed to digging and sampling of buried sites, being afraid of further contamination.

F. What lessons (both positive and negative) can be drawn from the experience of the programme or project?

- It is a positive lesson that the project was able to change survey strategy from stored stockpiles to buried stockpiles.
- Good cooperation between national authorities was vital for the success of survey work. There were cases when a stockpile was eliminated by a provincial Plant Protection Department without informing the Department of Natural Resources and Environment.
- The inventory should not be regarded as a complete work, instead it should be a dynamic process where data and sources of data are constantly verified and updated.
- Analytical results from different labs are not matching fully. It is always to rely on tests to get the order of magnitude of contamination, not to consider as exact concentration.
- Some stockpiles contain many obsolete pesticides including compounds of mercury and heavy metals which are not supposed to be incinerated. It's a difficult and in some cases impossible task to separate mixed pesticides.
- Survey consultants should be more aware of collection and destruction process. It helps them to estimate the amount of stockpiled pesticides at site instead of reading inventory notes provided by stakeholders. These figures in some cases are very different.
- Governmental officers' participation in the survey and elimination process is very important for transfer of survey skills and project sustainability.
- Project design involved FAO participation and the consultation process involved FAO at some stages (very beginning and final draft). It's the experience that FAO should be provided with all drafts in due time.

G. What are the views of the target groups with regard to the programme or project? Please note any significant gender-based differences in their views

Target groups at local level expected the project to not only destroy the stockpile but also clean the soil, water and other environmental media, even provide clean water supply. Some local people were not happy that many

missions came to take samples but did not eliminate the stockpiles. Most people did not realize how expensive the treatment could be.

No gender-based differences in their views were observed.

H. Provide any other information that may further support or clarify your assessment of the programme or project. You may include annexes as you deem necessary.

All planned outputs were achieved according to the project document. The activities on action plan and selection of soil treatment technologies were completed in a less ambitious level of details as designed in the project document. This resulted in surplus of funds for local consultants which later used for additional activities.

Additional activities included participation in Moldova HCH Conference, development of POP Pesticides stockpiles Data base and the pilot elimination of stockpiles. The project used remaining funds to pilot the collection, transportation and destruction (co-processed in cement kiln) of stockpiles in three provinces. The pilot gave many first hand experience and lessons learned to be used in the full-size phase.



UNDP Project Document

Government of Vietnam

Title of Project

Building capacity to eliminate POPs pesticides stockpiles in Vietnam

Brief description

The Government of Vietnam has faced serious constraints in dealing with stockpiles of POPs pesticides, including constraints due to funding, access to appropriate technologies, and coordination among multiple ministries and agencies. While some stockpiles are housed in sheds or other buildings, in some communities with particularly large stockpiles, the lack of suitable infrastructure resulted in the burial of POPs pesticides stockpiles. An estimated 1140 tonnes of POPs pesticides have been located in five such sites, and again it is certain that there are more such sites in the country. The buried stockpiles are of far greater concern than above-ground stockpiles both because of their size and because there is far less control over storage conditions, resulting in much larger potential and actual human health problems. This project will eliminate all known stockpiles of POPs pesticides in Vietnam. However, the destruction of known stockpiles is an incomplete response for two reasons. Firstly, it is clear that there are a potentially large number of additional, as yet unknown stockpiles, meaning that a one-off destruction process will be inadequate in dealing with additional stockpiles as they are discovered. Secondly, there is a major continuing problem of illegal importation of pesticides which may contain substantial amounts of POPs. Consequently, as important as the destruction of known stockpiles, is the need to build capacity both to destroy additional stockpiles as they are discovered, and to eliminate continued importation of illegal POPs pesticides. Capacity to eliminate continued importation is needed on both the demand side, to reduce and ultimately eliminate demand for such pesticides, and on the supply side, to eliminate the source of the pesticides. Supply-side management will require bilateral cooperation with neighbouring states, China, Lao PDR and Cambodia.

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Acronyms

CBD	Convention for Biodiversity
DARD	Provincial departments of agriculture and rural development (under the Provincial People's Committees)
DOE	Department of Environment (under MONRE)
DONRE	Provincial departments of natural resources and environment (under the Provincial People's Committees)
DPP	Department of Plant Protection (under MARD)
DSENRE	Department Of Science, Education Natural Resources and Environment
ExA	Executive Agency
FAO	Food and Agriculture Organization
FSP	Full Size Project
GDOC	General Department of Customs (under the Ministry of Finance)
GEF	Global Environment Facility
IA	Implementing Agency
IPM	Integrated Pest Management
IVM	Integrated Vector Management
M&E	Monitoring and Evaluation
MARD	Ministry of Agriculture and Rural Development
MOC	Ministry of Construction
MOD	Ministry of Defense
MOET	Ministry of Education and Training
MOIT	Ministry of Industry and Trade
MOH	Ministry of Health
MOST	Ministry of Science and Technology
MOT	Ministry of Trade
MPI	Ministry of Planning & Investment
MSP	Medium Size Project
NINST	National Institute for Natural Sciences and Technology
NIP	National Implementation Plan for the Stockholm Convention
NSC	The National Steering Committee for Stockholm Convention on POPs
PDF	Programme Development Facility
PMU	Programme Management Unit
POPs	Persistent Organic Pollutants
PPCs	Provincial People Committees
SD	Sustainable Development
SDPP	Sub Department of Plant Protection (at provincial level)
STAMEQ	Directorate for Standards Measures and Quality
STAP	Scientific and Technical Assessment Panel
TOR	Terms of Reference
UNDP	United National Development Programme
UNDP CO	UNDP Country Office
VCC	Vietnam Corporation on Chemicals
VEPA	Vietnam Environmental Protection Agency (under MONRE)

SECTION I: Elaboration of the Narrative

Part I: Situation Analysis

Context and global significance

1. Persistent Organic Pollutants (POPs) are chemical substances that possess toxic properties, resist degradation, bioaccumulate and are transported, through air, water and migratory species, across international boundaries and deposited far from their place of release, where they accumulate in terrestrial and aquatic ecosystems, have significant impacts on human health and the environment.
2. POPs are a concern because of the following 4 characteristics:
 - **Toxicity:** POPs are toxic chemicals that laboratory, field, and health studies have linked to certain adverse health effects in people and wildlife.
 - **Persistence:** POPs are highly stable chemicals that resist the natural processes of degradation. Once introduced into the environment, they can persist for a long time.
 - **Long-Range Transport:** POPs released in one part of the world can travel far from their original source via wind, water and, to a lesser extent, migratory species.
 - **Bioaccumulation:** POPs are readily absorbed in fatty tissue and accumulate in the body fat of living organisms; these substances become more concentrated as they move up the food chain, especially into larger, longer-living organisms.
3. Studies have linked POPs exposure to population declines, diseases, or abnormalities in a number of wildlife species, including certain kinds of fish, birds, and mammals. Wildlife also can act as sentinels for human health: abnormalities or declines detected in wildlife populations can sound an early warning bell for people. Behavioral abnormalities and birth defects in fish, birds, and mammals in and around the Great Lakes, for example, led scientists to investigate POPs exposure in human populations.
4. In people, reproductive, developmental, behavioral, neurologic, endocrine, and immunologic adverse health effects have been linked to POPs. People are mainly exposed to POPs through contaminated foods. Less common exposure routes include drinking contaminated water and direct contact with the chemicals. In people and other mammals alike, POPs can be transferred through the placenta and breast milk to developing offspring.
5. The Stockholm Convention is a global treaty with the general objective to protect the environment and human health against the threat of POPs. The Stockholm Convention divides POPs into 3 categories: chemicals that **must be eliminated**, including 8 pesticides and PCBs (Annex A); chemicals whose **use and production need to be reduced**: DDT (Annex B); and **unintentionally produced** chemicals: Dioxins, Furans and PCBs (Annex C).

Status of POPs pesticides stockpiles in Vietnam

6. Vietnam has suffered perhaps more than any other country from the effects of POPs. Most of the negative impacts are associated with the war-time use of chemical defoliants. However, there are also sites in Vietnam where dramatic health impacts, including deaths and birth abnormalities have resulted from storage of POPs pesticides. One example of this is a site in Yen Son district, Tuyen Quang province, where at least 14 deaths and numerous other health problems are linked to a large DDT stockpile.

7. The import and use of all POPs pesticides is now banned in Vietnam. However, stockpiles that accumulated before the bans came into effect still exist. The Government of Vietnam has faced serious constraints in dealing with stockpiles of POPs pesticides, including constraints due to funding, access to appropriate technologies, and coordination among multiple ministries and agencies. Despite these constraints, the government at central and local level has made determined efforts to deal with stockpiles, and where government funding has not been forthcoming, local communities have taken action themselves.
8. Because of these actions by government and communities, the quantities found in above-ground stockpiles are modest. An inventory of POPs pesticides stockpiles undertaken during the preparatory process of the project revealed that, for the 25 provinces sampled, which included all those expected or known to have significant stockpiles, a total of only 70 tonnes of POPs pesticides were found in above-ground stockpiles. These figures can be extrapolated to a national level, indicating total current above-ground stockpiles of 150 tonnes of POPs pesticides. However, as noted above, it is certain that substantial additional unknown stockpiles remain, many of which will be discovered and will require treatment in coming years.
9. Furthermore, while some stockpiles are housed in sheds or other buildings, in some communities with particularly large stockpiles, the lack of suitable infrastructure resulted in the burial of POPs pesticides stockpiles. An estimated 1140 tonnes of POPs pesticides have been located in five such sites, and again it is certain that there are more such sites in the country. The buried stockpiles are of far greater concern than above-ground stockpiles both because of their size and because there is far less control over storage conditions, resulting in much larger potential and actual human health problems. Also, while the locations of above-ground stockpiles are usually known, records concerning buried stockpiles are incomplete and sometimes missing completely. This results in farmers using the land for gardens and building houses above the buried stockpiles.
10. Although the production of POPs pesticides has never been legal, pesticide production plants tend to source their chemical supplies purely on the basis of lowest cost, and government controls over chemical safety standards is weak. As a result, many of the raw materials are of unknown quality and newly produced pesticides may therefore contain POPs.
11. While many stockpiles date from before the banning of POPs pesticides in Vietnam, others are active, especially in border regions, where significant quantities of banned pesticides are captured and confiscated every month. For example, in Lang Son province, confiscated illegal pesticides in a Customs Department storage facility were incinerated in December 2006, yet the 2m x 5m x 2m storage facility was filled again by June 2007. Even though illegal pesticides were known to be crossing the border, no further confiscations can be undertaken until the new stockpile is destroyed since there are no further storage facilities. It is estimated that, for the northern provinces bordering China, 5-7 tonnes of illegal pesticides are confiscated every month, and there are larger quantities which cross the border without being confiscated, either because they evade detection, or because the authorities do not have the capacity to confiscate them.
12. Many of the imported pesticides carry no labels indicating their chemical content, so determining whether they contain POPs would require expensive and continuous sampling of newly confiscated pesticides. However, it is believed that a high proportion of the confiscated pesticides contain at least some proportion of POPs.

Institutional, sectoral and policy context

13. Agriculture employs more than two thirds of Vietnam's labour force and contributes one fourth of the country's GDP and a third of export earnings. Over the last 10 years, food output has increased by an average of 1.2 million tonnes/year. Coffee, rubber, tea and sugar outputs have increased in recent years by 400, 200, 65, and 750 thousand tonnes, respectively. The area of fruit and vegetable production is about 450 thousand hectares with an estimated output of 4.5 million tonnes. The growth rate of the livestock sector is 56%/year, and in 2006, total meat production reached 3.1 million tonnes, 9.3% higher than the 2005 figure.
14. While the production of livestock products, sugar, fruits and vegetables mainly supplies domestic markets, other products are mainly for export, including coffee (95% exported), cashew (90%), rubber (80-85%), pepper (90%), and tea (50%). Vietnam is now the second largest global rice exporter (rice exports in 2005 were 5 million tonnes), and robusta coffee exporter, and the fourth largest cashew exporter.
15. The increased pressure to maintain high levels of rice and other agricultural products for consumption and export has resulted in increased use of pesticides that maximize yield. In 1957, the pesticides had been used with the quantity of 100 ton/year. In the end of years 80, the quantity of pesticides used was 10,000 tons/year, then in the years 90, this quantity is growing up to double (21,600 ton/year in 1990), to triple (33,000 ton/year in 1995), and up to 48,300 tons in 2004 year. The improper use and handling of agrochemicals has had an adverse impact on ecosystem as well as field laborers. Farmers who use pesticides and herbicides have higher reported incidences of rashes, eye irritation, gastrointestinal disorders and headaches. The long-term effect of the pesticides and herbicides has far reaching consequences for the environment, the people and trade.

Policies on environmental protection and sustainable development

16. Policies on environmental protection and sustainable development are consistently integrated with general development policies and legislation of Vietnam.
17. In its legal framework, Vietnam has promulgated many laws and decrees directly or indirectly related to environmental protection. The primary legal instrument is the Law on Environmental Protection, which was approved by the National Assembly on 27 December 1993. Based on that law, the legal framework related to the environment has subsequently been developed and refined. The amended Law on Environmental Protection was approved on 29th November 2005 by the National Assembly. Guidance on implementation of the Law has been developed and applied, forming a relatively comprehensive legal framework for environmental protection.
18. In addition, Vietnam has also promulgated the Law on Land (1993, 2003), the Law on Mineral Resources (1996) and amended (2005), the Law on Water Resources (1998), the Law on Agricultural Resources Protection and Development (1989), the Law on Aquaculture (2004), the Law on Forest Protection and Development (1991, 2004), the Law on Enterprises, the Code of Criminal Affairs, and the Decree on Chemical Safety (2005), among others. In such legislation, regulations regarding natural resource exploitation and use are supplemented by regulations on environmental protection and sustainable development.
19. Regarding the policy framework, Vietnam has developed and promulgated many policies and strategies on sustainable development such as Resolution 41-NQ/TW dated 15th November 2004, Directive 36-CT/TW dated 25th June 1998, Orientation for Sustainable Development (Agenda 21) dated 17th August 2004, the National Strategy for Environmental Protection until 2010 and Vision toward 2020 (2003), the Comprehensive Strategy on Poverty Alleviation, and the Plan for Radical Treatment of Environmentally Polluting Hotspots (2003). Government, ministries, sectors and

localities have developed implementation plans for Resolution 41-NQ/TW. The National Strategy on Pollution Control (2005). In addition, ministries such as Ministry of Industry (MOI), Ministry of Agriculture and Rural Development (MARD), Ministry of Construction (MOC), Ministry of Health (MOH), Ministry of Transportation (MOT), have development plans that take account of environmental protection.

20. Vietnam is currently seeking to complete its legal system on environmental protection. Sanctions and economic measures appropriate to a market economy are being enhanced in order to prevent and control environmental pollution.
21. Vietnam is also rearranging the governmental administrative structure to promote environmental protection. MONRE, established in 2002, is responsible for overall governmental management of the environment, which includes sound management of chemicals and hazardous wastes in Vietnam. Ministries have also assigned specializing units for environmental issues within their scope. Many provinces have established a Division of Natural Resources and Environment at the district level.
22. Currently in Vietnam there is a lack of environmental investment, even though Vietnam has policies designed to enhance and diversify environmental investment, including through the national budget allocation process and international financial aids. Research and development activities on environmental protection are being promoted, but there are shortcomings because of inadequate investment and uncoordinated approaches. Vietnam is strengthening the socialisation of environmental protection.
23. The Vietnam Environmental Fund was established in June 2002. It is a governmental financial mechanism for the environment, directly under the administration of MONRE and under the financial management of the Ministry of Finance. Its responsibility is to mobilize domestic and international financial sources pursuant to Vietnamese legislation in order to invest in environmental activities and provide financial aid for programmes, projects and activities to prevent and mitigate the effects of environmental pollution, and pollution-related incidents at all levels: national, interdisciplinary and inter-regional.
24. Recently, Vietnam has played an increasing role in promoting regional and international cooperation on environmental protection. So far, Vietnam has ratified or accessed to seventeen international conventions on the environment. These include the Climate Change Convention, the Kyoto Protocol and Clean Development Mechanism, the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal, the Stockholm Convention on POPs, the International Labor Organization Convention on Safety in the Use of Chemicals at Work, and others.
25. The key policies and legal provisions for management of chemicals and hazardous wastes, including POPs and POPs-pesticides are:
 - Resolution 41/TW dated 15th November 2004 on “Environmental Protection in the industrialization and modernization of Vietnam” and the Governmental implementation program for Resolution 41/TW: Create a firm policy and direction to enhance environmental protection. Ministries, sectors and localities have developed specific implementation programmes for Resolution 41/TW, including environmental pollution prevention and degradation recovery, wastes (including hazardous wastes) management and raising of awareness of and responsibility for environment and human health protection.
 - The Law on Environmental Protection (1993) and amended (2005). The Law on Environmental Protection affirms that environmental protection is the responsibility of the whole population. The basic principle of environmental protection is to seek to prevent environmental degradation,

pollution and incidents. The use of chemicals, chemical fertilizers and pesticides, as well as wastes treatment should comply with the legislation. The Law on Environmental Protection (2005) more specifically regulates hazardous wastes management and pollution prevention.

- The National Strategy on Environmental Protection (2003) consists of thirty six national programmes covering all fields of environmental protection, including hazardous wastes management, application of environmentally friendly technologies and environmental pollution (including pesticides pollution) treatment and recovery.
- The National Plan on Environment and Sustainable Development (1991) and Orientation for Sustainable Development in Vietnam (Agenda 21 - 2004), which serve as the nation's blueprint for sustainable development, provide specific requirements for the sound management of chemicals and hazardous wastes.
- The Plan for thoroughly handling establishments which cause serious environmental pollution (2003), ratified in Decision 64/2003/QĐ-TTg dated 22nd April 2003 is now under implementation. It contains regulations on penalties for violation of environmental standards, and defines appropriate policies and mechanisms for facilities that need to be closed or removed. According to this plan, 439 facilities of this type must be closed by 2007, some of which are contaminated by POPs pesticides.
- The Law on Population Health Protection (1989) specifies that people have the right to live healthily. Any activities that cause adverse impacts to the environment and human health should be minimised, eliminated or carefully controlled.
- The Ordinance on Plant Quarantine and Protection (2001) unifies the management of the production, export, import, maintenance, storage, transport, trade and use of pesticides. MARD has the responsibility for management of pesticides through the organization of registration, the issuance of permits, and publishing the lists of permitted pesticides, restricted pesticides and prohibited pesticides in Vietnam.
- The Decree on Chemical Safety (2004) and Law on Chemicals (in preparation, 2006): there are seventeen provisions dealing with the sound management and treatment of hazardous wastes/toxic chemicals.
- Hazardous Waste Management Regulations, based on decision 23/2006/QĐ-BTNMT dated 26th September 2006 (issuing the Lists of Hazardous Wastes) and Decree ND80, under the Environmental Protection Law (2005) regulate all stages of the hazardous wastes life-cycle, including their production, transportation, storage, treatment and final disposal. Regulations on permits for collection, transport, storage, treatment and disposal are relatively specific. However, the application of these regulations is difficult due to lack of human capacity, equipment and a lack of clarity in some articles. Although these regulations are applied to all POPs, there is no clear distinction between POPs and other hazardous wastes.
- The Strategy for the Management of Municipal Solid Waste (1999) and Regulations on the Management of Solid Waste Landfills (2004), issued by MOC contain regulations on sanitary landfilling of solid wastes (including hazardous wastes). However, landfilling is not the best disposal method for POPs because they are highly toxic and persistent, even at low concentrations.
- Decision 328/2005/QĐ-TTg dated 12th December 2005 of the Prime Minister on approving the national plan on environmental pollution control till 2010, has set up the objectives of the management of wastes and waste sources, enhancement of the capacity for wastes treatment and implementation of international treaties related to pollution control to which Vietnam is a Party. The national plan on environmental pollution control presented nineteen priority projects, plans

and programmes. The implementation of these priority plans and projects will cooperate with and support the sound management, reduction and elimination of POPs.

Policies specifically related to POPs: Vietnam's Commitment to the Stockholm Convention

26. One of the elements of the overall strategy for the protection of the environment and the pursuit of sustainable development is exemplified by Vietnam's ratification of the Stockholm Convention on POPs on July 22, 2002. Vietnam was one of the first countries to sign and to ratify the Stockholm Convention. The Government, through MARD, MOH, MOI and MONRE, has adopted a series of legal documents on prohibition of the production and use of all POPs pesticides in Vietnam. DDT and Lindane have been officially prohibited since 1993. All nine of the POPs pesticides covered by the Stockholm Convention have now been prohibited from use.
27. Being aware of environmental issues related to POPs, the Government of Vietnam has prepared policies and implemented some specific actions, aimed at sound management of chemicals including POPs. Chief among these is the National Implementation Plan for the Stockholm Convention (NIP), approved by Parliament under Decision 184/2006/QĐ-TTg, 10th August 2006 and submitted to the Stockholm Convention Secretariat in August 2007. The NIP includes 15 priority actions, the second of which is "*Safe management, disposal and phase-out of POPs pesticides stockpiles*". Other policy documents specifically addressing POPs include:
- In 1991, the Ministry of Agriculture and Food Industry (the precursor of MARD) promulgated Regulations on Pesticides Registration in Vietnam. MARD subsequently cooperated with line ministries and sectors in establishing the Consultative Council on pesticides. Based on advice from this Committee, MARD published a list of pesticides that are allowed to be used in Vietnam. By 1992, most of organochlorine pesticides including POPs and organophosphor pesticides with high toxicity and persistence had been prohibited.
 - In 1998, the Government of Vietnam issued Directive 29/1998/CT-TTg on enhancing the management of the use of pesticides and POPs, which stipulates the safe treatment and management of POPs and the relevant responsibility of line ministries and sectors. The regulations include:
 - *Strictly prohibit all organizations and individuals from the production, trade, storage, transport and use of dangerous and prohibited pesticides. Any violation will be treated pursuant to legislation, and if it results in serious consequences, criminal proceedings will be taken against the facility.*
 - *Require timely and appropriate collection and treatment of prohibited pesticides. This includes the application of environmental pollution treatments for former pesticide stores.*
 - *Promote the dissemination of knowledge about the harm of pesticides to the environment and human health.*
 - *Prohibit the release of PCBs-containing oils and products into the environment. This includes the restriction and eventual prohibition of the use of PCBs-containing products. Strict controls are also specified to ensure that the release and transport of PCBs-containing products are pursuant to hazardous wastes management regulations. The organization of the collection, treatment and disposal of PCBs-containing products with hazardous wastes treatment technology is also covered.*
 - *Assign line ministries, sectors and localities different tasks according to their functions and responsibilities.*
 - Decision 1970, 1971, 1972/QĐ-BKHCMNT dated 10th November 1999 of MOSTE, on treatment technology for prohibited pesticides stockpiles, consists of guidelines on pesticide (including POPs) disposal. However, there has not been any assessment of the application of these guidelines in relation to POPs pesticides treatment.

- Circular 08/2001/TT-BCN dated 14th September 2001 issued a List of Conditionally Exported and Imported Toxic Chemicals and their Products. This provided the basis for the prohibition by the Electricity of Vietnam Corporation of the import of PCBs-containing equipment by all its members.
- Decision 60/2002/QD-BKHCNMT dated 07th August 2002 of MOSTE, on publishing the technical guidelines on hazardous wastes landfilling, contains technical guidelines on landfilling of chemicals and hazardous wastes (including pesticides and POPs).
- Decree 59/2007/ND-CP of the Government on solid waste management has some provisions on solid HW in general
- Decree 81/2006/ND-CP of the Government on the environmental violation punishment stipulates the violation regarding HW
- Circular 12/2006/TT-BTNMT of MONRE on guiding the professional capacity and the permit procedure of HW management has details on HW management, particularly the permit for disposal facilities and requirement on capacity and operation...
- Emission standards contained in TCVN 6560:2005 on Emission of Healthcare waste incinerator; the Standards for HW incinerator emission are under development and will be issued soon
- In order to implement the Ordinance on Plant Quarantine and Protection (2001), MARD approved a series of decisions on management of pesticides including:
 - *Decision N. 60/2003/QD-BNNPTNT of May 6th, 2003 of MARD on publication of the list of veterinary medicins permitted to be produced, exported, handled, imported, trade, used and limited to be used in Vietnam.*
 - *Decision N. 63/2003/QD-BNNPTNT of May 27th, 2003 of MARD on official registration, added and special registration of some pesticides for protection of plants to the list of permitted pesticides for protection of plants to be used in Vietnam.*
 - *Decision N. 145/2002/QD-BNNPTNT of December 18th 2002 of MARD on procedure of registration, production, bottling, handling, importation, exportation, labeling, packaging, advertising pesticides for protection of plants.*
- In 2003, MARD cooperated with the Norwegian Agency for Development Cooperation (NORAD) in performing an inventory of pesticides stockpiles in Vietnam. In 2002-2003, MONRE cooperated with UNEP Chemicals and SDC in demonstrating the application of POPs inventory toolkits through an initial inventory and assessment of PCBs and Dioxins/Furans release sources in Vietnam.
- In 2002-2003, MOSTE (the precursor of MONRE) supported the implementation of some pilot projects on treating POPs and pesticides stockpile wastes, such as safe disposal in landfills in combination with bio-chemical treatment, research and development of the technology for the disposal of POPs and hazardous wastes at high temperature in specialized incinerators, and the incineration of pesticides in cement kilns (see report on cement kiln trial in Technical Annex 3).
- In 2004, the POPs Project Office (established within VEPA) cooperated with consultants, domestic and foreign experts and local authorities in an inventory and assessment of POPs issues in Vietnam, including: the production, export-import, use, transport, storage and disposal of POPs pesticides; the status of PCBs-containing oils and equipment; unintentionally produced dioxins/furans sources; an overview on toxic chemical-contaminated areas related to the chemicals used by the US Army during the war in Vietnam (including those contaminated with dioxins); assessment of the POPs monitoring and treatment infrastructure; and a review of policy, legislative and institutional framework related to POPs management. These POPs assessments provided the scientific base for the development of the NIP for the Stockholm Convention.
- In 2004, MONRE was designated by the Government to be the focal point for the coordination of implementation activities under Stockholm Convention in Vietnam. In collaboration with other line ministries, sectors and localities, MONRE was responsible for developing the National Implementation Plan and submitted it to the Prime Minister for approval.

- Decree 80/2006/ND-CP on the enforcement of, and financial penalties related to, environmental protection includes regulations on the trade, export-import, transport and treatment of wastes, including POPs. Procedures are defined for determination of penalties, and jurisdiction for their application is assigned to chief inspectors specialized in environment, presidents of wards, and districts, towns, provinces and cities.
- Some specific regulations on POPs are found in Vietnamese Standards: TCVN 5938:1995, TCVN 5941:1995, TCVN 5942:1995, TCVN 6560:1999, TCVN 6774: 2000, TCVN 6984:2001, TCVN 6985: 2001, TCVN 5507:2002.

28. In general, Vietnam Government is determined to eliminate POPs as soon as practicable by implementing the NIP. It is the intention of the Government to undertake review of its policies and legislative framework relevant to the implementation of the Stockholm Convention to strengthen capacity of institutions that deal with POPs including the establishment of mechanisms for coordination, monitoring of POPs and review and updating of the NIP. Also the Government realises the importance of generating and disseminating public information and creating public awareness at all levels to tackle the issues of POPs in a comprehensive way. In doing so, the Government within its limited capacity, shall make deliberate efforts to implement its obligations under the Stockholm Convention and hence eliminate POPs as scheduled. To achieve the NIP objectives, Vietnam will seek cooperation of the international community in dealing with problems of POPs.

Institutional and administrative context

29. Key Ministries and Institutions involved in POPs and POP-pesticides management in Vietnam are as follows:

30. **Ministry of Natural Resources and Environment (MONRE)** as designated in Decree No. 91/2002/ND-CP dated 11 November 2002, is the principal government agency having an overall mandate for resource and environmental strategy, legislation and policy formulation, resource and environmental institution building, environmental impact assessment, resource and environmental research, environmental quality standards, data collection and management. MONRE is charged with inspection, developing guidelines for provinces and sectors, and international cooperation for resource and environmental protection. Based on its function and tasks, MONRE has responsibility to guide the management of POPs and POP-pesticides in their whole life cycle from the import to export, production, handling, transportation, treatment and disposal. Among its agencies are:

- Department of Environment (DOE) which is responsible for the preparation of policies, legislation and regulations on environmental protection
- Vietnam Environmental Protection Agency (VEPA), which is responsible for the preparation of national action plans, development of guidelines, implementation of state management activities for pollution prevention and control, environmental monitoring and emergency response.

31. **Ministry of Science and Technology (MOST)** according to Decree No. 54/2003/ND-CP dated 18 July 2003, is responsible for cooperating with MONRE and other Ministries to introduce advanced scientific techniques and technological applications to manage resources effectively and to control sources of pollution. It has an overall mandate to unify governmental management to meet Vietnamese standards, and to develop standards relating to POPs and other chemicals. Relevant agencies within MOST are the General Department of Standards, Measure and Quality (STAMEQ), the Department of Nuclear and Radioactive Control and Safety, the Department of Science and Technology in Economic-technical Sectors, and the Department of Evaluation, Appraisal and Control of Technology. .

32. **Ministry of Industry and Trade** (MOIT) according to Decree No. 55/2003/ND-CP dated 28 May 2003), is a governmental agency carrying out governmental management functions relating to industry, including the mechanical, metallurgical, electrical, energy development, renewable energy, petroleum and gas, metal exploitation, chemicals (including pharmaceuticals and industrial explosives), food, and other processing sectors throughout the country. These functions include management of public services and representation of governmental ownership at industrial enterprises in conformity with laws and regulations. The relevant agencies of MOIT in management of chemicals are the Department of Industrial Safety, the Department of Local Industries, the Department of Science and Technology, the Department of Mechanics, the Department of Metallurgy, the Department of Chemicals, the Department of Energy and Petroleum, the Department of Market Control, the Department of Importation and Exportation, and Department of Trade Inspection and Vietnam Corporation on Chemicals. According to Decree No. 29/2004/ND-CP dated 16 January 2004, MOIT also has the function of governmental management of the import, export, and circulation of goods and trade services throughout the country.
33. **Vietnam Corporation on Chemicals (VCC)** is a state-owned corporation responsible for trade activities, including exploitation, production, and trade (including import and export) of chemicals. The Corporation also produces basic chemicals, pesticides, electronical chemical products (accumulators and batteries) which may contain POP.
34. **Ministry of Agriculture and Rural Development (MARD)** according to Decree No. 86/2003/ND-CP dated 18 July 2003, is responsible for governmental management of activities related to agriculture, forestry, water resources and rural development, and terrestrial national parks and protected areas, including coastal wetlands. MARD plays an important role in the control and reduction of sources of pollution originating from agricultural activities and the use of chemical fertilizers. The main agencies related to the management of POPs and chemicals are the Department of Plant Protection, the Department of Veterinary Services, and the Institute of Plant Protection. Annually, MARD checks and publishes lists of new pesticides permitted to be used, and those which are subject to limited use or are prohibited in Vietnam, based on advice received from the National Consultative Council on Pesticides, and with the participation and cooperation of relevant ministries and sectors.
35. **Ministry of Health (MOH)** according to Decree No. 43/2003/ND-CP dated 15 March 2003, is responsible for governmental management of care and protection of public health, including medical services, medicines, cosmetics, food safety and sanitation, and medical equipment. The Ministry is responsible for overseeing the delivery of health services in the country and managing hospital wastes. It therefore has a direct role in raising awareness related to environmental health issues. The Ministry manages unintentional production of POPs from incineration of hospital wastes.
36. **Ministry of Defense (MOD)** is responsible for management of chemical equipment and centers serving defense and security objectives, as well as polluted areas from chemicals used by the American Army during the war (1960-1975).
37. **Ministry of Planning & Investment (MPI)** is responsible for overall planning of economic development projects and dealing with environmental consequences of such projects. The key department within MPI is the Department of Science, Education, Natural Resources and Environment (DSENRE), which oversees environment sector issues and is MPI's counterpart to MONRE and VEPA.

38. **Ministry of Finance** (MOF) - (and specifically the **General Department of Customs - GDOC**) according to Decree No. 16-CP dated 07 March 1994 and Vietnam Customs Law are responsible for the state management of customs including import, export, transit activities, combating transboundary smuggling or illegal transportation of goods. The GDOC is thus responsible for the management of import and export of POPs and other chemicals.
39. **Ministry of Education and Training** (MOET) is responsible for cooperation with MONRE in raising awareness and knowledge on environmental issues, and in integrating policies and legislation on environment protection as well as POPs/hazardous chemicals management in the education.,
40. **Relevant Universities and Research Institutions** serve as a technical advisor on environmental issues, technology process, means and techniques to effectively manage POPs and other chemicals.
41. **Provincial People Committees** (PPC) have authority over state management of local environmental protection. The Department of Resources and Environment is responsible to the PPC on local environmental and resources protection.

Assessment of institutional, sectoral and policy context for POPs sound management in Vietnam

42. Vietnam has defined the functions and responsibilities of ministries and sectors, including chemicals and hazardous wastes management in particular, and environmental protection in general. Furthermore, for multi-sectoral tasks and responding to particular conditions, the Government has issued supplementary regulations that modify the functions of, establish regulatory and cooperative relations among, and determine the responsibilities of relevant stakeholders for specific tasks and objectives.
43. In general, Vietnam has been endeavoring to establish a legal and institutional framework for sound management of chemicals and hazardous wastes, including POPs and POP-pesticides. However, there are still shortcomings that need to be addressed. These include:
 - Despite of regulations, responsibilities of authorities in POPs management are unspecific, overlapped, and the responsibilities of authorities are not coordinated over the whole life-cycle of POPs. The Government issued policies on the safe management of POPs, but the authorities have not adequate capacity for their effective implementation.
 - Despite the various legal documents on chemicals management, there is still no Law on Chemical Safety, nor a database that can serve as a basis for management of POPs and other hazardous chemicals. In 2000, the former National Environment Agency (now VEPA) with support from SEMA (Sweden) started drafting such a law. However, since MONRE inherited the environmental function from the former Ministry of Science, Technology and Environment, the draft has not been developed further. In 2004, MOI proposed a draft Law on Chemicals but it is still under discussion. These developments show that governmental agencies are aware of threats from and the need for sound management of chemicals, chemical products and wastes. However, their endeavors have thus far not been sufficient or adequately focused.
 - Legal documents on POPs management are vague and insufficient. Regulations on Hazardous Wastes Management are not sufficiently specific to be useful in the management of POPs and POPs-containing wastes. The legal documents on chemicals import, export, use, and transportation do not take into account the special characteristics of POPs management. There are no regulations requiring enterprises that export, import, produce, use, and dispose of POPs to provide information on toxicity, classification, and labeling of chemicals. There is no effective information management system and database for the control of the export-import and use of toxic chemicals including POPs.

- In spite of number of POPs inventories that have been conducted to support the continuous survey and assessment of POPs required by the Stockholm Convention, they are still fragmented and not completely reliable.
 - There is a gap of specific policies on dissemination of information and knowledge of POPs' and hazardous chemicals' adverse impacts. There is lack of capacity and infrastructure for systematic pollution monitoring and evaluation on POPs impact to human health and the environment. There are no regulations covering responsibilities of communities and the private sector, or providing incentives for their involvement in POPs management and treatment.
 - Vietnam is now a party to WTO. However, WTO regulations on chemical trade have not been legalized in Vietnam as required for accession. Furthermore, Vietnam has not participated in some other agreements on chemical management, such as the London Guidelines on chemical information exchange in international trade (amended 1989), and the Rotterdam Convention on prior informed consent procedures for certain hazardous chemicals and pesticides in international trade (1998).
 - Strategy and policy on training of experts in pollution monitoring, management and safe treatment of hazardous wastes, including POPs and POPs-pesticides, have been developed, but have not been paid proper attention. The knowledge of POPs issues and their management is not widely known in the government structures despite of the various responsibilities in this regard. This applies both to line ministries working on legislation, enforcement and monitoring as well as to local government which has the hands-on contact with potential polluters and handlers of POPs.
 - Ministries and sectors, especially the industry, energy, and environment sectors, in their development strategies and programmes, have not yet developed specific activities associated with sound management, reduction and elimination of POPs.
44. Overall, the establishment and maintenance of effective legal, scientific, economic, and political institutions for POPs in general and POP-pesticides in particular are significantly hampered because of insufficient human and financial resources. This deficiency is further compounded by the lack of appropriate administrative infrastructures needed to design, implement, monitor, and enforce relevant policies and programs that are vital in the sound management of POP-pesticides.

Stakeholder analysis

Stakeholder	Stakeholder Role/Interest in the Project	Assessment of Impact	Potential Strategies for obtaining support or reducing obstacles to the Project
1. MONRE/VEPA	<ul style="list-style-type: none"> Responsible to guide the management of POPs pesticides in their whole life cycle from the import to export, production, handling, transportation, treatment and disposal. The project offers great opportunity for MONRE/VEPA to enhance their capacity in management of POPs in general, and POPs pesticides in particular, and also to improve the capacity in coordinating actions on POPs management. 	Positive if actively engaged in coordinating the activities of the project.	<ul style="list-style-type: none"> In full support of the project. Emphasizing the coordinating role of MONRE/VEPA in the implementation of the project, and also coordinating this project with other contemporary projects on POPs (BAT/BEP project on U-POPs, PCB project) and National Implementation Plan (NIP). The challenge is to establish an effective consultation and coordination mechanism with relevant ministries to oversee management of POPs pesticides in whole country.
2. MOST	<ul style="list-style-type: none"> In charge of introducing appropriate technologies for the management and elimination POPs pesticides stockpiles. It is a chance for MOST to raise the qualification of its staff in up-to-date technologies for the treatment of POPs pesticides. 	Positive if actively engaged in the development of appropriate technologies for the management and elimination POPs pesticides stockpiles.	<ul style="list-style-type: none"> In full support of the project. Training key MOST staff on technologies for the management and elimination of POPs pesticides stockpiles.
3. MOI/VCC	<ul style="list-style-type: none"> Managing industrial sectors, including chemicals sector. VCC produces different chemicals, including pesticides. 	Positive if they can take part (in cooperation with MOST) in the development of appropriate technologies for the treatment/disposal POPs pesticides	<ul style="list-style-type: none"> Support the project The challenge will be the way to have their participation in the implementation of the project
4. MARD	<ul style="list-style-type: none"> Responsible for the control and diminution of 	Positive if actively	<ul style="list-style-type: none"> In full support of the project.

	<p>polluted areas dealing with agricultural activities and the use of pesticides. Annually, MARD screen and identifies new pesticides which may be used, limited in use or prohibited in Vietnam.</p> <ul style="list-style-type: none"> • Compiling a report on pesticide management and the amount of prohibited pesticide stockpiles in the country. • Acts in cooperation with MONRE, MOST and PPCs on management, control and supervision of pesticide producers about the kind of pesticides permitted for production, trade and other activities in accordance with provisions of the Ordinance on protection and quarantine of plants. • Closely collaborate with MOF/GDOC, MOT and the Department of Market Management in strictly controlling, supervising and punishing the illegal importation of pesticides. • The project gives great chance for MARD and its departments in strengthening their capacity in management of POPs pesticides. 	<p>engaged in inventory and assessment process, preventing the illegal importation of pesticides.</p>	<ul style="list-style-type: none"> • Strengthening the capacity of Departments of MARD, including the Department of Plant Protection, Department of Science, Technology and Environment, Research Institute for Plant Protection, and DARDs in dealing with the list of banned pesticides and in inventory methodology and assessment of POPs pesticides.
5. MOH	<ul style="list-style-type: none"> • Building awareness of environmental pollution caused by pesticides in agricultural products, foods, and water environment and propose measures for recovery and rehabilitation. • Study the reverse impact of pesticides on human health in order to develop effective prevention and therapy measures. 	<p>Positive if it can raise awareness of the communities of the reverse impact of POPs pesticides on human health.</p>	<ul style="list-style-type: none"> • In full support of the project. • Training key MOH members in toxicity of POPs pesticides and their impact on human health.
6. MPI/DSEE	<ul style="list-style-type: none"> • Balance and allocate appropriate budgets for relevant ministries and localities to support and ensure implementation of the project. • Responsible for overall planning of projects relating to environmental issues through DSEE which oversees environment 	<p>Positive if actively engaged in budgetary allocation for the project.</p>	<ul style="list-style-type: none"> • In full support of the project. • Conducting consultative meetings with implementing agencies for the development of financing program. • The main challenge will be the way to allocate budget to stakeholders of the

	sector issues and is the MPI's counterpart to MONRE/VEPA		project.
7. MOF/GDOC	<ul style="list-style-type: none"> Managing and supervising the import and export of pesticides in the permissible list across national borders Responsible for enforcing border controls in regulating the entry of banned pesticides Responsible for measures that will prevent further stockpiling of obsolete pesticides, including a legal framework governing POPs pesticides It is a good opportunity for GDOC to raise the qualification of its staff in up-to-date techniques for the control of import and export of POPs pesticides. 	Positive if it can successfully perform the function of management of import and export of pesticides, and implement measures for preventing further stockpiling of obsolete pesticides.	<ul style="list-style-type: none"> Support the project. Strengthening the capacity of GDOC for preventing importation and use of illegal POPs pesticides. Proposals on modifications to existing, or creation of new regulations to address gaps and inconsistencies in the legal framework for importation and use of POPs pesticides.
8. MOT	<ul style="list-style-type: none"> MOT has the function of state management of goods, imports, exports, circulation and trade services throughout the whole country. It is responsible for the inspection and supervision of imports and exports and market circulation of prohibited pesticides The inspection and supervision of imports and exports and market circulation of prohibited pesticides Ensure the necessary capacity within competent and relevant authorities for implementation of, and effective collaboration on obligations for the sound management of POP-pesticides. 	Positive if actively taking part in the inspection and supervision of imports and exports and market circulation of prohibited pesticides.	<ul style="list-style-type: none"> Support the project. Raising awareness of key MOT staff governing importation and use of POPs pesticides.
9. MOET	<ul style="list-style-type: none"> Responsible for raising awareness and understanding within various target groups on POPs and POPs pesticides and their impacts on human health and the environment, contributing to the sound management of POPs and the reduction of their impacts. 	Positive if actively engaged in raising awareness and understanding within various target groups on POPs pesticides and	<ul style="list-style-type: none"> In full support of the project. Emphasizing the importance of education on POPs pesticides in general environmental education programs. Developing information, education and

	<ul style="list-style-type: none"> The project offers great opportunity for MOET to upgrade environmental education materials relating to POPs and POPs pesticides. 	their impacts on human health and the environment.	communication materials for POPs pesticides issues and their implementation.
10. PPCs/DONREs	<ul style="list-style-type: none"> The PPCs have authority over state management of local environmental protection, and the DONREs are responsible to the PPCs on local environmental and resources protection. Collaborating with MONRE and relevant ministries and sectors in developing and implementing project activities related to their localities, e.g in the emigration of people relating to the contamination caused by POPs pesticides stockpiles 	Positive if they understand the benefits that project will bring to them. Their involvement, as well as linkages with national authorities is central to the success of the project.	<ul style="list-style-type: none"> Support the project DONRE staff is trained in identification, handling and disposal of POPs pesticides. Emphasizing the important role of PPCs and DONREs in the implementation of the project.
11. NGOs	<ul style="list-style-type: none"> NGOs and professional associations such as the Vietnam Association for Conservation of Nature and Environment, the Vietnam Union of Scientific and Technical Associations, the Chemistry Association, and the Biology Association contribute actively by commenting on the development of strategies and legal documents on POPs pesticides issues, exchanging experiences and expertise, enhancing international cooperation, disseminating knowledge of environmental protection, and also supporting governmental authorities in supervising POPs pesticides in localities and facilities. Complement the Government's efforts especially in the rural areas Promote wider public participation and awareness and advocacy 	Positive if NGOs and professional associations such as the Vietnam Association for Conservation of Nature and Environment, the Vietnam Union of Scientific and Technical Associations, the Chemistry Association, and the Biology Association can be actively involved in the project implementation.	<ul style="list-style-type: none"> In full support of the project. Promoting NGOs and professional associations to take active part in the implementation of the project
12. Private sector	<ul style="list-style-type: none"> Some private enterprises have indicated an interest in assisting with disposal of POPs pesticides, and they have already been equipped 	Positive if private enterprises have willingness to take part	<ul style="list-style-type: none"> Support the project Encouraging private sector engagement throughout the project implementation.

	<p>with modern/ hi-tech equipment for safe disposal of POP pesticides (e.g. a cement manufacturers).</p> <ul style="list-style-type: none"> • Interest in the opportunities the project offers for involvement in the process of treatment/disposal of POPs pesticides by inherent technologies. 	in the implementation of the project.	
13. Community-based organizations	<ul style="list-style-type: none"> • Social Associations such as the Vietnam National Front, the Vietnam Women's Union, the Vietnam Youth Union, and the Vietnam Peasantry Association play active and important roles in promoting the socialization of environmental protection. • They are helpful in ensuring and promoting local level (bottom-up) participation 	Positive if they encourage and facilitate the public to participate in control and the environmentally sound management of POPs pesticides.	<ul style="list-style-type: none"> • In full support of the project. • Training key staff of these organizations in toxicity of POP-pesticides and their reverse impact on human health. • Emphasizing the important role of these organizations in awareness raising of local communities in POPs pesticides.
14. Relevant Universities and Research Institutions	<ul style="list-style-type: none"> • Serving as a technical advisor on environmental issues, technology process, mean and technique to effectively manage POPs pesticides. 	Positive if they have willingness to join in inventory and assessment of POPs pesticides, and to develop technologies for treatment/disposal of POPs pesticides stockpiles.	<ul style="list-style-type: none"> • In full support of the project. • Assessing to research opportunities and enabling conditions for research. • Promoting scientists in developing environmentally sound methods according to international standards (avoiding unacceptable emissions levels of dioxins/furans) for destroying existing stockpiles of POPs pesticides.
15. Farmers (local householders)	<ul style="list-style-type: none"> • Involving in Environmental Impact Assessment (EIA) for POPs pesticides treatment technologies. • They are beneficiary of results of the project. 	Positive if they understand the reverse impact of POPs pesticides on human health; negative if they refuse to use alternatives of POPs pesticides.	<ul style="list-style-type: none"> • Disseminating knowledge of toxicity of POP-pesticides and their adverse impact on human health and appropriate use of pesticides in agricultural activities. • Convincing farmers (local householders) to give up the use of POPs pesticides. • They support the project as long as they can have access to the alternatives of POPs pesticides.

Business-as-usual analysis

45. Vietnam has been making efforts to deal with POPs pesticides stockpiles for some time. For example, this year MARD has allocated a budget of VND 5.144 billion (\$320,000) to destroy POPs pesticides. Under the newly formed “Decision 64” fund to treat chemical hotspots, MONRE spent VND 2.8 billion (\$175,000) in 2006 on POPs pesticides, mostly addressing the treatment of contaminated sites. Even with limited central government support, some of the worst affected provinces have allocated their own scarce budget resources to eliminating stockpiles. For example, provinces allocated a total of VND 994 million (\$62,000) in 2006 for this purpose.
46. Such initiatives have destroyed POPs pesticides by incineration. Two facilities have mainly been used. One is a mobile incinerator of the Ministry of Defense. The incinerator has recently been operating in a military area of Backan province, primarily for military waste destruction. The technology uses a multi-stage incinerator with presence of additives and catalysts, at a cost of approximately \$2,800/tonne. Pesticide incineration, especially of organic chlorinated pesticides causes strong corrosion of equipment and the wall of incinerator. Though the wall of the incinerator is made of 30mm thick inox, each 20 tons of pesticide the incinerator walls have to be replaced. The amount of slag and ash is approximately 0.1 - 0.2 m³/ tonne of pesticide. Slag and ash is stabilized by CaO and kept at least three months for monitoring.
47. The other facility used for pesticide destruction has been the incinerators of the Green Environment Company, located in Binh Chanh, HCMC. This incinerator is used for hazardous wastes in general and pesticides in particular. The Green Environment Company undertakes collection, transportation and disposal of pesticides, with costs varying on a case by case basis. Staff of the company in charge of handling pesticides have been trained by local experts. A new incinerator with a solvent distillation unit is being installed in Binh Duong.
48. For both of these facilities, there is evidence that unstable incineration conditions and low temperatures result in emissions of significant quantities of dioxins.
49. In the absence of a GEF project, some POPs pesticides stockpiles would be destroyed, but, there would continue to be short-comings with this situation:
 - Destruction procedures would not necessarily meet international standards, both in terms of handling and transportation of the pesticides, but also in terms of the quality of incineration, with poor technology and lax standards resulting in the production of significant quantities of dioxins from an incomplete combustion process
 - Many stockpiles would remain untreated
50. Compounding these problems, the continued movement of illegal pesticides across borders from neighbouring countries, which may include POPs components, will result in an on-going environmental and human health threat. The reasons for such a significant quantity of illegal pesticides being imported include:
 - The poverty level of farmers, which makes minimum cost options by far the most desirable. Illegally imported pesticides are significantly cheaper than legal pesticides, creating a strong incentive among poor farmers to buy illegal pesticides
 - Limited success of efforts to promote low-chemical input farming including IPM techniques. Vietnam has a long history of successful projects to promote IPM, yet despite this, high chemical

input farming remains the norm throughout much of the country. One reason for this is that despite efforts by some agencies to promote IPM, other agencies are promoting the increased use of pesticides. For example, the GoV recently allocated 100 billion VND for agricultural pesticide production.

- Low capacity of Customs, police and plant health inspectors to apprehend smugglers and confiscate illegal pesticides. By their nature, pesticides are difficult to inspect. If labels are missing, only time-consuming chemical testing can reveal the content of pesticides, and even if labels are present, there is no guarantee they are accurate. Other constraints include the lack of storage facilities which results in reduced efforts when stores are full.
- Despite the quantity of legal documents, there are nevertheless key weaknesses in the overall framework. For example, Vietnam does not have a comprehensive code on chemical safety. In some cases, different institutions issue conflicting regulations. For example, definitions, formulations and types of pesticides are specified in the 1993 Decree, but the 1997-import/export tariffs of the Ministry of Finance introduced new and ambiguous definitions for pesticides.
- Enforcement of laws and regulations is weak. For example, a 2000 nationwide survey conducted by the Plant Protection Department found:
 - Approx. 2,400 pesticide retailers operating without a business license (about 23.4 per cent of all inspected retailers)
 - Approx. 5,200 out of 10,250 inspected retailers (50.2 per cent) had no store for pesticides, and in many cases, the stores were failing to follow safety regulations (no fire and explosion extinguishers, no first-aid kits, and pesticides stored with construction materials, food and animal feeds)
 - 4,800 litres and 5,700 kg of illegally imported or counterfeit pesticides.
- A lack of awareness of the potential harmful effects of illegal pesticides containing POPs, compounded by the lack of labels on illegal pesticides, or labels which use non-Vietnamese characters. Surveys have revealed that:
 - 96.6% of farmers use pesticides excessively and not in compliance with the instructions on the labels only 4.8 per cent know how to properly dispose of left-over pesticides
 - Nearly 95% of farmers pour spray remains into canals, ditches or spray on other plants or use it up by continuing to spray
 - 38.1% bury pesticide containers and packing after use, most others discard containers in the fields, into the canals, ditches, ponds or sell to scrap collectors or utilize for other purposes.

51. The key shortcomings which need to be addressed through a GEF-funded project include:

52. **Improvement of systemic capacity.** This includes improvements to the legal and regulatory framework as well as the improvement of awareness among farmers and the general public. Improved coordination among different agencies is also a component of systemic capacity.

53. **Improvement of institutional capacity.** The capacity of key institutions responsible for coordinating action on POPs (MONRE/VEPA) and for enforcement of laws and regulations relating to use (MARD) of pesticides is inadequate. This results in inappropriate storage of hazardous chemicals, including POPs pesticides resulting in contamination of storage sites and the surrounding environment.

54. **Improvement of individual and technical capacity.** Many agencies and even communities in Vietnam have attempted to deal with the problem of POPs pesticides, but these efforts have been constrained by a lack of training and limited access to appropriate technologies. Thus, for example, the treatment of stockpiles has frequently included burial, often in sub-standard facilities. Incineration of stockpiles has also not met international standards.

PART II : Strategy

Project Rationale and Policy Conformity

55. This project will eliminate all known stockpiles of POPs pesticides in Vietnam. However, for reasons described above, the destruction of known stockpiles is an incomplete response for two reasons. Firstly, it is clear that there are a potentially large number of additional, as yet unknown stockpiles, meaning that a one-off destruction process will be inadequate in dealing with additional stockpiles as they are discovered. Secondly, there is a major continuing problem of illegal importation of pesticides which may contain substantial amounts of POPs.
56. Consequently, as important as the destruction of known stockpiles, is the need to build capacity both to destroy additional stockpiles as they are discovered, and to eliminate continued importation of illegal POPs pesticides. Capacity to eliminate continued importation is needed on both the demand side, to reduce and ultimately eliminate demand for such pesticides, and on the supply side, to eliminate the source of the pesticides. Supply-side management will require bilateral cooperation with neighbouring states, China, Lao PDR and Cambodia.
57. The GEF's goal in the POPs focal area is to protect human health and the environment by assisting countries to reduce and eliminate production, use and releases of POPs, and consequently contribute generally to capacity development for the sound management of chemicals.
58. For the period of GEF-4, this goal will be met through three Strategic Programmes, including **Strategic Program 1: Strengthening Capacities for NIP Development and Implementation**
59. Under *Objective 1 (b)* of this Strategic Programme (*NIP Implementation*) the GEF will strengthen and/or build the capacity required in eligible countries to implement their Stockholm Convention NIPs in a sustainable, effective and comprehensive manner, while building upon and contributing to strengthening a country's foundational capacities for sound management of chemicals.
60. Projects to be implemented under this program will be largely oriented towards technical assistance and capacity building, as is the case with this project.
61. The project is also consistent with guidance provided in document GEF/C.31/10 in that it has adopted the principle of cost effectiveness in the identification of destruction and treatment technologies. The monitoring framework of the project will also contribute to global tracking of impact through indicators such as:
- Quantity of POPs pesticides destroyed
 - Number of people previously exposed to POPs
62. The project is closely linked to UNDP's Country Programme Action Plan (2006 – 2010), particularly to several of the outputs under Promotion of environmentally sustainable development.

Project Goal, Objective, Outcomes and Outputs/activities

63. Given the business-as-usual situation, and the priorities for action developed through the NIP preparatory process, the **Objective** of this project is “to remove capacity barriers to the sustainable elimination of POPs pesticides in Vietnam”. This will contribute to the broader **Goal** of “support to sustainable development in Vietnam through the elimination of POPs from the environment”.
64. The PDF-B process involved an assessment of the shortcomings in the business-as-usual situation, which indicated the necessary Outcomes and Outputs required to achieve the project Objective. The key Outcome is Outcome 2, “**All known stockpiles are destroyed**”. However, before this Outcome can be achieved, certain pre-conditions are required, such as training and facility licensing, which will be achieved through Outcome 1, “**Improved capacity facilitates elimination of POPs pesticides stockpiles**”. This Outcome will also build capacity to ensure that future stockpiles can be safely destroyed and contaminated sites managed to prevent human health problems. Finally, to prevent the future development of new stockpiles, measures to prevent illegal importation of POPs pesticides will be undertaken through Outcome 3, “**Improved chemicals management prevents importation and use of POPs pesticides**”.

Outcome 1. Improved capacity facilitates elimination of POPs pesticides stockpiles

65. Before POPs pesticides stockpiles are destroyed (Under Outcome 2) improved capacity is required in certain areas, particularly related to the standard of pre-treatment (including re-packaging) and transportation. Only tested and licensed facilities will be considered in the bidding process for destruction of the pesticides (Output 2.5). Facilities in Viet Nam that have been used to destroy POPs in the past include the Holcim Vietnam cement kiln and the GEF/SGP-funded facility at Ben Nuc, Long An province.
66. Whilst all known stockpiles will be destroyed under Outcome 2, given the problems described previously, the present information concerning POPs pesticides stockpiles is indicative, and it is certain that additional sites will be discovered. The necessary capacity to manage and dispose of such newly-discovered stockpiles needs to be developed to ensure sustainability of project results. This will involve the development of improved consultation and monitoring processes as well as mainstreaming both awareness of POPs pesticides issues and actions to detect and destroy stockpiles into the activities of multiple governmental and non-governmental stakeholders.
67. Therefore, the Outputs that will contribute to this Outcome are:

Output 1.1. Qualified agencies selected to provide excavation, re-packaging, temporary storage, transportation and sampling/testing services

68. One or more organizations will be selected to undertake the various stages of stockpile destruction, in particular the excavation of buried stockpiles, re-packaging, where necessary, temporary storage and transportation. Given the geography of Vietnam, it is possible that different organizations are selected to cover different parts of the country. The tendering process will follow standard UNDP procedures, with the selection being made by the project Steering Committee on the basis of submitted tenders. The technical specifications for the tenders will be developed during the initial stages of the project in consultation with VEPA and FAO. Templates by FAO which have been used in the Afirca Stockpiles Programme and similar projects could be considered at that time as long as they would be tailored for a suitable application in Viet Nam. To the extent possible, submissions under this tendering process will address, inter alia:
- a. The way the waste will be received at the plant

- b. The way it will be handled and stored at the plant
- c. The way it will be pre-treated and inserted into the incinerator
- d. The level of skill of its workers handling the waste and assurance that when workers are replaced by new workers, they would be trained adequately before handling such waste
- e. Information on rate of feed, how long the destruction will take (i.e. for the proposed 1140 tons)
- f. The price charged by them to accept the waste
- g. A risk-assessment in case of power cuts or other unforeseen circumstances
- h. A risk assessment for the surrounding population

In the event that a cement kiln facility is selected as the preferred option, the selected agency and facility will be required to follow the GTZ-Holcim Guidelines on Incineration of Waste Materials in a Cement Kiln, a summary of which is provided in Technical Annex 2. As noted above, the regulatory environment of Viet Nam supports the application of these guidelines, for example, through:

- The Law on Environmental Protection 2005 has a Section with 7 Articles on HW
- Decree 59/2007/ND-CP of the Government on solid waste management has some provisions on solid HW in general
- Decree 81/2006/ND-CP of the Government on the environmental violation punishment stipulates the violation regarding HW
- Circular 12/2006/TT-BTNMT of MONRE on guiding the professional capacity and the permit procedure of HW management has details on HW management, particularly the permit for disposal facilities and requirement on capacity and operation...
- Emission standards contained in TCVN 6560:2005 on Emission of Healthcare waste incinerator; the Standards for HW incinerator emission are under development and will be issued soon

Output 1.2. Staff of government agencies trained in appropriate technologies and application of standards and guidelines.

69. Staff of relevant government agencies will be trained in the technical processes and in particular, in monitoring processes in order to ensure that international standards can be met at every stage of the destruction process. FAO will partner in the provision of training resources for this Output.

Output 1.3. A monitoring plan for disposal of stockpiles.

70. The project will support the development and implementation of a monitoring plan to ensure that during every stage of the destruction process international standards are adhered to. The monitoring plan may include, for example, independent (and possibly international) monitors who will make unannounced visits to sites during the excavation, re-packaging and temporary storage procedures, and will inspect the vehicles used for transportation.

Output 1.4. Testing and licensing of destruction facilities

71. During the PDF-B an analysis was made of options for destruction of existing known stockpiles, including transportation abroad, incineration and non-combustion options. A comprehensive report of this analysis is given in Annex 1. Based on results from a 2003 test burn of obsolete POPs pesticides at the Holcim cement plant in southern Vietnam (see Technical Annex 3), which recorded *“the best destruction efficiency ever measured”*, and emissions that were between 9 and 30 times cleaner than standards applied in the USA, co-incineration in the Holcim cement kiln was identified as the most appropriate technology. However, as mentioned above, final selection of technology and facility will be based on a tendering process. In the case of buried stockpiles, dispersed pesticides will also be treated in situ using bio-remediation and phyto-remediation techniques.

72. Additional testing needs to be undertaken on DDT to ensure that a suitable facility can be identified that meets emissions standards. Assuming such standards can be met, a license for destruction of POPs pesticides can be issued by the government.
73. A GEF SGP project at Ben Nuc, Long An province, has piloted small scale destruction of obsolete pesticides. This facility may also be used for destruction of most of the above-ground stockpiles, which typically occur in small quantities with a low proportion of POPs. The facility will also be tested to ensure that emissions standards are met.

Output 1.5. MONRE/VEPA establishes an effective consultation and coordination mechanism to oversee management of POPs in Vietnam.

74. Because POPs pesticides have historically been used in several sectors – most obviously the agricultural sector, but also the health and transportation sectors (and by the military) – a comprehensive assessment and analysis of the status of POPs pesticides is difficult, and therefore effective management of stockpiles and contaminated sites is compromised. This problem was highlighted during the PDF process, when the difficulty of obtaining accurate and comprehensive information was very evident. Project interventions will therefore establish a multi-sectoral consultation and coordination mechanism in order to facilitate the development of a clear, comprehensive and sustainable process to eliminate POPs pesticides. The results of Output 1.4, particularly the awareness raising campaign for government officials, will also contribute to this Output.

Output 1.6. A regular and systematic monitoring programme covers POPs pesticides inventories.

75. VEPA has already implemented an annual chemical survey, the first survey being undertaken in 2006. The initial survey philosophy and methodology did not highlight POPs pesticides as a special issue, and so the results of the 2006 survey conveyed little information of value for POPs pesticides management. Therefore the project will work with VEPA to modify and improve the methodology of future annual surveys to ensure that additional information on POPs pesticides is captured effectively. The information gathered through this process will be used in the information management system to be developed under Output 1.7.

Output 1.7. Establishment of a POPs pesticide management information system.

76. Vietnam will implement the FAO web-based information system to manage information gathered from the NIP and PDF inventories and additional information provided through periodical surveys in the future. This Output will be delivered with technical assistance from FAO.

Output 1.8. Specific activities associated with sound management, reduction and elimination of POPs incorporated in development strategies and programmes of key ministries and sectors.

77. In the business-as-usual scenario, treatment of POPs pesticides occurs on an *ad hoc* basis. With project support, key sectors, especially the agriculture, and environment sectors, will develop strategies and programmes integrated into their normal management processes to deal with POPs pesticides. This will allow for a coordinated approach across sectors to ensure that there is neither duplication of effort nor gaps in coverage.

Output 1.9. Communications strategy covering responsibilities of communities and the business sector.

78. MONRE, in cooperation with MOST will develop, in a participatory manner, a communications strategy to be implemented jointly by MONRE and MARD to communicate both the needs and responsibilities for management and destruction of POPs pesticides. This will, in part, build support among stakeholders for the need to destroy POPs pesticides, and educate them on the risks and safeguards associated with the selected technology.

Output 1.10. Awareness of the legal provisions governing importation and use of POPs pesticides among government officials and the general public supports efforts to prevent importation and use.

79. Continued importation of illegal pesticides occurs, in part, because of a low level of awareness among government officials, the general public, and particularly the agricultural community regarding the dangers of pesticides. The project will therefore support targeted awareness-raising campaigns for different stakeholder groups to increase awareness of the risks and alternatives. This activity will be supported by technical input from FAO

Output 1.11. Technical and managerial guidelines are prepared governing treatment of contaminated sites.

80. Given the number of contaminated sites in Vietnam, the challenge of rehabilitating them so as to improve the global environment is immense. Currently, government capacity is constrained due to uncertainties over methodologies and procedures, related to the lack of experience in tackling the issue. The project will formulate an operational plan for cost-effective management and containment of contaminated sites. This activity will be supported by technical input from FAO

Output 1.12: Stakeholder platform is established for preparation for a nation-wide empty container management programme

81. Empty container management programmes are an element of improved farmer awareness and control of illegal pesticides. The project will develop a proposal for the organization of Vietnamese national empty container management programme based on involvement of all stakeholders dealing with pesticides. Training on such a programme will be provided in cooperation with FAO.

Outcome 2. All known stockpiles are destroyed and impacts on human health relieved

With the capacity developed under Outcome 1, all known stockpiles can be destroyed. The selected technology for destruction could be incineration through co-processing in a cement kiln, because Viet Nam has a state-of-the-art facility belonging to Holcim Vietnam, at Hon Chong, Kien Giang Province. A bidding exercise will be conducted at the outset of the implementation phase which will determine the most cost effective destruction facility and service provider meeting the specified technical and legal standards, also ensuring that all technical & environmental specifications would be adhered to. The following additional information (indented and in italics) is given as additional background information on Holcim, as these were the findings from the PDF-B phase of the project. However, these paragraphs should not be seen as pre-empting or encouraging the choice of HOLCIM as destruction-option, as this will solely be determined during the just-mentioned bidding exercise.

The Holcim facility produces cement clinker in a new dry suspension preheater rotary cement kiln equipped with a precalciner, a best available techniques plant (IPPC, 2001). The site was tested for emissions from incineration of liquid chlorinated pesticides in 2003 and again in 2004 (see Technical Annex 3). The treatment of solid DDT waste is different from the liquid waste treated in 2003. However, the Fibronil treated in 2003 can very well be compared a POPs as the concentrations of chlorine are 16,2 % and of fluorine 26,06%.

The most vital part is the pre-treatment of the material. In this case a 16m³ steel tank for receiving, blending and feeding of the insecticide mix was built and connected to the light fuel oil pumping system with automatic dosage and switch off/on through the main control system. The tank was equipped with a diaphragm pumping system and was placed in a bunded concrete construction for spill recovery. The insecticide mix was pumped from the tank through stainless steel pipes

For the destruction of the DDT waste another specific pre-treatment by means of a blending and feeding device will be constructed that ensures that appropriate and equally spread concentration of DDT.

The chlorine tolerance of a kiln differs widely due to process constraints, but as rule of thumb, chlorine should usually be limited to 300 to 500 g/t cement clinker for a kiln without by-pass and 400 to 750 g/t for a kiln with by-pass. The concerned cement kiln has a by-pass. For further details, see appended SBC POPs Technology Specification and Data Sheet for Cement Kiln Co-Processing (High Temperature Treatment).

The plant produces approximately 4400 tonnes of clinker per day. Pure DDT contains about 50% chlorine, but in our case the DDT has been excavated and is mixed up with other materials and therefore it is expected that concentrations will be less than 1%. The design of the feeding will anyway make sure that not more than 300g Cl/t of clinker is fed to the kiln during the destruction.

Requirements as fulfilled during the tests in 2003 will be applied again:

- Project supervision and evaluation by third party experts.
- Independent stack gas sampling and analysis by an accredited company.
- The transport and the handling of the hazardous waste should comply with the hazardous waste management regulation in Vietnam, Decision 155 (1999).
- The emission levels should comply with the Vietnamese emission limit values in the standard TCVN 5939-1995 and TCVN 5940-1995 (Decision 155, 1999; Karstensen et al., 2003a).
- Power and water supply had been evaluated to be stable and adequate.

Additionally the following requirements will be applied:

- Holcim/GTZ Guidelines
- Holcim has committed itself to comply with newly developed international “certification” Guidelines which set an international benchmark for cement kilns treating hazardous wastes.

A number of conditions have already been fulfilled such as:

- An environmental impact assessment (EIA) following the Vietnamese requirements had been successfully completed (Decision 155, 1999; HCMC, 2002).
- The cement plant has previously been evaluated to be technical and chemical feasible for treatment of hazardous wastes. This evaluation will be repeated.

In US, the cement industry treats since 1990 about 25% of all organic hazardous waste. Globally, around 10 Million tonnes of organic hazardous waste are treated by cement kilns.

After the successful test in 2003, the plant has been treating more than 15000 tons of hazardous waste and has demonstrated considerable experience for proper treatment of hazardous waste. The details can be seen in the following list:

Typical waste material	Waste consumed (MT)
Plastic waste	5,000
Footware waste	6,700
Other bulk wastes (rubber waste, yarn waste...)	600
Consumer products (shampoo, tobacco..)	900
Obsolute pesticides	178
Bottom ash from Haz waste incinerator	350
Paint waste	110
Hazardous contaminated rags, packacging materials	320
Misc Chemical waste	400
Hazardous waste water	300
Used oils	200
Waste water sludge (Hazardous)	500
	15,732

Cement kilns have proven to be effective means of recovering value from waste materials (Kreft, 1995; Balbo et al., 1998) and co-processing in cement kilns is now an integral component in the spectrum of viable options for treating hazardous and industrial wastes, mainly practiced in developed countries. Alternative fuel and raw materials (AFR) derived from industrial sources such as tyres, waste oil, plastics, solvents and many more are commonly used by the cement industry as substitute fuels, but also hazardous organic wastes have been used as a co-fuel since the early 1970s (Chadbourne and Helmstetter, 1983; Burton, 1989; Hansen et al., 1996). Many tests have investigated the influence on the emissions and the product quality when waste materials are used to replace either fuels or raw materials in clinker production. So far, no adverse impacts have been identified (Lauber, 1982, 1987; Branscome et al., 1985; Garg, 1990; Karstensen, 1994; Chadbourne, 1997; Balbo et al., 1998).

Proper preparation and selection of appropriate feed points is however essential for environmentally sound co-processing. This means that alternative raw materials free of organic compounds can be added to the raw meal or raw slurry preparation system while mineral wastes containing significantly quantities of organic components must be introduced via the solid fuels handling system, i.e. directly to the main burner, to the secondary ring or, rarely, to the calcining zone of a long wet or dry kiln ("mid-kiln"). Alternative fuels must be fed to the main burner, to the precalciner, eventually to the kiln inlet, or to the mid-kiln of a long wet kiln. Most importantly is to ensure sufficient temperature, oxygen, retention time, and proper mixing conditions.

A stable cement kiln will comply with the US TSCA PCB incineration criteria which require a temperature of 1200 C and 2 s retention time at 3% oxygen (Dempsey and Oppelt, 1993; Federal Register, 1999; Lee et al., 2000) or the EU Directive 2000/76/EU, requiring a temperature of 850 C for at least 2 s for the incineration of non-chlorinated hazardous waste and 1100 C and 2 s retention time for organic substances containing more than 1% halogen at 2% oxygen (Council Directive, 2000). Another important criterion for environmentally sound destruction and irreversible transformation is to achieve a sufficient destruction efficiency (DE) or destruction and removal efficiency (DRE) (Basel Convention, 2007). The DRE consider emissions to air only while the more comprehensive DE is also taking into account all other out-streams, i.e. products and liquid and solid residues. A DRE value greater than 99.9999% is required for disposal of POPs in the US (Federal Register, 1999).

The importance of a strong and enforced regulatory environment will be dealt with by the technical conditions of the respective tender documents. The bidder has to fulfil these conditions but in the supervision works these conditions will be strictly controlled by the employed supervisory staff and therefore the Holcim/GTZ Guidelines will be adhered to.

Additionally Holcim is developing international certification procedures for cement kilns and these procedures will be applied for the test as well as for the whole project. The certification procedures are the

most stringent ever been applied for cement kilns and requires cement plants to fulfil the following preconditions/prerequisites:

- *An approved environmental impact assessment EIA and all necessary national/local licences;*
- *Compliance with all relevant national and local regulations;*
- *Compliance with the Basel and the Stockholm Convention;*
- *Approved location, technical infrastructure and processing equipment;*
- *Reliable and adequate power and water supply;*
- *Adequate air pollution control devices and continuous emission monitoring ensuring compliance with regulation and permits; needs to be verified through regular baseline monitoring;*
- *Exit gas conditioning/cooling and low temperatures (<200^oC) in the air pollution control device to prevent dioxin formation;*
- *Clear management and organisational structure with unambiguous responsibilities, reporting lines and feedback mechanism;*
- *An error reporting system for employees;*
- *Qualified and skilled employees to manage hazardous wastes and health, safety and environmental issues;*
- *Adequate emergency and safety equipment and procedures, and regular training;*
- *Authorised and licensed collection, transport and handling of hazardous wastes;*
- *Safe and sound receiving, storage, preparation and feeding of hazardous wastes;*
- *Adequate laboratory facilities and equipment for hazardous waste acceptance and feeding control;*
- *Demonstration of hazardous waste destruction performance through test burns;*
- *Adequate record keeping of hazardous wastes and emissions;*
- *Adequate product quality control routines;*
- *An environmental management and continuous improvement system certified according to ISO 14001, EMAS or similar;*
- *Regular independent audits, emission monitoring and reporting;*
- *Regular stakeholder dialogues with local community and authorities, and for responding to comments and complaints;*
- *Open disclosure of performance reports on a regular basis.*

The outputs that will contribute to this Outcome are:

Output 2.1 Buried POPs pesticides are excavated, where needed separated from contaminated soil, and deposited for repackaging

82. The majority of stockpiled pesticides are buried, and will therefore require excavation. For some of the buried stockpiles, the containers are still in good condition, so separation from soil is not required. However, in other cases the containers have deteriorated (or were open when the pesticides were buried), so the pesticides are mixed with soil to varying degrees. In such cases, separation of the pesticides from soil may be required.

Output 2.2. POPs pesticides in degraded containers are re-packaged on-site in preparation for transportation and disposal.

83. For some of the buried stockpiles and above-ground stockpiles containers have degraded to such an extent that re-packaging will be necessary for safe handling and transportation. In the case of buried stockpiles, the re-packaging process is complex because of the need to separate the stock itself from the surrounding medium (soil) and manage them separately. The new containers and re-packaging process will conform with international standards to ensure effective containment and minimal safety risks.

Output 2.3. Stocks are tested for destruction.

84. In the case of buried stockpiles, pure pesticides and soil with high pesticide concentrations will be sent for destruction to the selected disposal facility. Soil with low pesticides concentrations will be treated in situ using bio-remediation and phyto-remediation technologies. While visual inspection can separate these categories to a large degree, there will also be a requirement for testing to determine into which category a substantial amount of the excavate material should be placed. Also, for some above-ground stockpiles testing will be undertaken to ascertain chemical composition of the pesticides and pesticide concentrations in the media of buried stockpiles..

Output 2.4. Stocks are transported to the destruction facility (ies)

85. The excavated POPs pesticides will be transported to the selected facility under conditions that meet international standards so as to maintain safety risks at the lowest level possible. In the case of above-ground stockpiles, of which there are a large number, with each one containing only small quantities, given the geography of Vietnam, it may be necessary to transport stocks initially to “transit points” where they will be consolidated for further transportation to the destruction facility. This means that a combination of road and rail transportation may be required. For both modes of transportation, the same international standards will be applied as for the transportation to the destruction facility.

Output 2.5 Stocks are destroyed

86. Once stocks have been re-packaged and transported to the destruction facility, the POPs pesticides will be destroyed. As mentioned before, a bidding exercise will determine at the outset of the implementation phase which technology / facility will be carrying this out.

Output 2.6. Related contaminated media will be treated using bio-remedial and phyto-remedial technologies

87. These technologies are adapted form a technology successfully applied at a pilot scale in Danang (100m³ with 1 m depth in the heavy herbicide/dioxin contaminated site). “Active landfill” cells use microbial stimulation technology to detoxify DDT. The cap or landfill cell designed following the real DDT contamination level of the location. In the top of these cells direct injection pipe system serves as a net which provides water and water-soluble treated products for microbial growth following to the cycle treatment (at least 6 cycles). Different groups of microorganisms play roles in aerobic or anaerobic toxicant degradation. Based on this category about 2000 m² soil with depth ranging from 1.5 – 1.7 m (3000 m³) can be treated by this technology.

Outcome 3: Improved chemicals management prevents importation and use of POPs pesticides

88. Outcome 1 and 2 will generate the capacity to manage and destroy newly discovered historical stockpiles, but there is also the risk of new POPs pesticide stockpiles becoming established due to importation and confiscation of illegal pesticides of unknown content. The project will prevent this happening by addressing both the demand and supply sides of illegal pesticide use.

89. There are currently efforts to introduce improved chemicals management to Vietnam. For example, the EU-GTZ project “Sound Chemicals Management for a Healthier Environment in Vietnam” has the overall objective to support local stakeholders in the development and implementation of environmentally sound and sustainable management of chemicals and pesticides in urban and semi-

urban areas. Specifically, the project aims to support counterparts in Vietnam in the enhancement of capacities for:

- Improvement of the management of chemicals and pesticides
- Inventory and risk assessment tools
- Environmental monitoring techniques
- Monitoring of environmental pollution
- Safety measures when handling chemicals

90. Consequently the project will partner with GTZ and other partners on this issue so as to establish the individual and technical capacity for prevention of continued cross-border movement of illegal pesticides. GEF funding will be used to address particular issues of POPs pesticides.

91. Outputs that will contribute to this Outcome are:

Output 3.1: National chemicals safety standards

92. Although the legislative framework for chemicals management is well developed, this has not yet been translated into an effective regulatory system. A key element of such a system is the establishment of national chemicals safety standards. The project will work with GTZ and FAO on the establishment of such standards. No GEF funding will be used for activities resulting in this Output.

Output 3.2: Line agency staff trained in management of POPs pesticides.

93. Staff of different line agencies have responsibilities related to importation of pesticides. The project will develop and deliver targeted training courses to build individual capacity within line agencies to deliver their mandates. This will include, for example, training of DONRE and SDPP staff in handling, transportation and disposal of pesticides, training of customs, border police and plant health inspectorate staff in identification, handling and storage of illegal pesticides, training in pollution monitoring, management and safe treatment of hazardous wastes, including POPs and POPs-pesticides, and training of farmers, pesticide suppliers and distributors. Training will also include aspects of IPM and IVM, with linkages built to parallel IPM and IVM initiatives led by FAO.

Output 3.3: A compendium of legal documents on POPs pesticides management for use by Customs and other key agencies involved in management and destruction of POPs pesticides.

94. Another identified weakness of the regulatory environment stems from the lack of a unified chemical safety law, meaning that the legal provisions regarding importation and use of pesticides are viewed by stakeholders such as GDoC as being very complex. The project will produce a compendium, summarizing legal provisions concerning importation and use of pesticides to facilitate the work of Customs and other law enforcement agencies.

Output 3.4: Bilateral task forces between Vietnamese border provinces and their Chinese counterparts

95. As established during the PDF process, by far the most significant issue in eliminating POPs pesticides is the prevention of on-going illegal importation from neighbouring countries. This issue cannot be addressed unilaterally. Therefore bilateral task forces will be established, initially with China, and subsequently, if necessary, with Laos PDR and Cambodia, to eliminate illegal importation of POPs pesticides.

Output 3.5: Facilities for handling and storage of illegal pesticides developed at key border sites

96. Storage facilities will be expanded at high-volume illegal border crossing sites to eliminate the situation where authorities discontinue checking for illegal pesticides when storage is full.

Output 3.6: Capacity to deal with new accumulations of obsolete pesticides

97. Systems will be developed to ensure that any new obsolete pesticides generated through confiscations, damage, age or other reasons will be disposed off in a timely and environmentally sound manner.

Project Indicators, Risks and Assumptions

98. Indicators at the level of Objective and Outcomes are provided below. For indicators at the Output level, see Section II, Part II.

Objective :

- By the end of the project the inventory of POPs pesticides stockpiled sites in Vietnam contains no sites posing known or potential threats to human health

Justification: Destruction of POPs pesticides from all stockpiles, including those which may be discovered during project implementation, and effective treatment of contaminated sites will result in the elimination of human health hazards

Outcome 1

- Within 9 months of the start of project implementation, international standards have been adopted for management of pesticide stockpiles

Justification: The application of international standards will reduce the risks associated with destruction of pesticide stockpiles, including the risk of dioxin production from incomplete incineration.

- From 2008 onwards, government expenditure on destruction of POPs pesticides is at least \$600,000 (until stockpiles destroyed)

Justification: Government funding to an on-going programme to eliminate POPs pesticides is an indicator of commitment and enhanced capacity

Outcome 2

- By the end of 2009, all known stockpiles destroyed

Justification: A direct measure of volume of POPs pesticides destroyed.

Outcome 3

- By the end of the project, the volumes of illegal pesticides confiscated are no more than 2 tonnes per month (based on equal level of effort)

Justification: A direct measure of the effectiveness of interventions designed to prevent continued illegal importation of pesticides.

Assumptions

99. Key assumptions required to achieve the Outcomes and Objective are:

- External changes do not affect the viability of selected technologies

- Improved capacity addresses the demand-side dynamics for use of POPs pesticides
- Government maintains Decision 64 funding
- Government maintains application of international standards to minimize potential impacts on human health
- Mainstreaming POPs pesticides into improved chemical management eliminates illegal importation

Risk		Risk Mitigation Measure
Existing inventories have significantly under-estimated total stockpiles, and post-project funding is inadequate to eliminate newly-found stockpiles.	M	Both the NIP and PDF-B inventories targeted provinces known to have been the location of large POPs pesticides historically. Government funding for treatment of chemical “hotspots” has been increasing in recent years
During project implementation, standards specified by the project document are not adhered to.	M	The project will utilize independent monitors to ensure that international standards for handling, re-packaging, transportation and destruction are adhered to
No acceptable bids are received for destruction of the POPs pesticides within Viet Nam, or bids are more expensive than budgeted.	L	Based on previous testing, it is believed that acceptable facilities exist, and that the costs likely to be quoted fall within the budget figures used. In the event that no acceptable facility is found, options for export of the POPs pesticides to a suitable hazardous wastes facility will be explored. In the event that the costs of export exceed the budget for Output 2.5, or acceptable bids quote substantially higher prices, project interventions under Outcome 3 will be down-scaled in order to move financial resources to Outcome 2. In this case, the Government of Vietnam will also be invited to reconsider its co-financing contributions.
Environmental and human health issues associated with transportation and destruction of POPs pesticides	M	Inevitably there are risks associated with excavation, transportation and destruction of POPs pesticides. These risks apply no matter what destruction technology is selected. The call for tenders following international accepted guidelines will minimize this risk, which is considered lower than the risk of future environmental and human health problems if the pesticides are left untreated.
Lack of stakeholder acceptance (local, national) for selected destruction technology	L	The Peoples Committee will handle the permit application officially and involve local experts and local people. They will also appoint stakeholders who must be involved in the entire process, including Central Government official and academia experts. The project will also involve the best international experts available, for technical feasibility approval, technical design criteria, supervision and reporting of the project. Output 1.9 will support a process of stakeholder communication to build support for the destruction of POPs pesticides
Reputational risk to UNDP and the GEF if the project fails	L	Project facilitates the final step on establishing national capacities for hazardous waste destruction according to international standards. This is one of the obligations under the Basle Convention, stating that if a sovereign nation has the capacity to destroy a toxic chemical within their national borders, they are obligated to do so. By the fulfilment of international standards, the project will set new national standards for other existing facilities and create strong incentives for these facilities to achieve the same standards
Novel bio-remediation technologies prove not to be fully effective in eliminating POPs pesticides.	L	Exchange of lessons learned with a team developing similar technologies in India will improve the quality of the novel technologies. The biochemical basis of bio-remediation is not inherently better suited to dioxins than to POPs pesticides
Overall Rating	M	

Expected global, national and local benefits

100. Vietnam is almost certainly the country with the greatest numbers and proportion of the population experiencing adverse health effects due to exposure to POPs. Thus the national benefits to Vietnam will be similar to those experienced globally, but more intense due to the location of the POPs pesticides and the historic “load” of POPs impacts on human health. Furthermore, agriculture employs more than two thirds of Vietnam’s labour force and contributes one fourth of the country’s GDP and a third of export earnings. The elimination of POPs pesticides will have an impact in terms of increased productivity in the agricultural sector due to reduced health impacts on agricultural workers.
101. This project will eliminate all known stockpiles of POPs pesticides in Vietnam. This will yield global benefits in eliminating at least 1140 tonnes of POPs pesticides. In terms of national and local benefits, the human health benefits will be very significant, as rural communities live in close proximity to all sites, and in some cases, on top of the stockpiles.
102. The project will demonstrate innovative bio-remediation technologies, developed in Vietnam originally for treatment of dioxin sites, but also applicable to DDT stocks and other sites. The project will facilitate south-south technology exchange, initially by promoting exchange of lessons and experiences with a team in India that has been developing similar technologies. The resulting improved technologies will be widely applicable in other countries facing similar needs for bio-remediation.

Country Ownership: Country Eligibility and Country Drivenness

103. Vietnam ratified the Stockholm Convention on 22nd July 2002, and is eligible for technical assistance from UNDP.
104. The elimination of stockpiles of POPs pesticides is one of the top priority actions identified in Vietnam’s National Implementation Plan (NIP).
105. During the implementation of the NIP, activities were specified related to the need to carry out pollutant analysis, assessment, classification and development of a road map for treatment of the POPs pesticides contaminated areas. Another area that was highlighted was the transfer and promotion of technology for the safe and full disposal of POPs Pesticides.
106. Several priority actions identified in the NIP relate to Outcomes to be secured under this project, including:

NIP priority 2: Sound management, disposal and phase-out of POPs pesticides stockpiles

Implementing Agencies: Ministry of Agriculture and Rural Development, Ministry of Natural Resources and Environment

Collaborating Agencies: Ministry of Trade, General Department of Customs, PPCs

NIP priority 5: Thorough treatment of PCBs and POPs pesticides contaminated hotspots

Implementing Agency: Ministry of Natural Resources and Environment

Collaborating Agencies: Relevant Ministries, sectors and localities

107. Other priorities are listed in the NIP related to legislation, capacity building and awareness but these would only apply to this project as far as they are sector-specific for pesticides.

108. UNDP's Country Programme Action Plan (2006 – 2010) is designed to contribute to two of the three outcomes identified in the UNDAF, namely Outcome No. 1 on more equitable, inclusive and sustainable growth, and Outcome No. 3 on governance that effectively supports rights-based development. These are areas where UNDP has demonstrated comparative advantages, has learned useful lessons from past cooperation activities and can make a real difference.
109. Promotion of environmentally sustainable development includes assistance to develop policies that take into account environmental protection and rational use of natural resources. It also helps to ensure that resource allocation, utilization and mobilization decisions involve and are accountable to people and their representatives. Among six CP outputs to be achieved through UNDP assistance are:
- Capacities and systems for enhanced oversight by national and local legislative bodies on the implementation of the Strategic Orientation on Sustainable Development (SD), National Strategy on Environmental Protection and various other national environmental laws and policies:
 - Strengthening legislation and oversight capacities of the National Assembly and People's Councils in selected provinces for the enforcement of the Law on Environmental Protection (LEP), Biodiversity Law and implementation of the Strategic Orientation for Sustainable Development in Viet Nam, Disaster Mitigation Strategy and other related national strategies which would include raising awareness on SD issues, improving access to environmental information/data, encouraging stakeholder consultations and piloting mechanisms that allow public monitoring of environmental issues;
 - Designing and introducing oversight structures for SD at national, provincial and sectoral levels, and building capacities for strategic coordination which would include capacity building for overseeing the implementation of obligations under international environmental conventions.
 - Sustainable development and environmental legal frameworks, strategies, policies and long-term plans developed with broad participation of local people and stakeholders and in line with international environmental conventions:
 - Supporting the formulation of strategic priorities, policies and legal instruments that encourage environmental protection and sustainable use of natural resources, support poverty reduction and improve equality, focusing on capacity building to implement the Stockholm Convention on POP's and other relevant conventions;
 - Improved and publicly accessible environmental information for monitoring:
 - Improving access to data on SD, and specifically environmental information, for the public generally and officials at various levels particularly, including support to developing a strategy and channels for the dissemination of SD/environment information, publication/dissemination of lessons learned, and developing pilots/models into user-friendly extension materials;
 - Strengthening institutional capacities to monitor and report on environmentally SD indicators and outcomes, including new support to capacity strengthening for monitoring key indicators in selected sectors and provinces, for reporting by key departments and selected national NGO's.

Coordination with other related initiatives

110. The project builds on the GEF-supported NIP preparation process and is consistent with NIP priorities 2 and 5, as mentioned above. In this regard it will help Vietnam to meet its obligations under the Stockholm Convention. By promoting environmentally sound use of hazardous chemicals (and taking obsolete pesticides out of use) the project will also contribute to the objectives of the Rotterdam Convention. Activities under Outcome 3 will reduce transboundary movement of hazardous chemical, thus contributing to the objectives of the Basel Convention.
111. The project is part of a portfolio of GEF-funded interventions to address POPs in Vietnam. The portfolio is managed by VEPA, even though other government and business sector agencies will be responsible for implementation of different projects. As such, this project will be coordinated with other GEF-funded projects, such that lessons can be shared and overall cost savings of the portfolio secured. These will include the ongoing Global Medical Waste Programme and the pipeline project on Agent Orange, to name just a few.
112. The project will also build links to the GTZ project “Sound Chemicals Management for a Healthier Environment in Vietnam”. The project also builds on successful results from an FAO- IPM project implemented since the 1990’s and a recent DANIDA-IPM funded project
113. UNDP is working with the Government to initiate a project funded by the Quickstart Programme as it relates to the Strategic Approach for Integrated Chemicals Management (SAICM). This would allow amongst other, a further mainstreaming of the specific GEF programmes within the National Vietnamese policies as they relate to chemical management. The Government is currently considering appointing a SAICM Focal Point, further to which this effort will be further pursued.

Sustainability

114. Vietnam has already passed legislation banning the importation and use of POPs pesticides. Therefore, once existing stockpiles have been eliminated and contaminated sites treated, the global environmental benefits will be sustained, providing illegal importation can be prevented. The Government of Vietnam is fully committed to the elimination of POPs from the environment, as demonstrated by its early ratification of the Stockholm Convention and proactive role in passing the necessary legislation. This project will assist the government in building capacity for, and eliminating barriers that prevent the full implementation of the current legislative and regulatory instruments.
115. Government decision 64/2003/QD-TTg of April 22, 2003 seeks to address highly polluted establishments (including more than 4,295 enterprises) that are reported to cause serious environmental pollution problems. From this number 439 sites have been selected for priority action up to the year 2007.
116. Activities and Outputs leading to Outcome 1 will build capacity not only to eliminate all known stockpiles but also to detect, manage and eliminate stockpiles discovered in the future and to manage contaminated sites so as to contain human health risks. Key Outputs include

Output 1.5. MONRE/VEPA establishes an effective consultation and coordination mechanism to oversee management of POPs in Vietnam.

Output 1.6. A regular and systematic monitoring programme covers POPs pesticides inventories.

Output 1.7. Establishment of a POPs pesticide management information system.

Output 1.8. Specific activities associated with sound management, reduction and elimination of POPs incorporated in development strategies and programmes of key ministries and sectors.

Output 1.9. Communications strategy covering responsibilities of communities and the business sector.

Output 1.10. Awareness of the legal provisions governing importation and use of POPs pesticides among government officials and the general public supports efforts to prevent importation and use.

Output 1.11. Technical and managerial guidelines are prepared governing treatment of contaminated sites.

117. The mainstreaming of POPs pesticides elimination into sound chemicals management will also contribute to sustainability.

Replicability

118. As the project will eliminate all existing stockpiles of POPs pesticides in Vietnam, and associated contaminated sites, replication in Vietnam is not necessary. The efforts from the pilot programme for site-remediation however would be replicated to other sites within the country as it is expected that the benefits of the rehabilitated sites will attract other communities to emulate similar efforts.

119. In addition, lessons learned will be valuable in guiding others countries within the S.E. Asian region as they seek to implement similar measures.

PART III : Management Arrangements

120. The project will be managed by the National Execution modality (NEX), with the following arrangements:

- *Implementing Partner:* As the national focal point for the project, MONRE is accountable to the Government and UNDP for ensuring (a) the substantive quality of the project, (b) the effective use of both national and UNDP resources allocated to it, (c) the availability and timeliness of national contributions to support project implementation and (d) the proper coordination among all project stakeholders, particularly national parties.
- *Responsible Party:* As the day-to-day implementer(s) of project activities, VEPA is responsible for mobilizing all national and international inputs to support project implementation, organizing project activities in accordance with the agreed work plan, and reporting to MONRE and UNDP on the progress as well as financial status of the project.

121. UNDP-CO will assist VEPA in mobilization of international inputs, upon official request from the NPD.

122. The project implementation structure will be set up as below:

- The Project Executive Board (PEB)
- The Project Management Unit (PMU)

123. *Project Executive Board (PEB):* The PEB will make all necessary decisions and provide guidance for implementation of project activities, including approval of the overall project work-plan, and budget revisions.

124. The National Steering Committee for Stockholm Convention on POPs (NSC) will provide overall supervision to the implementation of this project. To undertake this responsibility, the NSC will nominate its appropriate members representing MONRE, MARD and MPI to form the PEB together with a representative of UNDP-CO. The NSC member representing MONRE will be the chairperson of the PEB. The PEB will meet every six-months, or more often on an *ad-hoc* basis, if deemed necessary.
125. *National Project Director (NPD)*: MONRE will appoint a senior official at directorial level of VEPA to be the NPD. The NPD will be responsible to the PEB for overall management and implementation of the project.
126. *Project Management Unit (PMU)*: The PMU will be responsible for the overall organization and implementation of all project activities and will be accountable to the NPD. The Project office will be located in the main building of VEPA and equipped as needed by the project. The PMU will consist of following positions:
- Project Manager (PM) (recruited, 48 months, full-time)
 - Project Secretary/ Accountant (recruited, 48 months, full time)
127. **Public Information and Advocacy**: During its lifetime, the project may produce technical reports, education materials/publications, organize workshops and document experience/lessons learnt. UNDP will provide necessary support, upon official request from the NPD.
128. In order to accord proper acknowledgement to GEF and UNDP for providing funding and technical assistance, GEF and UNDP logos should appear on all relevant project publications, including among others, project hardware and vehicles purchased with the project funds. Any citation on publications should also accord proper acknowledgment to GEF and UNDP
129. **Country Office Support**: The UNDP CO will provide services for tendering of packages of activities, procurement of sub-contractors, recruitment of individual consultants, and contracting, upon the formal request of the NPD. UNDP prevailing cost recovery policies will apply to these services.

PART IV: Monitoring and Evaluation Plan and Budget

130. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures, Decree 131/2006/ND-CP and Circular 04/2007/TT-BKH of the Government and will be provided by the project team and the UNDP Country Office (UNDP-CO) with support from UNDP/GEF. The Logical Framework Matrix in Section II, Part II provides *performance* and *impact* indicators for project implementation along with their corresponding *means of verification*. These will form the basis on which the project's Monitoring and Evaluation system will be built.
131. The following sections outline the principle components of the Monitoring and Evaluation Plan and indicative cost estimates related to M&E activities. The project's Monitoring and Evaluation Plan will be presented and finalized at the Project's Inception Report following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

Project Inception Phase

132. A Project Inception Workshop will be conducted with the full project team, relevant government counterparts, co-financing partners, the UNDP-CO and representation from the UNDP-GEF Regional Coordinating Unit, as well as UNDP-GEF (HQs) as appropriate.
133. A fundamental objective of this Inception Workshop will be to assist the project team to understand and take ownership of the project's goals and objectives, as well as finalize preparation of the project's first annual work plan on the basis of the project's logframe matrix. This will include reviewing the logframe (indicators, means of verification, assumptions), imparting additional detail as needed, and on the basis of this exercise finalize the Annual Work Plan (AWP) with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project.
134. Additionally, the purpose and objective of the Inception Workshop (IW) will be to: (i) introduce project staff with the UNDP-GEF *expanded team* which will support the project during its implementation, namely the CO and responsible Regional Coordinating Unit (RCU) staff; (ii) detail the roles, support services and complementary responsibilities of UNDP-CO and RCU staff vis à vis the project team; (iii) provide a detailed overview of UNDP-GEF reporting and monitoring and evaluation (M&E) requirements, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Project Report (APR), Tripartite Review Meetings, as well as mid-term and final evaluations. Equally, the IW will provide an opportunity to inform the project team on UNDP project related budgetary planning, budget reviews, and mandatory budget rephasings.
135. The IW will also provide an opportunity for all parties to understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff and decision-making structures will be discussed again, as needed, in order to clarify for all, each party's responsibilities during the project's implementation phase.

Monitoring responsibilities and events

136. A detailed schedule of project reviews meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: (i) tentative time frames for Tripartite Reviews, Steering Committee Meetings, (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities.
137. Day to day monitoring of implementation progress will be the responsibility of the Project Manager based on the project's Annual Work Plan and its indicators. The Project Team will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.
138. The Project Manager and the Project GEF Technical Advisor will fine-tune the progress and performance/impact indicators of the project in consultation with the full project team at the Inception Workshop with support from UNDP-CO and assisted by the UNDP-Montreal Protocol Unit (MPU). Specific targets for the first year implementation progress indicators together with their means of verification will be developed at this Workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the Annual Work

Plan. The local implementing agencies will also take part in the Inception Workshop in which a common vision of overall project goals will be established. Targets and indicators for subsequent years would be defined annually as part of the internal evaluation and planning processes undertaken by the project team.

139. Measurement of impact indicators related to global benefits will occur according to the schedules defined in the Inception Workshop and tentatively outlined in the Logical Framework matrix in Section II, Part II. The measurement, of these will be undertaken through subcontracts or retainers with relevant institutions (e.g. vegetation cover via analysis of satellite imagery, or populations of key species through inventories) or through specific studies that are to form part of the projects activities (e.g. measurement carbon benefits from improved efficiency of ovens or through surveys for capacity building efforts) or periodic sampling such as with sedimentation.
- 140.** *Periodic monitoring of implementation progress* will be undertaken by the UNDP-CO through quarterly meetings with the Responsible Party, or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.
141. The UNDP Country Office and UNDP-MPU as appropriate, will conduct yearly visits to projects that have field sites, or more often based on an agreed upon scheduled to be detailed in the project's Inception Report / Annual Work Plan to assess first hand project progress. Any other member of the Steering Committee can also accompany, as decided by the SC. A Field Visit Report will be prepared by the CO and circulated no less than one month after the visit to the project team, all SC members, and UNDP-GEF.
142. *Annual Monitoring* will occur through the ***Tripartite Review (TPR)***. This is the highest policy-level meeting of the parties directly involved in the implementation of a project. The project will be subject to Tripartite Review (TPR) at least once every year. The first such meeting will be held within the first twelve months of the start of full implementation. The project proponent will prepare an Annual Project Report (APR) and submit it to UNDP-CO and the UNDP-GEF regional office at least two weeks prior to the TPR for review and comments.
143. The APR will be used as one of the basic documents for discussions in the TPR meeting. The project proponent will present the APR to the TPR, highlighting policy issues and recommendations for the decision of the TPR participants. The project proponent also informs the participants of any agreement reached by stakeholders during the APR preparation on how to resolve operational issues. Separate reviews of each project component may also be conducted if necessary.

Terminal Tripartite Review (TTR)

144. The terminal tripartite review is held in the last month of project operations. The project proponent is responsible for preparing the Terminal Report and submitting it to UNDP-CO and RBAP-GEF's Regional Coordinating Unit. It shall be prepared in draft at least two months in advance of the TTR in order to allow review, and will serve as the basis for discussions in the TTR. The terminal tripartite review considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated objectives and contributed to the broader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainability of project results, and acts as a vehicle through which lessons learnt can be captured to feed into other projects under implementation or formulation.

145. The TPR has the authority to suspend disbursement if project performance benchmarks are not met. Benchmarks will be developed at the Inception Workshop, based on delivery rates, and qualitative assessments of achievements of outputs.

Project Monitoring Reporting

146. The Project Manager in conjunction with the UNDP-GEF extended team will be responsible for the preparation and submission of the following reports that form part of the monitoring process. Items (a) through (f) are mandatory and strictly related to monitoring, while (g) through (h) have a broader function and the frequency and nature is project specific to be defined throughout implementation.

Inception Report (IR)

147. A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year/ Annual Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the project. This Work Plan would include the dates of specific field visits, support missions from the UNDP-CO or the Montreal Protocol Unit (MPU) or consultants, as well as time-frames for meetings of the project's decision making structures. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 months time-frame.
148. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may effect project implementation.
149. When finalized the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the IR, the UNDP Country Office and UNDP-GEF's Regional Coordinating Unit will review the document.

Annual Project Report (APR)

150. The APR is a UNDP requirement and part of UNDP's Country Office central oversight, monitoring and project management. It is a self -assessment report by project management to the CO and provides input to the country office reporting process, as well as forming a key input to the Tripartite Project Review. An APR will be prepared on an annual basis prior to the Tripartite Project Review, to reflect progress achieved in meeting the project's Annual Work Plan and assess performance of the project in contributing to intended outcomes through outputs and partnership work.
151. The format of the APR is flexible but should include the following:
- An analysis of project performance over the reporting period, including outputs produced and, where possible, information on the status of the outcome
 - The constraints experienced in the progress towards results and the reasons for these
 - The three (at most) major constraints to achievement of results
 - AWP, CAE and other expenditure reports (ERP generated)
 - Lessons learned
 - Clear recommendations for future orientation in addressing key problems in lack of progress

Project Implementation Review (PIR)

152. The PIR is an annual monitoring process mandated by the GEF. It has become an essential management and monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects. Once the project has been under implementation for a year, a Project Implementation Report must be completed by the CO together with the project. The PIR can be prepared any time during the year (July-June) and ideally prior to the TPR. The PIR should then be discussed in the TPR so that the result would be a PIR that has been agreed upon by the project, the executing agency, UNDP CO and the concerned RC.
153. The individual PIRs are collected, reviewed and analysed by the Regional Technical Advisor of UNDP/GEF prior to sending them to the focal area clusters at the UNDP/GEF headquarters. The focal area clusters supported by the UNDP/GEF M&E Unit analyse the PIRs by focal area, theme and region for common issues/results and lessons. The TAs and PTAs play a key role in this consolidating analysis.
154. The focal area PIRs are then discussed in the GEF Interagency Focal Area Task Forces in or around November each year and consolidated reports by focal area are collated by the GEF Independent M&E Unit based on the Task Force findings.
155. The GEF M&E Unit provides the scope and content of the PIR. In light of the similarities of both APR and PIR, UNDP/GEF has prepared a harmonized format for reference.

Quarterly Progress Reports

156. Short reports outlining main updates in project progress will be provided quarterly to the local UNDP Country Office and the UNDP-GEF regional office by the project team.

Project Terminal Report

157. During the last three months of the project the project team will prepare the Project Terminal Report. This comprehensive report will summarize all activities, achievements and outputs of the Project, lessons learnt, objectives met, or not achieved, structures and systems implemented, etc. and will be the definitive statement of the Project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the Project's activities.

Independent Evaluation

158. The project will be subjected to at least two independent external evaluations as follows:-

Mid-term Evaluation

159. An independent Mid-Term Evaluation will be undertaken at the end of the second year of implementation. The Mid-Term Evaluation will determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project

document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

Final Evaluation

160. An independent Final Evaluation will take place three months prior to the terminal tripartite review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

Audit Clause

161. The Government will provide the Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

Learning and Knowledge Sharing

162. Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums. In addition:

163. The project will participate, as relevant and appropriate, in UNDP/GEF sponsored networks, organized for Senior Personnel working on projects that share common characteristics.

164. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation through lessons learned.

165. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Identify and analyzing lessons learned is an on-going process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered not less frequently than once every 12 months. UNDP/GEF shall provide a format and assist the project team in categorizing, documenting and reporting on lessons learned. To this end a percentage of project resources will need to be allocated for these activities.

Monitoring and Evaluation Work plan and corresponding Budget

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team Staff time</i>	Time frame
Inception Workshop	<ul style="list-style-type: none"> ▪ Project Manager ▪ UNDP CO ▪ UNDP GEF 		Within first two months of project start up
Inception Report	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP CO 	None	Immediately following IW
Measurement of Means of Verification for	<ul style="list-style-type: none"> ▪ Oversight by Project GEF Technical Advisor and Project 	To be determined as part of the Annual Work	Annually prior to APR/PIR and to the

Project Progress and Performance (measured on an annual basis)	<ul style="list-style-type: none"> ▪ Manager ▪ Measurements by regional field officers and local IAs 	Plan's preparation. Indicative cost \$50,000	definition of annual work plans
APR and PIR	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP-CO ▪ UNDP-GEF 	None	Annually
TPR and TPR report	<ul style="list-style-type: none"> ▪ Government Counterparts ▪ UNDP CO ▪ Project team ▪ UNDP-GEF Regional Coordinating Unit 	None	Every year, upon receipt of APR
Steering Committee Meetings	<ul style="list-style-type: none"> ▪ Project Manager ▪ UNDP CO 	None	Following Project IW and subsequently at least once a year
Mid-term External Evaluation	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP- CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team) 	\$20,000	At the mid -point of project implementation.
Final External Evaluation	<ul style="list-style-type: none"> ▪ Project team, ▪ UNDP-CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team) 	\$30,000	At the end of project implementation
Terminal Report	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP-CO ▪ External Consultant 	None	At least one month before the end of the project
Lessons learned	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP-GEF Regional Coordinating Unit (suggested formats for documenting best practices, etc) 	\$15,000 (average 3,000 per year)	Yearly
Audit	<ul style="list-style-type: none"> ▪ UNDP-CO ▪ Project team 	\$4,000 (average \$1000 per year)	Yearly
Visits to field sites (UNDP staff travel costs to be charged to IA fees)	<ul style="list-style-type: none"> ▪ UNDP Country Office ▪ UNDP-GEF Regional Coordinating Unit (as appropriate) ▪ Government representatives 	\$15,000 (average one visit per year)	Yearly
TOTAL INDICATIVE COST <i>Excluding project team staff time and UNDP staff and travel expenses</i>		US\$ 134,000	

PART V: Legal Context

166. This project document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement between the Socialist Republic of Viet Nam and the United Nations Development Programme signed by the parties on 21 March 1978. The host country executing agency shall, for the purpose of this Agreement, refer to the Government Cooperating Agency described in that Agreement.

167. The UNDP Resident Representative in Viet Nam is authorized to effect in writing the following types of revision to this project document, provided that s/he has verified the agreement thereto by the UNDP-GEF Unit and is assured that the other signatories of the project document have no objection to the proposed changes:

- a) Revision of, or addition to, any of the annexes to the Project Document;
- b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;
- c) Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and
- d) Inclusion of additional annexes and attachments only as set out here in this Project Document

168. *National Professional Project Personnel:* The Government agrees to the recruitment of nationally recruited project professional personnel (NPPP) required for the implementation of this project, in accordance with UNDP policies and procedures established within the United Nations system for this purpose. These services constitute an addition to the regular personnel resources to be provided by the Government and will be available for the duration of UNDP participation in the project. The remuneration of NPPP will be determined on a case-by-case basis in accordance with the policies and procedures of UNDP; it should exceed neither the prevailing compensation for comparable functions in the host country nor remuneration levels applicable within the United Nations system.

SECTION II: Strategic Results Framework and GEF Increment

PART I : Incremental Cost Analysis

A. Project Background

Vietnam has suffered perhaps more than any other country from the effects of POPs. The import and use of all POPs pesticides is now banned in Vietnam. However, stockpiles that accumulated before the bans came into effect still exist. The Government of Vietnam has faced serious constraints in dealing with stockpiles of POPs pesticides, including constraints due to funding, access to appropriate technologies, and coordination among multiple ministries and agencies. Despite these constraints, the government at central and local level has made determined efforts to deal with stockpiles, and where government funding has not been forthcoming, local communities have taken action themselves.

While some stockpiles are housed in sheds or other buildings, in some communities with particularly large stockpiles, the lack of suitable infrastructure resulted in the burial of POPs pesticides stockpiles. An estimated 1032 tonnes of POPs pesticides have been located in five such sites, and again it is certain that there are more such sites in the country. The buried stockpiles are of far greater concern than above-ground stockpiles both because of their size and because there is far less control over storage conditions, resulting in much larger potential and actual human health problems. Also, while the locations of above-ground stockpiles are usually known, records concerning buried stockpiles are incomplete and sometimes missing completely. This results in farmers using the land for gardens and building houses above the buried stockpiles.

While many stockpiles date from before the banning of POPs pesticides in Vietnam, others are active, especially in border regions, where significant quantities of banned pesticides are captured and confiscated every month. For example, in Lang Son province, confiscated illegal pesticides in a Plant Protection Sub-Department storage facility were incinerated in December 2006, yet the 2m x 5m x 2m storage facility was filled again by June 2007. Even though illegal pesticides were known to be crossing the border, no further confiscations can be undertaken until the new stockpile is destroyed since there are no further storage facilities. It is estimated that, for the northern provinces bordering China, 5-7 tonnes of illegal pesticides are confiscated every month, and there are larger quantities which cross the border without being confiscated, either because they evade detection, or because the authorities do not have the capacity to confiscate them.

This project will eliminate all known stockpiles of POPs pesticides in Vietnam. However, the destruction of known stockpiles is an incomplete response for two reasons. Firstly, it is clear that there are a potentially large number of additional, as yet unknown stockpiles, meaning that a one-off destruction process will be inadequate in dealing with additional stockpiles as they are discovered. Secondly, there is a major continuing problem of illegal importation of pesticides which may contain substantial amounts of POPs.

Consequently, as important as the destruction of known stockpiles, is the need to build capacity both to destroy additional stockpiles as they are discovered, and to eliminate continued importation of illegal POPs pesticides. Capacity to eliminate continued importation is needed on both the demand side, to reduce and ultimately eliminate demand for such pesticides, and on the supply side, to eliminate the source of the pesticides. Supply-side management will require bilateral cooperation with neighbouring states, China, Lao PDR and Cambodia.

B. Incremental Cost Assessment

Business-as-Usual

In the absence of the project, the following activities would continue.

Outcome 1: Improved capacity facilitates elimination of POPs pesticides stockpile s

Capacity would remain low, resulting in stockpile destruction and management of contaminated sites at levels well below international standards. This, in turn, would result in greater impacts on human health, with local communities continuing to suffer ill-effects from buried stockpiles, and other communities being at risk due to dioxin emissions from incomplete combustion in incineration facilities.

Outcome 2: All known stockpiles are destroyed and impacts on human health relieved

Above-ground stockpiles would continue to be destroyed, but using unsafe procedures resulting in incomplete combustion in sub-standard incineration facilities. Buried stockpiles would remain largely unmanaged, and deterioration of the original structures over time would increase the risk of future adverse human health impacts.

Outcome 3: Improved chemicals management prevents importation and use of POPs pesticides

Illegal importation of pesticides, potentially including POPs pesticides, would continue, and Plant Protection and Customs officials would be unable to curb such importation effectively due to numerous constraints related to institutional capacity. Demand for cheap pesticides from farmers would remain high, in part due to their ignorance of the potential adverse impacts and risks of using POPs pesticides

Global Environmental Benefits

Global environmental benefits will result from the destruction of at least 1140 tonnes of POPs pesticides, with additional amounts being destroyed in future years due to the sustained capacity built by the project. Increased capacity to treat contaminated sites will result in the elimination of additional quantities of POPs pesticides from the global environment.

Results Framework

The proposed Results Framework is summarized in the Logical Framework Matrix in Section II Part II. The three Outcomes will ensure that:

- Systemic capacity is sufficiently developed through the introduction of international standards in destruction of stockpiles and management of contaminated sites, such that stockpiles are destroyed safely and in a timely fashion.
- Institutional capacity will be developed to mainstream the elimination of POPs pesticides into a national chemical safety system, and through empowering Customs and other agencies to prevent future illegal importation of pesticides.
- The individual capacity of staff in line agencies and other stakeholders will be improved through training and awareness raising so as to sustain government commitment to the elimination of obsolete pesticides and to safe chemicals management.

- The knowledge base is improved to the extent that the best available technologies and practices in destruction of obsolete pesticides and management of contaminated sites reduces future adverse impacts on human health.

Incremental Reasoning

In the absence of a GEF project, some POPs pesticides stockpiles would be destroyed, but, there would continue to be short-comings with this situation:

- Destruction procedures would not necessarily meet international standards, both in terms of handling and transportation of the pesticides, but also in terms of the quality of incineration, with poor technology and lax standards resulting in the production of significant quantities of dioxins from an incomplete combustion process
- Many stockpiles would remain untreated

Compounding these problems, the continued movement of illegal pesticides across borders from neighboring countries, which may include POPs components, will result in an on-going environmental and human health threat. With GEF funding, 1140 tonnes of POPs pesticides will be destroyed and the capacity established to destroy further stockpiles, treat contaminated sites, and prevent importation of illegal pesticides which may contain POPs

Co-financing

Co-financing will predominantly come from the Government of Vietnam, which is committed to providing \$2,090,109 in cash and \$4,240,000 in in-kind contributions over the course of the project. This is related to the government's commitment to contribute 1% of GDP to environmental protection and remediation. These substantial amounts of funding are mobilized through specific programmes and through the Vietnam Environment Fund. It should also be noted that private companies in Vietnam have invested many million USD in hazardous waste treatment facilities

Additional amounts of co-financing will be provided by UNDP and by FAO through support to training on international standards for pesticide management and destruction.

Summary of Costs

Result	Business-as-Usual and costs	Project and costs
Domestic Benefits	POPs pesticides continue to cause adverse impacts on human health, and high levels of illegal importation increase risk of future environmental and human health damage	Adverse impacts on human health eliminated due to destruction of stockpiles, prevention of illegal importation of new quantities, and treatment of contaminated sites
Global Benefits	No global environmental benefits	At least 1140 tonnes of POPs pesticides destroyed and capacity developed to destroy additional quantities when discovered. Capacity to eliminate POPs pesticides form contaminated sites developed
Outcome 1. Improved capacity facilitates elimination of POPs pesticides stockpiles	MONRE: \$ 50,000 Other government agencies: \$ 35,000 Provinces: \$ 0 TOTAL: \$ 85,000	GoV: \$ 924,770 UNDP: \$50,000 FAO \$ 40,000 GEF: \$693,530 TOTAL: \$1,708,300
Output 1.1. Qualified agencies selected to provide excavation, re-packaging, temporary storage, transportation and sampling/testing services	No qualified agencies would be selected Costs: \$0	Qualified agencies selected to undertake excavation, re-packaging, temporary storage, transportation and sampling/testing services Project costs: GOV \$ 14,197 GEF: \$10,000 Total: \$ 24,197
Output 1.2. Staff of government agencies trained in appropriate technologies and application of standards and guidelines.	No training in application of international standards Costs: \$0	All relevant staff trained in application of international standards Project costs: GOV \$ 44,958 GEF: \$53,000 Total: \$ 97,958
Output 1.3. A monitoring plan for disposal of stockpiles.	No monitoring plan would be developed Costs: \$0	Transparent and participatory monitoring plan developed and implemented to ensure international standards are adhered to Project costs: GOV \$ 21,442 GEF: \$10,000 Total: \$ 31,442
Output 1.4. Testing and licensing of destruction facilities	Limited testing or licensing of destruction facilities Costs: \$0	Selected destruction facility subjected to testing and, if tests yield satisfactory results, licensed for incineration of POPs pesticides Project costs: GOV \$ 189,295 GEF: \$290,530 Total: \$ 479,825
Output 1.5. MONRE/ VEPA establishes an effective consultation and coordination mechanism to oversee management of POPs in Vietnam.	Consultation is ad hoc and coordination largely ineffective Costs: MONRE \$15,000 Other government agencies: \$ 10,000 Total: \$ 25,000	An effective multi-stakeholder consultation and coordination mechanism helps to sustain government commitment to elimination of POPs pesticides Project costs: GOV \$ 35,493 GEF: \$15,000 Total: \$ 50,493

Output 1.6. A regular and systematic monitoring programme covers POPs pesticides inventories.	No monitoring system would be introduced Costs: \$0	Effective monitoring system designed, tested and introduced Project costs: GOV \$ 70,986 GEF: \$50,000 Total: \$ 120,986
Output 1.7. Establishment of a POPs pesticide management information system.	No management information system would be introduced Costs: \$0	FAO's pesticides information management system adopted for use in Vietnam and effectively implemented Project costs: GOV \$ 9,217 FAO \$ 40,000 GEF: \$30,000 Total: \$ 79,217
Output 1.8. Specific activities associated with sound management, reduction and elimination of POPs incorporated in development strategies and programmes of key ministries and sectors.	Activities of ministries and sectors uncoordinated and largely ignore the problems of POPs pesticides Costs: MONRE \$30,000 Other government agencies: \$ 20,000 Total: \$ 50,000	Activities of ministries and sectors coordinated and comprehensively address the elimination of POPs pesticides Costs: GOV \$ 6,789 UNDP: \$50,000 GEF: \$40,000 Total: \$ 96,789
Output 1.9. Communications strategy covering responsibilities of communities and the business sector.	No communications strategy Costs \$0	Communications strategy developed and implemented to promote action by all stakeholders and support to destruction of POPs pesticides Project costs: GOV \$ 70,986 GEF: \$25,000 Total: \$ 95,986
Output 1.10. Awareness of the legal provisions governing importation and use of POPs pesticides among government officials and the general public supports efforts to prevent importation and use.	Awareness is low and remains static – no increase in awareness over time Costs: MONRE \$5,000 Other government agencies: \$ 5,000 Total: \$ 10,000	Awareness within government agencies and among farmers and the general public increased, thus raising support for elimination of POPs pesticides and addressing demand-side dynamics of illegal importation Project costs: GOV \$ 106,479 GEF: \$60,000 Total: \$ 166,479
Output 1.11. Technical and managerial guidelines are prepared governing treatment of contaminated sites.	No guidelines are produced Costs: \$0	Guidelines produced and disseminated Project costs: GOV \$ 56,789 GEF: \$40,000 Total: \$ 96,789
Output 1.12: Stakeholder commitment for a nation-wide empty container management programme	No plans for empty container programme Costs \$0	Based on review of other programmes and stakeholder consultations, a costed plan developed for a nationwide empty container programme Project costs: GOV \$ 298,140 GEF: \$70,000 Total: \$ 368,140
Outcome 2. All known stockpiles are destroyed and impacts on human health relieved	GoV: \$ 70,000 Provinces: \$ 105,000 UNDP: \$ 60,000 TOTAL: \$ 235,000	GoV: \$1,746,100 Provinces: \$ 940,000 UNDP: \$ 60,000 GEF: \$2,637,450

		TOTAL: \$5,323,550
Output 2.1 Buried POPs pesticides are excavated, where needed separated from contaminated soil and deposited for repackaging	No excavation or separation would occur Costs: \$0	POPs pesticides in buried sites excavated, where needed separated from contaminated soil and deposited for repackaging Project costs: GOV \$ 10,739 Provinces \$ 5,780 GEF: \$15,000 Total: \$31,519
Output 2.2. POPs pesticides in degraded containers are re-packaged on-site in preparation for transportation and disposal.	No re-packaging would occur as buried sites largely ignored Costs: \$0	POPs pesticides in buried sites and, where necessary, above-ground sites re-packaged according to international standards Project costs: GOV \$ 759,859 Provinces \$ 493,946 GEF: \$827,000 Total: \$2,080,805
Output 2.3. Stocks are tested for destruction.	No testing occurs Costs \$0	Stocks tested as basis for final decision on treatment choice Project costs: GOV \$ 150,330 Provinces \$ 80,931 GEF: \$110,000 Total: \$ 341,261
Output 2.4. Stocks are transported to the destruction facility (ies)	Transportation for those sites which would be treated would not confirm with international safety standards Costs: GoV \$40,000 Provinces: \$ 25,000 Total: \$ 65,000	Transportation according to international safety standards Project costs: GoV \$ 225,497 Provinces \$ 121,395 GEF: \$360,000 Total: \$ 706,892
Output 2.5 Stocks are destroyed	Stocks incinerated in sub-standard facilities, resulting in releases of dioxins Costs: GoV \$30,000 Provinces: \$ 20,000 Total: \$ 50,000	Stocks are destroyed safely, eliminating hazards to human health Project costs: GoV \$ 581,282 Provinces \$ 312,929 GEF: \$890,450 Total: \$1,784,661
Output 2.6. Related contaminated media will be treated using bio-remedial and phyto-remedial technologies	Treatment of contaminated sites is ad hoc and largely ineffective Project costs: GoV \$ 0 Provinces \$ 60,000 UNDP: \$ 60,000 Total: \$ 120,000	Treatment is effective, eliminating hazards to human health Project costs: GoV \$ 284,305 Provinces \$ 153,054 UNDP: \$ 60,000 GEF: \$435,000 Total: \$ 932,359
Outcome 3: Improved chemicals management prevents importation and use of POPs pesticides	GoV: \$ 260,000 TOTAL: \$ 260,000	GoV: \$1,790,505 Provinces: \$ 348,734 FAO: \$ 60,000 GEF: \$547,220 TOTAL: \$2,736,459

Output 3.1: National chemicals safety standards	Chemical safety standards are developed, but do not address POPs pesticides Costs: GOV: \$ 230,000 TOTAL: \$230,000	Chemical safety standards incorporate POPs pesticides and are widely applied Project costs: GOV: \$ 533,588 TOTAL: \$533,588
Output 3.2: Line agency staff trained in management of POPs pesticides.	Line agency staff not trained Costs: GoV: \$ 30,000 TOTAL: \$ 30,000	Line agency staff trained and apply knowledge to reduce illegal importation Project costs: GOV: \$ 246,570 Provinces: \$ 130,080 FAO: \$ 60,000 GEF: \$70,000 TOTAL: \$506,650
Output 3.3: A compendium of legal documents on POPs pesticides management for use by Customs and other key agencies involved in management and destruction of POPs pesticides.	No compendium exists, constraining efforts to reduce illegal importation Cost \$0	A compendium is prepared and disseminated, supporting efforts to reduce illegal importation Project costs: GoV: \$ 121,470 GEF: \$25,220 Total: \$146,690
Output 3.4: Bilateral task forces between Vietnamese border provinces and their Chinese counterparts	No bilateral task forces exist Costs: \$0	Bilateral task forces address supply-side dynamics of illegal pesticide importation Project costs: GoV \$ 520,136 GEF: \$120,000 Total: \$640,136
Output 3.5: Facilities for handling and storage of illegal pesticides developed at key border sites	Facilities are inadequate and no additional facilities are built Costs: \$0	More substantial facilities support active programme of confiscation of illegally imported pesticides Project costs: GoV \$ 368,741 Provinces: \$ 218,654 GEF: \$332,000 Total: \$919,395

PART II : Logical Framework Analysis

RESULT	INDICATOR	BASELINE VALUE	TARGET	MEANS OF VERIFICATION	RISKS AND ASSUMPTION
Goal	"To support sustainable development in Vietnam through the elimination of POPs from the environment".				
Objective : To remove capacity barriers to the sustainable elimination of POPs pesticides in Vietnam	Number of sites posing threat to human health	At least 6 sites with known or potential adverse human health impacts	By the end of the project the inventory of POPs pesticides sites in Vietnam contains no sites posing known or potential threats to human health	Project reports, field surveys	External changes do not affect the viability of selected technologies
Outcome 1. Improved capacity facilitates elimination of POPs pesticides stockpiles	International standards met in management of pesticide stockpiles Government budget allocations adequate to destroy stockpiles and manage contaminated sites	Management and destruction of POPs pesticides follows no set standards Government expenditure (2006) \$382,000; resulting in few stockpiles destroyed	Within 9 months of the start of project implementation, international standards have been adopted for management of pesticide stockpiles From 2008 onwards, government expenditure on destruction of POPs pesticides is at least \$600,000 (until stockpiles destroyed)	Project reports; government policy papers Project reports, government budgetary figures (MONRE)	Improved capacity addresses the demand-side dynamics for use of POPs pesticides Government maintains Decision 64 funding
Output 1.1. Qualified agencies selected to provide excavation, re-packaging, temporary storage, transportation and sampling/testing services	Existence of qualified agency	No qualified agency	Within 6 months of the start of project implementation a qualified agency has been identified and selected	Project reports	There are agencies in Vietnam able to meet international standards
Output 1.2. Staff of government agencies trained in appropriate technologies and application of standards and guidelines.	Number of staff completing training courses	No staff trained	Within 9 months of the start of project, at least 20 staff of government agencies trained in international standards for handling and destruction of POPs pesticides	Training reports	Training by FAO can be mobilized in a timely fashion
Output 1.3. A monitoring plan for disposal of stockpiles.	Existence of a monitoring plan	No plan exists	Within 6 months of the start of project implementation a participatory monitoring plan to ensure application of international standards has been developed	Project reports and monitoring plan	Government is will to accept participatory and transparent monitoring system

Output 1.4. Testing and licensing of destruction facilities	Existence of license	No facility licensed	Within 6 months of the start of project implementation the selected destruction method (facility or other) has been determined to destroy POPs pesticides	Project report, license document	A facility or other destruction option can be selected that is able to meet licensing requirements
Output 1.5. MONRE/VEPA establishes an effective consultation and coordination mechanism to oversee management of POPs in Vietnam.	Existence of consultation mechanism	Consultation on POPs pesticides is <i>ad hoc</i>	Within 6 months of the start of project implementation a formal inter-ministerial, multi-stakeholder consultation mechanism has been established and functions on a regular basis	Government reports; reports generated through the consultation mechanism	Commitment among all government agencies remains high; agencies are willing to cooperate
Output 1.6. A regular and systematic monitoring programme covers POPs pesticides inventories.	Adaptation of MONRE's chemicals monitoring system to incorporate POPs pesticides	Inventories are <i>ad hoc</i> and irregular	Within 9 months of the start of project MONRE procedures for annual chemical surveys have been adapted to explicitly record presence of POPs pesticides	MONRE chemical survey guidelines	MONRE commitment to annual chemical inventories continues
Output 1.7. Establishment of a POPs pesticide management information system.	FAO's management information system adopted for use in Vietnam	No management information system available	Within 9 months of the start of project FAO's management information system is adopted for use in Vietnam	MONRE reports and procedures	
Output 1.8. Specific activities associated with sound management, reduction and elimination of POPs incorporated in development strategies and programmes of key ministries and sectors.	Sectoral and ministerial plans addressing POPs pesticides	No sectoral or ministerial plans address POPs pesticides	By the end of 2009, at least 3 sectoral and ministerial plans address the need to eliminate POPs pesticides; by the end of the project this number is 5	Project reports; ministerial plans and strategy documents	Commitment among all government agencies remains high; agencies are willing to cooperate
Output 1.9. Communications strategy covering responsibilities of communities and the business sector.	Existence of communications strategy	No communications strategy exists	By the end of 2009 a communications strategy covering responsibilities of communities and the business sector has been developed and implemented	Project reports; MONRE reports	Communications strategy is successful in building stakeholder support
Output 1.10. Awareness of the legal provisions governing importation and use of POPs pesticides among government	Survey assessment of level of awareness	To be established	By the end of the project the level of awareness among government officials and the general public has increased by	Survey	Raised awareness translates into sustained commitment to eliminate POPs

officials and the general public supports efforts to prevent importation and use.			50% of the baseline value		pesticides
Output 1.11. Technical and managerial guidelines are prepared governing treatment of contaminated sites.	Existence of guidelines	No guidelines exist	By the middle of 2009 guidelines have been prepared, endorsed by the government and disseminated to all line agencies	Project reports, government reports, surveys	Guidelines are consistently applied
Output 1.12: Stakeholder commitment for a nation-wide empty container management programme	Detailed plans for empty container programme	No plans exist	By the end of the project a detailed, costed plan with firm milestones has been prepared for implementation of a nation-wide empty container programme	Project reports, empty container plan	Government commitment to implementation of empty container programme remains high
Outcome 2. All known stockpiles are destroyed and impacts on human health relieved	All known stockpiles, consisting of at least 1140 tonnes of POPs pesticides, eliminated	Stockpiles slowly destroyed, but not applying international standards	By the end of 2009, all known stockpiles destroyed	Destruction certificates	Government maintains application of international standards to minimize potential impacts on human health
Output 2.1 Buried POPs pesticides are excavated, where needed separated from contaminated soil and deposited for repackaging					
Output 2.2. POPs pesticides in degraded containers are re-packaged on-site in preparation for transportation and disposal.	Volume re-packaged	No re-packaging	Within 6 months after licensing of the destruction facility, all pesticides requiring re-packaging have been re-packaged	Project reports; reports of monitoring plan (Output 1.3)	Monitoring plan is effective in ensuring international standards are maintained
Output 2.3. Stocks are tested for destruction.	Completion of tests	No tests	Within 6 months of the start of project implementation tests have been completed at the selected destruction facility	Project reports of tests	Tests reveal anticipated levels of POPs pesticides
Output 2.4. Stocks are transported to the destruction facility (ies)	Speed of delivery to destruction facility	No delivery	For all stockpiles, materials for destruction are delivered to the destruction facility within one month of completion of excavation and re-packaging	Project reports	Monitoring plan is effective in ensuring international standards are maintained
Output 2.5 Stocks are destroyed	Speed of destruction	No destruction applying	For all materials, incineration occurs within 30 days of	destruction certificates	Monitoring plan is effective in ensuring

		international standards	delivery to the destruction facility		international standards are maintained
Output 2.6. Related contaminated media will be treated using bio-remedial and phyto-remedial technologies	Initiation of remedial measures	No remediation	By the middle of 2009 remediation treatments have been initiated at all sites requiring remediation	Project reports; site visits	Local communities accept remediation technologies
Outcome 3: Improved chemicals management prevents importation and use of POPs pesticides	Volumes of pesticides illegally imported	At least 10 tonnes per month	By the end of the project, the volumes of illegal pesticides confiscated are no more than 2 tonnes per month (based on equal level of effort)	Project reports, surveys	Mainstreaming POPs pesticides into improved chemical management eliminates illegal importation
Output 3.1: National chemicals safety standards	Adoption of national chemical safety standards	No national chemical safety standards	By the end of 2008 national chemical safety standards have been adopted and staff of all line agencies trained in their application and enforcement	MONRE and other government reports	Safety standards are effectively implemented and cover importation of POPs pesticides
Output 3.2: Line agency staff trained in management of POPs pesticides.	Completion of training courses	No training in management of POPs pesticides	By the end of 2008 staff of all line agencies trained in management of POPs pesticides	MONRE and other government reports, training reports	Staff are subsequently encouraged by management to apply skills learnt through training
Output 3.3: A compendium of legal documents on POPs pesticides management for use by Customs and other key agencies involved in management and destruction of POPs pesticides.	Dissemination of compendium	No compendium exists	By the end of 2008 a compendium of legal documents on POPs pesticides management has been disseminated to all Customs offices	Survey of Customs offices	Customs staff and staff from other agencies utilize compendium to improve scrutiny of imported chemicals
Output 3.4: Bilateral task forces between Vietnamese border provinces and their Chinese counterparts	Task forces functioning	No task forces exist	By the end of 2009 bilateral task forces with Chinese authorities have taken specific steps to reduce illegal importation of pesticides	Government reports; government statistics on illegal pesticide seizures; interviews with Vietnamese Customs personnel	Cooperation from Chinese officials is effective in addressing supply-side dynamics of illegally imported pesticides
Output 3.5: Facilities for handling and storage of illegal pesticides developed at key border sites	Volume of storage facilities at selected sites	Storage at Lang Son limited to 20m ³	By the middle of 2009, storage facilities of at least 50 m ³ built at five or more key sites	Ground survey; project reports	Facilities remain committed for storage of confiscated pesticides and other hazardous chemicals

SECTION III: Total Budget and Workplan

Award ID:	Tbd
Award Title:	Vietnam: Building capacity to eliminate POPs pesticides stockpiles in Vietnam
Business Unit:	Tbd
Project Title:	Vietnam: Building capacity to eliminate POPs pesticides stockpiles in Vietnam
Project ID: PIMS no.	3578
Implementing Partner (Executing Agency)	Vietnam Environmental Protection Agency (VEPA)

GEF Outcome/Atlas Activity	Responsible Party/Implementing Agent	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Total (USD)	See Budget Note :
OUTCOME 1: Improved capacity facilitates elimination of POPs pesticides stockpiles	VEPA (MONRE)	62000	GEF	71200	International Consultants	7,000	13,000	7,000	9,000	36,000	
				71300	Local Consultants	3,000	4,000	4,000	5,000	16,000	
				72100	Contractual services - companies	79,000	90,000	70,000	72,000	311,000	
				71600	Travel	20,000	22,000	18,530	18,000	78,530	
				74500	Miscellaneous	1,000	1,000	1,000	1,000	4,000	
					sub-total GEF	110,000	130,000	100,530	105,000	445,530	
	FAO (see footnote)	62000	GEF	71200	International Consultants	11,000	13,000	11,000	8,000	43,000	
				71300	Local Consultants	5,000	6,000	6,000	5,000	22,000	
				74100	Professional Services. (Training)	34,000	38,000	31,000	32,000	135,000	
				71600	Travel	12,000	15,000	10,000	11,000	48,000	
					sub-total GEF	62,000	72,000	58,000	56,000	248,000	
	Total Outcome 1	172,000	202,000	158,530	161,000	693,530					
	VEPA (MONRE)	62000	GEF	71200	International Consultants	540,000	250,000	54,000	10,000	854,000	
				71300	Local Consultants	150,000	86,000	23,000	38,000	297,000	

OUTCOME 2. All known stockpiles are destroyed and impacts on human health relieved				72100	Contractual services - companies	1,000,000	377,000	0	0	1,377,000	
				71600	Travel	57,450	27,000	13,000	12,000	109,450	
					sub-total GEF	1,747,450	740,000	90,000	60,000	2,637,450	
					Total Outcome 2	1,747,450	740,000	90,000	60,000	2,637,450	
OUTCOME 3: Improved chemicals management prevents importation and use of POPs pesticides	VEPA (MONRE)	62000	GEF	71200	International Consultants	9,000	11,000	15,000	10,000	45,000	
				71300	Local Consultants	7,000	8,000	10,000	12,000	37,000	
				74100	Professional Services. (Training)	65,000	85,000	80,000	95,000	325,000	
				71600	Travel	8,000	8,000	12,000	13,000	41,000	
				74500	Miscellaneous	1,000	1,000	1,000	1,000	4,000	
					sub-total GEF	90,000	113,000	118,000	131,000	452,000	
	FAO (see footnote)	62000	GEF	71200	International Consultants	5,000	5,000	6,000	3,000	19,000	
				71300	Local Consultants	2,500	2,000	4,000	1,000	9,500	
				74100	Professional Services. (Training)	16,500	15,000	15,000	8,220	54,720	
				71600	Travel	6,000	6,000	0	0	12,000	
					sub-total GEF	30,000	28,000	25,000	12,220	95,220	
					Total Outcome 3	120,000	141,000	143,000	143,220	547,220	
PROJECT MANAGEMENT	VEPA (MONRE)	62000	GEF	71400	Contractual services - individuals	66,600	91,000	91,000	88,000	336,600	
				71600	Travel	8,000	4,000	2,000	2,000	18,000	
				72500	Office Supplies	43,000	3,000	2,000	0	48,000	
				74500	Miscellaneous	5,000	5,000	5,000	5,000	20,000	
					sub-total	122,600	105,000	100,000	95,000	422,600	
					Total Management	122,600	105,000	100,000	95,000	422,600	
PROJECT TOTAL						2,162,050	1,188,000	491,530	459,220	4,300,800	

Footnote: FAO's participation in the project therefore amounts to US\$ 343,220.

**Summary of
Funds:¹**

GEF		2,162,050	1,188,000	491,530	459,220	4,300,800
GoV		1,200,000	450,000	300,000	200,000	2,150,109
GoV in-kind		2,000,000	940,000	800,000	500,000	4,240,000
TOTAL		5,362,050	2,578,000	1,591,530	1,159,220	10,690,909

¹ Summary table should include all financing of all kinds: GEF financing, cofinancing, cash, in-kind, etc. etc

SECTION IV: Additional Information
PART I : Other agreements

GEF VIETNAM OPERATIONAL FOCAL POINT

83 Nguyen Chi Thanh str., Dong Da dist., Hanoi, SR, Vietnam
Tel: (84 4) 7734985/ 7735084; Fax: (84 4) 7734245; E-mail: nvtai@yahoo.com, nvtai@monre.gov.vn

16th August, 2007

To: Mr. Yannick Glemarec
UNDP – GEF Executive Coordinator
304 East 45th Street
New York, NY 10017, USA
Tel: (+1-212) 906-5044
Fax: (+1-212) 906-6998

Subject: Endorsement for Project Proposal entitled “Building Capacity to Eliminate POPs Pesticides Stockpiles in Vietnam”.

In my capacity as GEF Operational Focal Point for Vietnam, I confirm that the above project proposal (a) is in accordance with the government’s national priorities and the commitments made by Vietnam under the relevant global environmental conventions and (b) has been discussed with relevant stakeholders, including the global environmental convention focal points, in accordance with GEF’s policy on public involvement.

Accordingly, I am pleased to endorse the preparation of the above project proposal with the support of UNDP. If approved, the proposal will be prepared and implemented by Vietnam Environmental Protection Agency (VEPA). Further, I request UNDP to provide a copy of the project document before it is submitted to the GEF Secretariat for CED endorsement.

I understand that the total GEF financing being requested for this project is \$5,115,880, inclusive of project preparation grant (PPG), if any, and Agency fee (10%) to UNDP for project cycle management services associated with this project.

Sincerely,



Dr. Nguyen Van Tai
GEF Operational Focal Point
Deputy Director-General, Department of Environment
Ministry of Natural Resources and Environment of Vietnam

PART II: TECHNICAL ANNEXES

Annex 1: Stockpile Elimination Report Brief Motivation of Decisions of final destruction

See separate document

Annex 2: Summary of GTZ-Holcim Guidelines on Incineration of Waste Materials in Cement Kilns

Greenhouse gases and global warming, the efficient use of non-renewable fossil fuels, toxic residues, and the contamination of water and soil are in the forefront of ecological concerns and public discussions. Cost competitiveness, global competition and profitability are the concerns of business. The challenge facing today's society is to balance environmental protection and economic interest.

Poor waste management is an issue in developing countries and in countries in transition. In many of these countries, waste is discharged to sewers, buried or burned on company premises, illegally dumped at unsuitable locations, or taken to landfills that fail to meet requirements for the environmentally sound final disposal of waste. This can cause contamination of soil, water resources, and the atmosphere, leading to the sustained deterioration of the living conditions and health of the adjacent populations. Toxic substances and persistent compounds escape into the environment, are spread through the air over large areas, and can enter the food chain, affecting human and animal health.

Several factors can cause these problems:

- Not all developing countries have an integrated waste management strategy and only a few can offer an appropriate technical infrastructure for disposing of waste in a controlled and environmentally sound manner
- Although in many cases laws concerning the controlled handling of waste exist, they are often not properly enforced
- Uncontrolled disposal is usually the cheapest way to get rid of the waste, and the waste generators tend to be unwilling to pay much for adequate disposal
- Policy makers rarely pay enough attention to the subject of waste management, and may know little about the consequences for human health or the high cost of the remediation of the damage caused by uncontrolled waste disposal.

There is general agreement that there is an urgent need to improve waste management, and different solutions are being discussed. Waste avoidance, cleaner production, producer responsibility, supply chain management or sustainable use of natural resources are only a few of the strategies being promoted. In spite of technological progress and an increasing social and political awareness, the problem of growing waste streams persists. The "zero waste society" is a worthy vision, but we are far from realizing it. Modern incineration plants and secure landfills are common disposal options in OECD countries but have high investment and operating costs and need qualified personnel.

One proved alternative and possible solution is the **co-processing** of selected waste materials in the cement industry. An efficient cement kiln can provide an environmentally sound and cost-effective treatment/recovery option for a number of wastes.

Different types of wastes have been successfully co-processed as alternative **fuels and raw materials (AFR)** in cement kilns in Europe, Japan, USA, Canada and Australia since the beginning of the 1970s. The use of AFR can decrease the environmental impacts of wastes, safely dispose of hazardous wastes, decrease greenhouse gas emissions, decrease waste handling costs and save money in the cement industry. It will help in achieving the targets set in Agenda 21 of the "Earth Summit" in Rio de Janeiro (1992), the Johannesburg Declaration on Sustainable Development (2002) and the Millennium Development Goals.

To promote co-processing of waste in cement kilns the Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (GTZ), and Holcim Group Support LTD (Holcim) have formed a strategic alliance. Holcim Group Support LTD (Holcim) is a worldwide leading supplier of cement and aggregates as well as value-adding activities such as ready-mix concrete and asphalt, including services. GTZ is an international cooperation enterprise for sustainable development with worldwide operations.

General Principles for co-processing

In order to ensure sustainably sound co-processing, we must understand and respect the following **general principles**:

Principle I	<p>Co-processing respects the waste hierarchy:</p> <ul style="list-style-type: none"> → Co-processing does not hamper waste reduction efforts, and waste shall not be used in cement kilns if ecologically and economically better ways of recovery are available. → Co-processing shall be regarded as an integrated part of modern waste management, as it provides an environmentally sound resource recovery option for the management of wastes. → Co-processing is in line with relevant international environmental agreements, namely the Basel and Stockholm Conventions.
Principle II	<p>Additional emissions and negative impacts on human health must be avoided:</p> <ul style="list-style-type: none"> → To prevent or keep to an absolute minimum the negative effects of pollution on the environment as well as risks to human health. → On a statistical basis, emissions into the air shall not be higher than those from cement production with traditional fuel.
Principle III	<p>The quality of the cement product remains unchanged:</p> <ul style="list-style-type: none"> → The product (clinker, cement, concrete) shall not be abused as a sink for heavy metals. → The product should not have any negative impact on the environment as e.g. demonstrated with leaching tests. → The quality of cement shall allow end-of-life recovery.
Principle IV	<p>Companies engaged in co-processing must be qualified:</p> <ul style="list-style-type: none"> → Have good environmental and safety compliance track records and to provide relevant information to the public and the appropriate authorities. → Have in place personnel, processes, and systems demonstrating commitment to the protection of the environment, health, and safety. → Assure that all requirements comply with applicable laws, rules and regulations. → Be capable of controlling inputs and process parameters required for the effective co-processing of waste materials. → Ensure good relations with the public and other actors in local, national and international waste management schemes.
Principle V	<p>Implementation of co-processing has to consider national circumstances:</p> <ul style="list-style-type: none"> → Country specific requirements and needs must be reflected in regulations and procedures. → A stepwise implementation allows for the build-up of required capacity and the set-up of institutional arrangements. → Introduction of co-processing goes along with other change processes in the waste management sector of a country.

The objective of this joint initiative is to prepare internationally recognized Guidelines on “Co-processing of Waste Materials in Cement Production” and its model application in selected countries. The Guidelines developed by this cooperation include some basic rules and principles that should be observed when co-processing waste materials.

This means AFR use should respect the waste hierarchy, be integrated into waste management programs, support strategies for resource efficiency and not hamper waste reduction efforts. Following certain basic rules assures that the use of AFR does not have negative impacts on cement kiln emissions. Co-processing should not harm the quality of the cement produced.

Specific Principles for co-processing

Furthermore the Guidelines include specific principles and requirements for co-processing of waste in cement kilns including the observation of and compliance with all applicable laws and regulations, environmental aspects of cement production and AFR pre-processing, operational issues, occupational health and safety as well as communication and corporate social responsibility.

Principles related to legal aspects

(See **principles 1-3** below)

Countries considering co-processing need appropriate legislative and regulatory frameworks. National laws should define the basic principles under which co-processing takes place and define the requirements and standards for co-

processing. Regulators and operators should conduct baseline tests with conventional fuels and materials so they can compare AFR results to these. Some wastes should never be co-processed; these range from unsorted municipal garbage and certain hospital wastes to explosives and radioactive waste. Other wastes will need pre-processing before they can be used, and approaches to AFR use should take account of the need to effectively regulate and manage these pre-processing plants.

Principles related to environmental aspects

(See principles 4-7 below)

Following certain basic rules assures that the use of AFR does not change the emissions of a cement kiln stack. These include feeding alternative fuels into the most suitable zones of the kiln, feeding materials that contain a lot of volatile matter into the high temperature zone only, and avoiding materials that contain pollutants which kilns cannot retain, such as mercury. Emissions must be monitored, some only once a year and others continuously. Environmental impact assessments (EIA) should be done to confirm compliance with environmental standards; risk assessments can identify any weaknesses in the system, and material flux and energy flow analyses help to optimize the use of resources.

Principles related to operational issues

(See principles 8-12 below)

Cement plant operators using AFR shall ensure their traceability from reception up to final treatment. Transport of wastes and AFR must comply with regulations. Plants must have developed, implemented and communicated to employees adequate spill response and emergency plans. For start-up, shut-down and conditions in between, strategies for dealing with AFR must be documented and available to plant operators. Plants need well-planned and functioning quality control systems, as well as monitoring and auditing protocols.

Principles related to occupational health and safety

(See principles 13-17 below)

Risks can be minimized by properly locating plants in terms of environmental setting, proximity to populations and settlements, and the impact of logistics and transport. Cement and pre-processing plants will require good infrastructure in terms of technical solutions for vapors, odors, dust, infiltration into ground or surface waters, and fire protection. All aspects of using AFR must be well documented, as documentation and information are the basis for openness and transparency about health and safety measures, inside and outside the plant.

Management and employees must be trained in handling and processing of AFR. Hazardous operations training for new workers and subcontractors should be completed before starting with co-processing. Periodic re-certification should be done for employees and subcontractors. All visitors and third parties should receive an induction training. Understanding risks and how to mitigate them are keys to training. Training authorities is the basis for building credibility.

Principles related to communication and social responsibility

(See principles 18-22 below)

Introducing AFR requires open communication with all stakeholders. Provide all the information stakeholders need to allow them to understand the purposes of co-processing, the context, the functions of parties involved, and decision-making procedures. Open discussions about good and bad experiences are part of transparency, leading to corrective actions. Be credible and consistent, cultivating a spirit of open dialogue and respect for differing cultures.

PRINCIPLES RELATED TO LEGAL ASPECTS	Principle 1	<p>An appropriate legislative and regulatory framework shall be set up:</p> <ul style="list-style-type: none"> → Co-processing shall be integrated into the overall legislation concerning environmental protection and waste management before it can be accepted as a viable waste management alternative. → Legally-binding regulations and standards are necessary to guarantee legal security and to assure a high level of environmental protection. → Law enforcement is the key to successful AFR implementation and marketing.
	Principle 2	<p>Baselines for traditional fuels and raw materials shall be defined:</p> <ul style="list-style-type: none"> → Control and monitor inputs, outputs, and emissions during the operation of the cement plant with virgin fuel and primary raw materials. → Evaluate the given environmental situation prior to starting waste co-processing. → Use this baseline data to define potential impacts of AFR on the environment based on standardized Environmental Impact Assessments (EIA).
	Principle 3	<p>All relevant authorities should be involved during the permitting process:</p> <ul style="list-style-type: none"> → Build credibility with open, consistent, and continuous communications with the authorities. → Consider and strive to apply Best Available Technology (BAT). → The cement plant operator shall provide necessary information to enable authorities to evaluate the option of co-processing. → Install community advisory panels early, including the authorities, to facilitate the exchange of information, opinion and know-how.
PRINCIPLES RELATED TO ENVIRONMENTAL ASPECTS	Principle 4	<p>Rules must be observed</p> <ul style="list-style-type: none"> → The use of AFR does not have a negative impact on the emissions from a cement kiln stack, if the following rules are observed: <ul style="list-style-type: none"> – all alternative fuels must be fed directly into the high-temperature zones of a kiln system (i.e. via main burner, mid kiln, transition chamber, secondary (riser duct) firing, precalciner firing) – the same is true for alternative raw materials with elevated amounts of volatile matter (organics, sulfur) – the concentration of pollutants in alternative materials for which the cement process has insufficient retention capability (like Hg) shall be limited → Cement production lines shall be equipped with a system capable of feeding operation filter dust directly to the cement mills.
	Principle 5	<p>Emission monitoring is obligatory:</p> <ul style="list-style-type: none"> → Emissions must be monitored in order to demonstrate: <ul style="list-style-type: none"> – compliance with the national regulations and agreements – compliance with corporate rules – the reliability of the initial quality control of the process input materials.
	Principle 6	<p>Pre-processing of waste is required for certain waste streams:</p> <ul style="list-style-type: none"> → For optimum operation, kilns require very uniform raw material and fuel flows in terms of quality and quantity. This can only be achieved for certain types of waste by pre-processing the waste.
	Principle 7	<p>Environmental impact assessments (EIA) confirm compliance with environmental standards:</p> <ul style="list-style-type: none"> → Risk assessments are an efficient way to identify weaknesses in the system. → Material flux and energy flow analyses help to optimize the use of resources.

PRINCIPLES RELATED TO OPERATIONAL ISSUES	Principle 8	<p>The sourcing of waste and AFR is essential:</p> <ul style="list-style-type: none"> → Traceability of waste helps to avoid undesired emissions, to minimize operational risks and to ensure final product quality. → Traceability shall be ensured at the pre- or co-processing facility from reception up to final treatment. → Business agreements with regular customers (waste producers, waste handling companies) shall include quality and delivery criteria to allow for a uniform waste stream. → Waste categories unsuitable for co-processing should be refused. → All candidate (new) wastes will be subject to a detailed source qualification test procedure prior to acceptance.
	Principle 9	<p>Materials transport, handling, and storage must be monitored:</p> <ul style="list-style-type: none"> → General Guidelines for waste and AFR transportation must comply with regulatory requirements. → Instructions and adequate equipment for transport, handling, and storage of solid and liquid wastes and AFR are provided and maintained regularly. → Conveying, dosing, and feeding systems are designed to minimize fugitive dust emissions, to prevent spills, and to avoid toxic or harmful vapors. → Adequate spill response and emergency plans must be developed, implemented, and communicated to plant employees.
	Principle 10	<p>Operational aspects must be considered:</p> <ul style="list-style-type: none"> → AFR will be fed to the kiln system only at appropriate introduction points determined by the characteristics of the AFR. → The technical conditions of the plant that influence emissions, product quality, and capacity will be carefully controlled and monitored. → For start-up, shut-down, or upset conditions of the kiln, the strategy dealing with the AFR feed has to be documented and must be accessible to operators.
	Principle 11	<p>Quality control system is a must:</p> <ul style="list-style-type: none"> → Documented control plans for wastes and AFR must be developed and implemented at each pre-processing or co-processing site. → Procedures, adequate equipment, and trained personnel for the control of wastes and AFR must be provided. → Appropriate protocols in case of non-compliance with given specifications must be implemented and communicated to operators.
	Principle 12	<p>Monitoring and auditing allow transparent tracing:</p> <ul style="list-style-type: none"> → Monitoring and auditing protocols for waste and AFR management in pre- and co-processing installations are developed and implemented. → Instructions and adequate training of company staff in performing internal audits are provided.

PRINCIPLES RELATED TO OCCUPATIONAL HEALTH AND SAFETY	Principle 13	<p>Site suitability avoids risks:</p> <ul style="list-style-type: none"> → Proper location (environmental, proximity to populations of concern, impact of logistics/transport); good infrastructure (technical solutions for vapors, odors, dust, infiltration into ground or surface waters fire protection etc.) and properly trained management and employees with regard to the handling and processing of AFR can all minimize risks.
	Principle 14	<p>Safety and security:</p> <ul style="list-style-type: none"> → Each site must have a unit for safety and security. → A risk manager is responsible for the arrangement and performance of the unit.
	Principle 15	<p>Documentation and information is a must:</p> <ul style="list-style-type: none"> → Documentation and information are the basis for openness and transparency about health and safety measures. → Information must be available for employees and authorities before starting any co-processing activity.
	Principle 16	<p>Training should be provided at all levels:</p> <ul style="list-style-type: none"> → Management should be trained before starting with co-processing at a new facility or site. Field visits at already existing facilities are strongly recommended. → Hazardous operations training for new workers and sub-contractors should be completed before starting with co-processing. Periodic re-certification should be done for employees and sub-contractors. Include induction training for all visitors and third parties. → Understanding risks and how to mitigate them are key to training. → Training and information of authorities is the basis for building credibility.
	Principle 17	<p>Emergency and spill response plans:</p> <ul style="list-style-type: none"> → Good, regular emergency and spill response planning and emergency response simulations, including the neighboring industries and the authorities, contribute to the safe use of AFR.
PRINCIPLES RELATED TO COMMUNICATION AND SOCIAL RESPONSIBILITY	Principle 18	<p>Openness and transparency:</p> <ul style="list-style-type: none"> → Provide all necessary information to allow stakeholders to understand the purpose of co-processing, the context, the function of parties involved and decision-making procedures . → Open discussions about good and bad experiences / practices are part of transparency.
	Principle 19	<p>Credibility and consistency:</p> <ul style="list-style-type: none"> → Build credibility by being open, honest and consistent. Rhetoric must be matched with demonstrated facts and good performance. Gaps between what you say and what you currently do must be avoided.
	Principle 20	<p>Cultivating a spirit of open dialogue, based on mutual respect and trust:</p> <ul style="list-style-type: none"> → Communication also means seeking feedback and dialog with stakeholders and integrating external views. Participants in stakeholder engagement activities must be able to express their views without fear of restriction or discipline.
	Principle 21	<p>Cultural sensitivity:</p> <ul style="list-style-type: none"> → Take into account the different cultural environments in which we operate. Be target-oriented and truthful.
	Principle 22	<p>Continuity:</p> <ul style="list-style-type: none"> → Start early; and once you start, never stop.

Conclusion

As populations increase in the developing world, so do waste management problems, and so does the need for more cement and concrete for housing and the infrastructure of development. The properly managed use of wastes as fuels and raw materials in cement kilns can help manage wastes while contributing to the sustainable development of our world.

These Guidelines on co-processing waste materials in cement production are meant to gather the lessons of the gained experience from industrialized countries and offer it particularly to developing countries that need to improve approaches to waste management. They encourage the private sector to develop techniques and know-how regarding co-processing and engage the public sector to apply and maintain environmental as well as occupational health and safety regulation standards.

The Guidelines have been prepared by experts from **Holcim** and **GTZ**. Support and advice was given by a variety of external stakeholders from public and private sector as well as from the cement industry and from organizations working in international development cooperation. The elaboration of the document was coordinated by the **Institute for Ecopreneurship (IEC) of the University of Applied Sciences Northwestern Switzerland (FHNW)**

Annex 3: Reports of test burns at Holcim Vietnam in 2003 and 2004

See separate document

PART III : Terms of References for key project staff and main sub-contracts

Term of Reference of Project Executive Board (PEB)

Representing the National Steering Committee for Stockholm Convention on POPs (NSC), the PEB² will make all necessary decisions and provide guidance for implementation of project activities, including approval of the overall project work-plan, and budget revisions.

The PEB is responsible for the following:

- Make all necessary and timely decisions for project management and implementation of the project, including review and approve project overall work-plans and budget revisions.
- Identify any personnel needing to be recruited to assist in implementation of the project; review and endorse ToR prepared by the NPM (see below);
- Review and approve annual reports and audit reports;
- Review Project progress made towards planned outputs. In the event that progress is not consistent with the project work plan, the PEB will determine what actions, if any, should be undertaken to rectify the situation;
- Review and endorse the final Full Size Project Document before submission to GEF for consideration and to the Government for approval.
- Report to the National Steering Committee for Stockholm Convention on POPs (NSC).
- The PEB may not alter project objectives or outputs. The PEB may alter project activities and/or implementation arrangements, but only if there is clear and consistent evidence that the project activities are failing to deliver project outputs, based on progress reports against project output indicators. Changes to project activities and/or implementation arrangements will require the consent of the UNDP-CO.

² The National Steering Committee for Stockholm Convention on POPs (NSC) will nominate its appropriate members who represent MONRE, MARD and MPI to form the Project Executive Board (PEB) together with a representative of UNDP-CO. The MONRE representative will be the chairperson of the PEB.

Terms of Reference for National Project Director (NPD)

Starting Date: As starting date of the project (nominated by the Government, working on part-time basis, at least 30% of regular time)

Background

The Government of Vietnam has faced serious constraints in dealing with stockpiles of POPs pesticides, including constraints due to funding, access to appropriate technologies, and coordination among multiple ministries and agencies. While some stockpiles are housed in sheds or other buildings, in some communities with particularly large stockpiles, the lack of suitable infrastructure resulted in the burial of POPs pesticides stockpiles. An estimated 1140 tonnes of POPs pesticides have been located in five such sites, and again it is certain that there are more such sites in the country. The buried stockpiles are of far greater concern than above-ground stockpiles both because of their size and because there is far less control over storage conditions, resulting in much larger potential and actual human health problems. The GoV is therefore implementing a project to eliminate all known stockpiles of POPs pesticides in Vietnam. As important as the destruction of known stockpiles, is the need to build capacity both to destroy additional stockpiles as they are discovered, and to eliminate continued importation of illegal POPs pesticides. Capacity to eliminate continued importation is needed on both the demand side, to reduce and ultimately eliminate demand for such pesticides, and on the supply side, to eliminate the source of the pesticides.

The National Project Director is the focal point for responsibility and accountability in the National Implementing Partner (MONRE in this case) for an UNDP-funded project. The NPD should be an officer of the Implementing Partner at the director or deputy director level of the department/agencies.

The NPD primary role is to ensure the substantive quality of the project and the proper use of resources allocated to it. His/her overall role is to ensure the successful execution and implementation of the project toward achieving project results, and accountability to the Government and UNDP for the proper use of project resources. He/she represents the MONRE and supervises the Project Manager (PM). As such, the NPD position will usually require only a part of his/her regular work time.

Duties and Responsibilities

- Ensures that the expected results of the project are of satisfactory substantive quality and that they contribute to the achievement of the intended outcome identified in the UNDP Country Programme Document (CPD). This will be discharged through the (i) approval of project workplans, TORs, reports, (ii) follow-up on the implementation of recommendations made by regular project reviews and/or external evaluations, and (iii) conduct of internal reviews and evaluations as/if needed.
- Ensures that project resources, national as well as international, are effectively utilized for their intended purposes through the (i) verification of project budgets and payments, (ii) approval of budget revisions within the agency flexibility limit, (iii) follow-up on the implementation of recommendations made by external audits and (iv) conduct of internal audits as/if needed.
- Ensures that counterpart funds are made available by the Implementing Partner in sufficient quantities and in a timely manner to support project implementation.
- Ensures that project parties, particularly national parties (including the Implementing Partner) fully participate in project implementation, effectively collaborate in project activities and duly benefit from project results.
- Ensures that the results achieved and lessons learned by the project are properly documented, proactively disseminated to and duly shared with all project parties, particularly national parties.

- Selects, arranges for the appointment of and supervises the Project Manager, in consultation with UNDP, to make sure that the PM and other national project staff are empowered to effectively perform their day-to-day project duties.
- Selects, arranges for the appointment of International Consultants, in consultation with UNDP, to make sure that international project personnel contribute expert inputs of the highest quality to the expected outputs of the project.
- Represents the Implementing Partner at major project reviews, evaluations, audits and other important events.
- Provide regular updates to the PEB.

Terms of Reference for National Project Manager

Duration: 48 months, starting 1 April 2008 (recruited, full time)
Reporting: National project Director

Background:

The Government of Vietnam has faced serious constraints in dealing with stockpiles of POPs pesticides, including constraints due to funding, access to appropriate technologies, and coordination among multiple ministries and agencies. While some stockpiles are housed in sheds or other buildings, in some communities with particularly large stockpiles, the lack of suitable infrastructure resulted in the burial of POPs pesticides stockpiles. An estimated 1140 tonnes of POPs pesticides have been located in five such sites, and again it is certain that there are more such sites in the country. The buried stockpiles are of far greater concern than above-ground stockpiles both because of their size and because there is far less control over storage conditions, resulting in much larger potential and actual human health problems. The GoV is therefore implementing a project to eliminate all known stockpiles of POPs pesticides in Vietnam. As important as the destruction of known stockpiles, is the need to build capacity both to destroy additional stockpiles as they are discovered, and to eliminate continued importation of illegal POPs pesticides. Capacity to eliminate continued importation is needed on both the demand side, to reduce and ultimately eliminate demand for such pesticides, and on the supply side, to eliminate the source of the pesticides.

These terms of reference will define the duties of the National Manager.

Duties and Responsibilities:

- Assumes operational management of the project according to the project document and policies and procedures for nationally executed projects;
- Prepares ToR for all project personnel identified by the PEB to be recruited to assist in implementation of the project and secures endorsement of the ToR from the PEB;
- Prepares and updates project workplans, and submits these for clearance to the UNDP Country Office;
- Assumes direct responsibility for managing the project budget, ensuring that:
 - Project funds are made when needed, and are disbursed properly;
 - Accounting records and supporting documents are kept;
 - Required financial reports are prepared;
 - Financial operations of the project are transparent and stand up to audit at any time;
 - Generally ensures that financial procedures and regulations for NEX projects are applied;
 - International and National consultants are hired and deliver their outputs on schedule;
- Supervises the project staff and local or international experts/consultants working for the project; and
- Reports to the UNDP Country Office on a regular basis.

Qualifications:

- University degree (preferably post-graduate degree) in chemistry, environmental engineering or related fields;
- At least 5 years of project management experiences in the areas of planning and organization of the work, scheduling, supervision, reporting and personnel management;
- Good English language skills, both spoken and written, good inter-personal and team building skills; and
- Experience in the management of international funded projects and in working with UN agencies.

Terms of Reference for Project Assistant

Duration: 48 months, starting 1 April 2008 (recruited, full time)
Reporting: National project Director

Background:

The Government of Vietnam has faced serious constraints in dealing with stockpiles of POPs pesticides, including constraints due to funding, access to appropriate technologies, and coordination among multiple ministries and agencies. While some stockpiles are housed in sheds or other buildings, in some communities with particularly large stockpiles, the lack of suitable infrastructure resulted in the burial of POPs pesticides stockpiles. An estimated 1140 tonnes of POPs pesticides have been located in five such sites, and again it is certain that there are more such sites in the country. The buried stockpiles are of far greater concern than above-ground stockpiles both because of their size and because there is far less control over storage conditions, resulting in much larger potential and actual human health problems. The GoV is therefore implementing a project to eliminate all known stockpiles of POPs pesticides in Vietnam. As important as the destruction of known stockpiles, is the need to build capacity both to destroy additional stockpiles as they are discovered, and to eliminate continued importation of illegal POPs pesticides. Capacity to eliminate continued importation is needed on both the demand side, to reduce and ultimately eliminate demand for such pesticides, and on the supply side, to eliminate the source of the pesticides.

Duties and Responsibilities:

1. Provide necessary assistance in the operational management of the project according to the project document and the NEX procedures.
2. Draft correspondence on administrative and program matters pertaining to the Project Office responsibilities;
3. Undertake all preparation work for procurement of office equipment, stationeries and support facilities as required;
4. Undertake preparation for project events, including workshops, meetings (monthly, quarterly and annual), study tours, trainings, etc. This also includes preparation of background materials for use in discussions and briefing sessions on project matter;
5. Logistical arrangements. This includes visa, transportation, hotel bookings for project staff, consultants and invited guests coming for project activities;
6. Assist in preparation of project work plan and reports;
7. Be responsible for project filing system. This includes setting up the filing, numbering and filing all incoming and outgoing correspondence.
8. Prepare regular list of events for sharing of information within project staff and outside;
9. Take care of project telephone, fax, and email system;
10. Assist with project communication activities, including publications;
11. Assist with preparation of TORs and contracts for consultants/experts for project activities;
12. Calculate and prepare staff time records;

Qualifications

1. University degree in chemicals management, business administration, or related fields;
2. Solid experience of budgeting and planning, for foreign funded projects;
3. Good secretarial skills and good organizational capacity;
4. Knowledge in administrative procedures of the Government
5. Good computer skills in common word processing (MS Word), and spreadsheets (MS Excel).
6. English language skills, both spoken and written.

Terms of Reference for Project Accountant

Duration: 48 months, starting 1 April 2008 (recruited, full time)
Reporting: National project Director

Background:

The Government of Vietnam has faced serious constraints in dealing with stockpiles of POPs pesticides, including constraints due to funding, access to appropriate technologies, and coordination among multiple ministries and agencies. While some stockpiles are housed in sheds or other buildings, in some communities with particularly large stockpiles, the lack of suitable infrastructure resulted in the burial of POPs pesticides stockpiles. An estimated 1140 tonnes of POPs pesticides have been located in five such sites, and again it is certain that there are more such sites in the country. The buried stockpiles are of far greater concern than above-ground stockpiles both because of their size and because there is far less control over storage conditions, resulting in much larger potential and actual human health problems. The GoV is therefore implementing a project to eliminate all known stockpiles of POPs pesticides in Vietnam. As important as the destruction of known stockpiles, is the need to build capacity both to destroy additional stockpiles as they are discovered, and to eliminate continued importation of illegal POPs pesticides. Capacity to eliminate continued importation is needed on both the demand side, to reduce and ultimately eliminate demand for such pesticides, and on the supply side, to eliminate the source of the pesticides.

Duties and Responsibilities:

Planning

1. Participate in preparation of project work plans
2. Prepare quarterly advance requests to get advance funds from UNDP in the format applicable.
3. Ensure a sufficient advance for activities in the planned quarter.
4. Assist the PM and NPD in project budget monitoring and project budget revision.
5. Participate in quarterly work planning and progress reporting meetings with the NPD, PMU, and UNDP

Accounting/ Reporting

1. Set up accounting system, including reporting forms and filing system for the project, in accordance with the project document and the NEX procedures.
2. Maintain petty cash transactions. This includes writing of receipts, preparation of payment request form, receipt and disbursement of cash and clearance of advances.
3. Prepare cheques and withdraw money from the bank.
4. Prepare project financial reports and submit to PM and NPD for clearance and furnish to UNDP as required.
5. Enter financial transactions into the computerised accounting system.
6. Reconcile all balance sheet accounts and keep a file of all completed reconciliation.

Control

1. Check and ensure all expenditures of project are in accordance with NEX procedures. This includes ensuring that receipts are obtained for all payments;
2. Check budget lines to ensure that all transactions are correctly booked to the correct budget lines;
3. Ensure documentation relating to payments are duly approved by the NPD;
4. Discuss any potential problems with the PM, bringing any actual or potential problems to the attention of the NPD;

5. Follow up bank transfers. This includes preparing the bank transfer requests, submitting them to the bank and keeping track of the transfers;
6. Ensure Petty Cash is reviewed and updated and records are kept up-to-date;
7. To continuously improve system & procedures to enhance internal controls are satisfy audit requirements.

Bank reconciliation

1. Bank statements should be collected from the banks on the 5th working day of each month;
2. Bank accounts should be reconciled and reported on or before the 8th of each month;
3. Prepare monthly bank reconciliation statements, including computation of interests gained to be included into reports.

Inventory Register

1. Maintain a proper inventory of project assets register, including numbering, recording, and reporting;
2. Maintain the inventory file to support purchases of all equipment/assets.

Administration

1. Maintain filing of financial documents;
2. Be responsible for planning and procurement of project stationary and office supplies;
3. Calculate and prepare staff time records;
4. Provide assistance to organization of project events, including workshops, seminars, and meetings.

Qualifications

1. University degree in business administration, accounting, finance or related fields;
2. Solid experience of budgeting and reporting on foreign funded projects;
3. Knowledge in administrative and accounting procedures of the Government
4. Good computer skills in common special accounting software.
5. Good knowledge of a computer-based accounting software;
6. English language skills, both spoken and written.

PART IV : Stakeholder Involvement Plan

The major stakeholders in project implementation are VEPA and MARD. Other government agencies, such as Customs, and the Ministry of Industry and Commerce also have important roles to play. Responsibilities for specific Outputs are shown in the Table below:

RESULT	VEPA MONRE	MARD	Other, specify
Outcome 1. Improved capacity facilitates elimination of POPs pesticides stockpiles			
Output 1.1. Qualified agencies selected to provide excavation, re-packaging, temporary storage, transportation and sampling/testing services		X	
Output 1.2. Staff of government agencies trained in appropriate technologies and application of standards and guidelines.		X	
Output 1.3. A monitoring plan for disposal of stockpiles.	X		
Output 1.4. Testing and licensing of destruction facilities	X		
Output 1.5. MONRE/VEPA establishes an effective consultation and coordination mechanism to oversee management of POPs in Vietnam.	X		
Output 1.6. A regular and systematic monitoring programme covers POPs pesticides inventories.	X		
Output 1.7. Establishment of a POPs pesticide management information system.	X		
Output 1.8. Specific activities associated with sound management, reduction and elimination of POPs incorporated in development strategies and programmes of key ministries and sectors.	X		
Output 1.9. Communications strategy covering responsibilities of communities and the business sector.	X		
Output 1.10. Awareness of the legal provisions governing importation and use of POPs pesticides among government officials and the general public supports efforts to prevent importation and use.	X		
Output 1.11. Technical and managerial guidelines are prepared governing treatment of contaminated sites.	X		
Output 1.12: Stakeholder platform is established for preparation for a nation-wide empty container management programme		X	
Outcome 2. All known stockpiles are destroyed and impacts on human health relieved			
Output 2.1 Buried POPs pesticides are excavated, where needed separated from contaminated soil and deposited for repackaging		X	

Output 2.2. POPs pesticides in degraded containers are re-packaged on-site in preparation for transportation and disposal.		X	
Output 2.3. Stocks are tested for destruction.		X	
Output 2.4. Stocks are transported to the destruction facility		X	
Output 2.5. Stocks destroyed	X		
Output 2.6. Related contaminated media will be treated using bio-remedial and phyto-remedial technologies	X		
Outcome 3: Improved chemicals management prevents importation and use of POPs pesticides			
Output 3.1: National chemicals safety standards			Ministry of Industry and Commerce, Standard Directory
Output 3.2: Line agency staff trained in management of POPs pesticides.	X		
Output 3.3: A compendium of legal documents on POPs pesticides management for use by Customs and other key agencies involved in management and destruction of POPs pesticides.			Customs
Output 3.4: Bilateral task forces between Vietnamese border provinces and their Chinese Lao, Cambodian counterparts.			Customs
Output 3.5: Facilities for handling and storage of illegal pesticides developed at key border sites			Customs

SIGNATURE PAGE

Country: Vietnam

UNDAF Outcome(s)/Indicator(s):

(Link to UNDAF outcome., If no UNDAF, leave blank)

Expected Outcome(s)/Indicator (s):

(CP outcomes linked t the SRF/MYFF goal and service line)

Expected Output(s)/Indicator(s):

(CP outcomes linked t the SRF/MYFF goal and service line)

Implementing partner:

(designated institution/Executing agency)

VEPA

Other Partners:

MARD

FAO

Programme Period: _____
Programme Component: _____
Project Title: _____
Project ID: _____
Project Duration: _____
Management Arrangement: _____

Total budget: _____
Allocated resources: _____
• Government 2,150,109
• Regular _____
• Other:
 ○ GEF 4,300,800
• In kind contributions 4,240,000

Agreed by (Government): _____

Agreed by VEPA: _____

Agreed by UNDP: _____