REGIONAL PROJECT TO DEVELOP APPROPRIATE STRATEGIES FOR IDENTIFYING SITES CONTAMINATED BY CHEMICALS LISTED IN ANNEXES A, B AND/OR C OF THE STOCKHOLM CONVENTION

ANNEXES

(revised 30 Aug. 2007)

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ANNEX 1: INCREMENTAL COST ANALYSIS

Regional Context and Broad Development Goals

Many countries in Africa such as Ghana and Nigeria recognize the problem of sustainability that ongoing POPs project would face where they deal only with the problem of disposal of stockpiles while ignoring the related problem of subsequent cleanup of sites contaminated with POPs chemicals. Such contaminated sites if redeveloped or redeployed for agricultural or housing purposes will pose significant and immediate threats to human and animal health and the environment. It is always cheaper to take precautionary and preventive action before using contaminated land for rural or urban development or put into agriculture so as to avoid expensive mistakes such as the Love Canal saga in the USA. Ghana and Nigeria have consequently approached UNIDO to assist them through GEF grant to develop policies and regulations for the rehabilitation of contaminated sites, capacity building in identifying contaminated land and in selection of methodology for site remediation, public education, setting up of Information Management System (IMS). At a later stage, through public-private partnership and other donors' support, it is expected to promote proper clean up of such sites while promoting the transfer of appropriate remediation technologies conforming to Best Available Techniques (BAT) and Best Environmental Practices (BEP) in accordance with the guidelines prepared by the Open-ended Working Expert Group on BAT/BEP of the Stockholm Convention.

The proposed project will take up the issue of POPs contaminated lands/sites in the region. It will provide the necessary policy/legal framework as well as national/regional incentive to identify POPs contaminated land and undertake remediation measures after a thorough scientific and technical analysis of various parameters based on Risk Based Decision Making (RBDM). The goal of the stakeholders' involvement and highlighting public-private partnership for any future development of contaminated land/sites has been adequately addressed by the project. Geoenvironmental Centres, which will deal with technical aspects of site identification and experimental scale model testing will be established in existing institutions in the participating countries. Public awareness and education is given great importance for reliability, responsibility and sustainability.

Baseline

The total cost of the project is US$ 4,830,00 including funds expended for the PDF-B (US$ 730,000 with US$ 80,000 as co-financing). The GEF contribution to the project, which is the subject of this proposal, is US$ 2,000,000. The Government of Ghana and Nigeria and other donors including UNIDO and GRC-Cardiff and others will contribute US$ 2,100,000. The total baseline is estimated at US$ 5,020,000. The project has five major outputs and the Government baseline estimated for each output is based on the existing facilities and capabilities of the countries at the time of the preparation of the project. The baseline takes into account the efficient use of existing facilities and human resources for each output. To achieve the outputs, the corresponding costs of clean up of potential POPs contaminated hotspots that will result in national and regional benefits is taken into consideration. It will also have considerable benefits in reducing health risks to those exposed to the contaminated sites. In addition, it will potentially boost revenue income from the use of cleaned up land for various economic, residential and social activities. In order to develop the participating countries' capacity building in this field to achieve national or international standards, the costs to overcome the barriers have been calculated based on experiences in similar activities in developed countries. The accrued benefits of the project from maximum stakeholders' involvement have induced interest of the private sector particularly when the Geo-environmental Research Centre of Cardiff University was involved in the public participation strategy as a technical and scientific institution providing services to the project. Thus, increased public knowledge and awareness will catalyze public-private partnership.

A detailed analysis of both pollutant pathways and benefits of the projects on recovered sites following the remediation and even by containment of the soil contaminants with regular monitoring to assess the direct and indirect benefits to the community living nearby and to the environment would be necessary. In order to achieve this capability and prevention of future POPs contamination in the region, five major outputs of the project brief would facilitate the removal of barriers. Therefore the relative GEF, Government and donor contributions presented in this report represent a satisfactory "cost sharing arrangement". The high baseline cost given to Components 4 and 5 was due to the fact that both Ghana and Nigeria have good infrastructure (human and physical) for chemical analysis,

data information collection/storage/dissemination, active press/media. However, in order to achieve good coordination, development of technology and proper risk assessment/ management and create regional stakeholders' awareness, the barriers removal cost is high as reflected in the cost matrix table.

Summary Incremental Cost Matrix in US$

Component	*Baseline*	*Alternative*	*GEF*	*Co-finance (Region)*	*Co-finance Nigeria (cash)*	*Co-finance (Donors incl. UNIDO)*
Project Coordination	50,000	605,000	240,000	100,000	47,500	217,500
Regional Policy/Legal Framework Enactment	100,000	500,000	250,000	100,000	75,000	75,000
National and regional capacity building and institutional strengthening	600,000	475,000	275,000	50,000	75,000	75,000
Toolkit for environmentally sound and economically feasible remediation technologies and establishment of national Geo-environmental Centres	2,520,000	1,710,000	935,000	150,000	532,500	92,500
IMS/public awareness and environment education	1,700,000	555,000	205,000	50,000	125,000	175,000
M&E Plan	50,000	255,000	95,000	50,000	45,000	65,000
TOTAL	**5,020,000**	**4,100,000**	**2,000,000**	**500,000**	900,000	**700,000**

The GEF Alternative:

The GEF alternative (GEF contribution plus co-financing) for each component including the M&E plan are given based on the estimated barrier removal cost. For project coordination, the GEF alternative will provide US$ 605,000, for regional policy and legal framework, US$ 500,000, for national and regional capacity building and institutional strengthening US$ 475,000, for methodology and technology selection, US$ 1,710,000, for IMS, public awareness and environmental education US$ 555,000 and for monitoring and evaluation US$ 255,000. The barrier removal and replicability of the outputs in other parts of the ECOWAS region will have a long-term beneficial effect in reducing the overall barrier cost removal. It should also be borne in mind that the project deals with a multidisciplinary and complicated area of soil decontamination and the incremental cost depends very much on the value of the contaminated land depending on its location and the type of use it is likely to be put viz commercial, social, educational or agricultural use.

Incremental Costs and Project Financing

Component	Sub-component	Increment in US$					
		GEF	Ghana	Nigeria	Nigeria Cash contribution	UNIDO	Other Donors
1**. Project Coordination**	1.1 Establish RMC for Ghana and Nigeria 1.2. Establish RSC with TOR 1.3. Establish RCU with TOR and all support facilities	50,000	10,000	10,000			
	1.4. Recruit CTA	60,000					
	1.5. Appoint Regional Coordinator and admin. staff (maximize synergies and avoid regional duplication)				22,500	120,000	47,500
	1.6 Recruit two National Programme Coordinators and admin. staff	90,000	20,000	20,000			
	1.7. Establish all NCUs with TOR 1.8. Equip RCU with all required facilities including office space rent	10,000	10,000	10,000	20,000	50,000	
	1.9. Skill share workshops for RMC/RCU and regular review meetings	30,000	10,000	10,000	5,000		
Sub-Total		***240,0000***	***50,000***	***50,000***	*47,500*	***170,000***	***47,500***

Component	Sub-component	Increment in US$					
		GEF	**Ghana**	**Nigeria**	**Nigeria Cash contribution**	**UNIDO**	**Other Donors**
2. Regional Policy/Legal Framework	2.1. Develop regional policy for management of contaminated sites. 2.2. Recruit international and national experts to assist in drafting of environmental legislation. 2.3. Develop, reform existing policies to cover management of contaminated sites. 2.4. Keep RMC fully informed of the policies developed to facilitate enactment.	200,000	40,000	40,000	**60,000**	**0**	60,000
	2.5. Organize and conduct regional/national training programmme for staff on requirements/enforcement of legal framework.	50,000	10,000	10,000	15,000	0	15,000
Sub-Total		***250,000***	***50,000***	***50,000***	*75,000*	*0*	*75,000*
3. National and Regional capacity building and institutional strengthening	3.1. Regional/national classification system. 3.2. Strengthening of institutional capacity for mitigation of land contamination and sustainable contaminated land management. 3.3. Human resource capacity development on sustainable methodologies for contaminated land site identification and remediation.	25,000	5,000	5,000	10,000		10,000

Component	Sub-component	Increment in US$					
		GEF	Ghana	Nigeria	Nigeria Cash contribution	UNIDO	Other Donors
	3.4. Programmes for stakeholder involvement, public awareness and education programmes.	250,000	20,000	20,000	65,000		65,000
Subtotal		*275,000*	*25,000*	*25,000*	*75,000*	*0*	*75,000*
4. Toolkit for selection of environmentally and economically feasible remediation technologies for Ghana and Nigeria and establishment of national Geo-environmental Centres	4.1. Establish two geo-environmental centres in participating countries. 4.2. Develop methodology for the systematic and stepwise identification of potentially POPs contaminated sites with regional context (including all risk studies). 4.3. Develop an analytical toolkit for decision/support system for environmentally sound and economically feasible technologies for contaminated sites. 4.4 Deploy selected methodology and framework for the identification and selection of appropriate low-cost remediation technology for POPs contaminated sites based on samples taken from the contaminated sites. Note: *GEF funds will be used to develop the methodology and not for remediation purposes.*	785,000	55,000	55,000	275,000		50,000

Component	Sub-component	Increment in US$					
		GEF	Ghana	Nigeria	Nigeria Cash contribution	UNIDO	Other Donors
	4.5. Undertake experimental project(s) to verify effectiveness of low-cost technology and validate site selection methodology, framework for remediation technology selection and the selected technology option. *Note: GEF funds will be used to develop the methodology and not for remediation purposes.*	150,000	20,000	20,000	257,500	0	42,500
Subtotal		*935,000*	*75,000*	*75,000*	*532,500*	*0*	*92,500*
5. IMS, public awareness and environmental education	5.1. Develop project strategy for communication for all parties' engagement. 5.2. Establish effective national database on POPs contaminated sites.	75,000	5,000	5,000	40,000 20,000	0	20,000
	5.3. Establish IMS as per requirements for a 10-year IMS strategic plan.	42,000	8,000	8,000	20,000	100,000	10,000
	5.4. Organize programmes of education and awareness for all relevant stakeholders including ECOWAS region.	42,000	8,000	8,000	20,000	10,000	10,000
	5.5. Develop/deploy complimentary websites, newsletters for regional dissemination of POPs related information	46,000	4,000	4,000	25,000	0	25,000
Subtotal		*205,000*	*25,000*	*25,000*	*125,000*	*110,000*	*65,000*

Component	Sub-component	Increment in US$					
		GEF	Ghana	Nigeria	Nigeria Cash contribution	UNIDO	Other Donors
6. Regional M&E Plan	6.1. Develop/assess baseline for M&E indicators for the project outputs	25,000	5,000	5,000	15,000	0	15,000
	6.2 Establish a socio-economic assessment and indicators for POPs exposures due to POPs contaminated sites	20,000	5,000	5,000	10,000	0	10,000
	6.3 Mid-term and Terminal Project Review exercises (excluding UNIDO staff time)	20,000	5,000	5,000	0	20,000	0
	6.4 M&E of the various non-civil society stakeholders	20,000	5,000	5,000	10,000	0	10,000
	6.5 Involve civil society/participation in M&E	10,000	5,000	5,000	10,000		10,000
Subtotal		*95,000*	*25,000*	*25,000*	*45,000*	*20,000*	*45,000*
GRAND TOTAL	4,100,000	2,000,000	250,000	250,000	900,000	300,000	400,000

ANNEX 2: LOGICAL FRAMEWORK ANALYSIS

Intervention Logic	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
Overall Objective			
Long Term Objective:	– Regional capacity developed to identify and take risk-based decision to clean-up and monitor POPs contaminated sites.	– Policies/legal framework enacted as law and tool kit available for site/ methodology identification and Centres of Excellence.	– Policies are enshrined and enforcement mechanism worked out.
Mid-Term Objective:	- Experimental scale testing on site remediation carried out and results analysed, public/NGO knowledge enhanced.	– Geoenvironmental Centres established; results of experimental scale testing.	– Experimental scale results not conclusive.
Short-Term Objective:	– Policy/legal framework drafted, stakeholders involved, RCU formed, various committees established.	– Workshops/seminars carried out, trained people on board, minutes of committee meetings.	– RCU provided with premises and regional character maintained.
Output 1: A suitable regional organization/arrangement for timely and well monitored implementation of the project			
– Establish a high level Regional Ministerial Committee (RMC) for overall supervision of the project and meeting twice annually. – Establish a Regional Steering Committee (RSC) to monitor the progress of the project and make recommendations for any changes/modifications to activities, outputs and budget allocations. Prepare terms of reference. – Establish a Regional Coordination Unit (RCU) for day-to-day implementation of the project. Prepare terms of reference for the Unit. – Recruit Chief Technical Advisor.	– Organizational set-up with RMC, RCU and NCU in place. Terms of Reference for all units/committees and well-defined workplan prepared.	– RMC established, RCU at UNIDO Regional Office with 3 staff members (2 part-time and 1 full time) with office facilities, NCUs established in government offices. – Channel of communication, minutes of meetings, recruitment of experts, reports	– Members of RMC are at high-level policy makers. – Reasonable office premises given by the government with administration staff and furniture. – A broadly representative RSC appointed by the RMC. – Capacity and will to undertake and invest in successful knowledge /skills sharing workshops.

Intervention Logic	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
– Appoint Regional Co-ordinator (maximize synergies and avoid regional duplication) and National Programme Coordinators and administrative staff for the RCU. – Establish all the National Coordination Units (NCU) and prepare terms of reference. – Equip both RCU and NCU with office equipment and other facilities as agreed during the project implementation. – Skill share workshops in Ghana and Nigeria annually for project teams (RMC and RCU) and other potential country participation			
Output 2: Establishment of Regional Policy and National Legal frameworks for the management of contaminated sites			
– Recruit national and international experts to assist in policy and legislation development – Develop regional policy for the management, (enforcement, monitoring, evaluation and remediation) of contaminated environment based on a risk assessment model. – Keep the RMC fully informed of the policies developed and take overall responsibility for monitoring the implementation of the policy when enacted through national legislation. – Develop and obtain approval of policies and to have overall responsibility for monitoring the implementation of the policy when enacted through national legislation.	- Policy/legal framework on POPs contaminated soils drafted, passed parliaments of Nigeria and Ghana and incorporated as part of the government land use management plans in place. At least 2-4 enforcement cases reported based on toolkit using identification techniques and risk assessment studies. - Two awareness and stakeholders workshops on policy and enforcement issues of POPs contaminated land organized and evaluated. - Organization of regional seminars on policies and capacity building in cooperation with ECOWAS.	– Draft policy/legal framework discussed by Parliament. – Staff allotted with responsibilities for enforcement and stakeholders made aware.	– Individuals with sufficient expertise can be identified and recruited. – Stakeholders actively engage in the development of the draft regional policy. – Sufficient political will to adopt draft policy and stakeholders actively engage in the monitoring of its implementation. – Sufficient legislative time is provided for the drafting and passing of national legislation. – Dependent on the adoption of the regional policy and enactment into national law. Requires commitment from regulatory staff to attend training courses.

Intervention Logic	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
– Develop, reform and extend existing policy and legislation to cover the management of contaminated environment. – Establish regional/national training programmes for staff and major stakeholders in the enforcement of the legal framework.			– Agreement on terms of reference for the unit and its location. Sufficient resources made available to ensure efficient functioning. – RSC/RMC kept fully informed in order to speed up legislation/ enactment process.
Output 3: National and Regional capacity building and institutional strengthening			
– Recruit national and international experts in capacity building, institutional strengthening, human resource capacity development and capacity for stakeholder engagement, public awareness and education programmes. – Establish working group formed from local and national experts and other key stakeholders. – Establish two Geoenvironmental Centres; one in Ghana and one in Nigeria. - Organize intensive course on Geoenvironmental Engineering to cover risk assessment, site investigation (desk and field), contamination and remediation, i.e. train the trainers. – Develop rational approach for site classification based on risk management. – Prepare Regional / National classification guidelines documents - Establish R&D units (or contaminated land mitigation units) in Ghana and Nigeria.	– Regional/national classification guidelines documents produced including trained staff for POPs contaminated site identification, risk assessment/management. – Two Geoenvironmental Centres established and operational in the two countries. – Specialised contaminated sites units established in the respective Ministry of Environment of the two countries.	– Document on regional/national classification guidelines, training course materials on risk assessment/risk management, training of trainers about 5 each in the participating countries. – All stakeholders fully involved in training courses. – MoU with existing laboratory (one each in Ghana and Nigeria) acting as Geoenvironmental Centre with all facilities/trained personnel. MoU established with similar institution in developed country.	– Individuals with sufficient expertise can be identified and recruited. – Those trained will remain in direct employment of the project. – Capacity to be developed will be appropriate for the task to be completed. – Existence of political will of the leaders in the two countries. – Existing laboratories will be upgraded.

Intervention Logic	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
– Organize training programme (for interested stakeholders) on the mitigation of land contamination (develop indigenous experience). – Twinning of a research centre in developed country with Universities in Ghana and Nigeria, encourage sharing and collaboration. Prepare Memorandum of Understanding (MoU). – Awareness and mainstreaming.			
Output 4: Toolkit for selection of low-cost environmentally sound and economically feasible remediation technologies and establishment of national Geoenvironmental Centres			
– Establish necessary drafting group for the site identification methodology – Develop methodology for the identification of potentially POPs contaminated sites in Ghana and Nigeria with a regional prospect (including all risk studies). – Inventory taking for all contaminated sites by industrial POPs in Ghana and partially in Nigeria. – Organise three (3) POPs site identification methodology stakeholder consultation workshops. – Establish the necessary technology selection framework and toolkit drafting group. – Develop site selection framework and toolkit for a decision support system for the selection of low-cost environmentally sound economically feasible technologies for the remediation of POPs contaminated sites.	– Toolkit for developing systematic strategies to identify POPs contaminated lands and selection of appropriate low-cost technology for contaminated land remediation. – Four pilot experimental scale tests performed in the 2 countries using the toolkit to verify and validate	– Documented evidence for identification strategies (risk studies). – Physical existence of toolkit for contaminated site identification and technology selection. Results of cleaning up of experimental scale clean up operations.	– The site identification methodology and technology selection framework developed are equally applicable to the West African region as well as Ghana and Nigeria. – The stakeholders of selected laboratories for equipment and personnel strengthening are willing to cooperate with the project. – Stakeholders of the selected sites for pilot studies are willing to cooperate with the project. – The developed methodology for site identification and technology selection are correct. – The selected technologies will clean up the analytical study sites to the required level.

Intervention Logic	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
– Organise three (3) POPs technology selection/framework stakeholder consultation workshops. – Establish the deployment and analytical studies working group. – Identify and select laboratories in both Ghana and Nigeria to undertake laboratory testing of selected technology framework – Deployment of the selected methodology and framework for the selection of low-cost appropriate remediation technology for POPs contaminated sites. – Strengthening laboratory capacities in equipment and personnel. – Undertake laboratory trials to check the suitability of selected methodology – Identify up to four (4) POPs contaminated sites (2 in each participating country). – Undertake experimental Project(s) in the designated sites in Ghana and Nigeria to verify and validate the site selection methodology, the framework for remediation technology selection and the selected technology option.			
Output 5: Establishment of Environmental IMS, a framework for stakeholder engagement and a Public Educational and Awareness Programme			
– Recruit local and national experts for IMS, stakeholder engagement and public Educational and Awareness Programmes. – Establish a project strategy for communication and stakeholder engagement including a long-term strategic communication plan.	– An IMS set-up based on toolkit for systematic investigation and identification of POPs (and other PTS) contaminated sites. – Linkage to UNIDO's electronic portal on contaminated sites.	A website on contaminated sites, newsletters, environment/economic indicators, press reports, public awareness campaign, promotion of private-public partnership.	– Individuals with sufficient expertise can be identified and recruited. – The elements of sustainability described in the Sustainability section of this proposal have been successfully met.

Intervention Logic	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
– Establish the necessary POPs potentially contaminated sites database working group. – Establish an effective, national database for potentially contaminated POPs sites. – Establish an Environmental IMS working group to specifically develop and deploy a 10-year Environmental IMS Strategic Plan. – Establish an effective Environmental IMS to include relevant stakeholder information dissemination, assessment tools, classification system, remediation methodologies and best practices techniques. – Strengthening of IMS capacities in equipment and personnel. – Organise three (3) IMS stakeholder consultation workshops. – Undertake activities necessary to strengthen understanding of POPs issues through programmes of education and awareness for all relevant stakeholders. – Identify and engage with all relevant sector stakeholders. – Organise at least two (2) POPs networking / workshop events per year in each country. – Disseminate information, knowledge, legislative updates and best practise across all aspect of POPs.	– Records of public awareness/ education campaign and health impact data due to contaminated (POPs) sites available in the IMS.		– Education and awareness programme are capable of being successfully received by all stakeholders equally. – Single country successes by both IMS and issue awareness programmes are able to translate into more regional applications. – A key assumption is that sufficient stakeholder interest can be fostered to participate in and engage positively with the activities for information dissemination, networking, workshops and education and awareness programmes.

Intervention Logic	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
- Plan and host at least two (2) meetings per year of the POPs Stakeholder Engagement Committee (SEC) to champion stakeholder interests and development of education and awareness campaigns in each country. - Development and deployment of complimentary websites, newsletters and systems for internal and external dissemination of POPs related information and key messages.			
Output 6: Regional monitoring and evaluation plan			
– Recruit local and national experts. – Establish the necessary M&E guidelines drafting working group. – Establish baseline indicators according to the GEF M&E guidelines. – Organise three (3) M&E indicator guidelines consultation workshops. – Establish the necessary UNIDO Evaluation and Review Mechanism Drafting Committee. – Review the monitoring mechanisms (to include project performance and evaluation review (PPER), Tripartite Review (TPR), mid-term independent evaluation and external evaluation). – Active involvement and participation in the GEF annual Project Implementation Review (PIR). – Proactively collect and analyse M&E activities from each of the other project outputs.	- Assessed and documented baseline indicators at the beginning of the project. - Four PIRs, 8 RSC reports and mid-term review report prepared. - Two RMC meetings organized. – Final Terminal evaluation report prepared.	– Achievements of outputs and timely implementation reports – Stakeholders' cooperation/commitment, evidence of private-public partnership, sustainability/replicability of outputs, reports on mid-term evaluation, if any.	– M&E should not be overlooked. – Individuals with sufficient expertise can be identified and recruited. – Sufficient funds made available for internal/external evaluation in accordance with GEF/UNIDO policies and procedure.

Intervention Logic	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
– Actively assist and monitor the M&E for all other tasks and activities from project outputs. – Collate and structure the M&E priorities from all project outputs into a single consolidated plan for the project.			

ANNEX 3A: STAP REVIEW

STAP TECHNICAL REVIEW OF GEF PROJECT PROPOSALS

Subject of the Review:

Project name: Regional project to develop appropriate strategies for identifying sites contaminated by chemicals listed in Annexes A, B and/or C of the Stockholm Convention

Requesting countries: Republic of Ghana and Federal Republic of Nigeria

Background and justification:

While most of the developing countries and the countries in economic transition banned agricultural and industrial Persistent Organic Pollutants (POPs) decades ago, they are burdened with obsolete stocks of POPs pesticides lying in unattended warehouses, buried underneath the ground without proper records and protective and monitoring measures, and PCBs contaminated and leaking electrical equipment. In addition, there is practically no knowledge/information to the public at large regarding the release of unintentionally produced highly toxic by-products namely dioxins and furans (also HCB and PCBs) from various industrial and non-industrial categories specified in Annex C, Article 5 of the Stockholm Convention.

Project clearly illustrates that presently the major types of chemicals used in Ghana and Nigeria are imported. Many of them are used in or arise from industry, agricultural and public health vector disease control. The inventory of obsolete pesticides has shown that there are stockpiles of persistent organic pollutants, which need to be disposed of since they are associated with risks to health and the environment.

The results of inventories carried out in Ghana and Nigeria as part of the preparation of their National Implementation Plan (NIP) indicated that there are several hundreds of metric tons of stockpiles/obsolete pesticides, which may include POPs pesticides. Sites where the stockpiles are stored need to be investigated for possible soil and ground water contamination. Potential sources of POPs releases in Ghana and Nigeria include:

- Locations where electrical equipment (particularly transformers and capacitors) were serviced
- Areas where spillages occurred during the filling of such equipment with PCBs
- Poorly designed and maintained storage sites;
- Locations where POPs wastes were/are potentially dumped (including co-disposal of hazardous and/or domestic waste);
- Waste discharges from chemical plants, where elemental chlorine is involved in the technology;
- Sewage sludge treatment plants; and
- Former organochlorine pesticides manufacturing/formulation plants;

The immediate surroundings of all leaking transformers are potential contaminated sites. This could be as a result of spillage resulting from maintenance operations of the main utility service providers. Transformers are occasionally filled or topped up with oil, which could be PCB oil. PCB- containing wastes for example may also be found at the Accra Central Station of the Electricity Company of Ghana, where broken down transformers from all over the country are repaired. This is located in the city's biggest open market where all types of goods, including vegetables, fruits, groceries, clothes and other goods are sold. There is a drainage which carries all spilled oil into the sea thus if the transformer oil is contaminated with PCBs it is a major hot spot not only contaminating the local areas but also international waters. In Nigeria similar sites contaminated with PCBs may be found at Ijora warehouse of the Power Holding Company of Nigeria.

Available evidence indicates that contents of the dirty oil (PCB contaminated oil) reservoir in both countries are unofficially and illegally sold out to:

- Enterprising women who illegally use the oil or possibly PCBs to formulate beauty creams for sale on the open market

- Welders for use in welding machines as coolants
- People who apply them as lubricants in domestic sewing machines
- Other entrepreneurs who formulate mixtures with sawdust for industrial and domestic use as fuel

Scientific and technical soundness of the project:

There are unconfirmed reports of volumes of pesticides containers buried at some specific locations. For example in Ghana, it is alleged that the pesticides containers, might include POPs pesticides, were buried in the early 1970's at the premises of the Plant Protection and Regulatory Services Department (PPRSD) at Pokuase in the Ga District of the Greater Accra Region as well as at the Tono and Vea Irrigation projects in the Upper East Region. These locations are within important river basins such as the Densu and Volta. Similarly in Nigeria the African Stockpile Programme has identified some warehouses where obsolete pesticides including POPs are stocked. These places are: Lagos, Kaduna, Ibadan and Kano.

Following the identification of hotspots using the proposed methodology for site identification and after the selection of the economically viable and environmentally friendly remediation technologies, pilot scale remediation experiments for low cost technologies will be undertaken in both Nigeria and Ghana. Special emphasis will be given to sites that can be considered as hot spots of contamination.

Suitable training and supervisory assistance will also be provided to Ghana and Nigeria by linkage and partnership arrangement with relevant institution(s) in the developed world. Most importantly the proposed project will bring out two sets of toolkit; one for the systematic identification of land/sites contaminated by POPs and the other for methodologies to be adopted in the region for decontamination using low cost technologies. Such toolkits will benefit the whole of the Africa region.

The immediate objective of the programme includes:

- Policy and legal frameworks developed for management of contaminated lands/sites;
- Institutional capacity strengthened for mitigation of land contamination and sustainable land management.

List of outputs and activities summarized what will be done in this project.

Identification of the global environmental benefits and/or drawbacks of the project:

Project is focused to the help with removing barriers to the further adoption and effective implementation of available technologies.

This project is also very important for the developing of market with waste treatment technologies and broader competition.

However, many countries in Africa such as Ghana and Nigeria recognize the problem of sustainability that ongoing POPs project would face where they deal only with the problem of disposal of stockpiles while ignoring the related problem of subsequent cleanup of sites contaminated with POPs chemicals. Such contaminated sites if redeveloped or redeployed for agricultural or housing purposes will pose significant and immediate threats to human and animal health and the environment.

Fitting of project within the context of the goals of GEF:

Nigeria and Ghana have consequently approached UNIDO to assist them through GEF funding to develop policies and regulations for the rehabilitation of contaminated sites, capacity building in identifying contaminated land and in selection methodology for site remediation, public education, setting up of Information Management System (IMS) and at a later stage through public-private partnership and other donors support, promote proper clean up of such sites while promoting the transfer of appropriate remediation technologies conforming to Best Available Techniques (BAT) and Best Environmental Practices (BEP).

The inventory of obsolete pesticides and other Persistent Organic Pollutants (POPs) chemical stocks is an integral component of the GEF funded Enabling Activities for the development of the National

Implementation Plans (NIP) underway in Ghana and Nigeria and is expected to provide national listings of chemicals contaminated sites. The listings are not, however, associated with the identification of the risks to health and the environment that these sites pose. Both countries are covering NIP activities with the support of UNIDO and are aware of the fact that identification of contaminated sites for developing an inventory is very complicated with no available data.

Regional and/or global context:

The project is example of potential joint and useful collaboration between international bodies such as GEF and national authorities (local Government) and local private sector for future efforts which will be undertaken pursuant to the Stockholm Convention.

Important aspect is that the real regional hotspot was selected for this model study and results can be very useful for other GEF Projects in this part of Africa or in other part of Globe.

Demonstration of this approach in the region of Africa is very suitable, because a lot of countries in this part of Africa have huge amount of contaminated sites.

The main outcome of the Full Project would involve development of policy and legal frameworks for the management of POPs contaminated lands/sites in Ghana and Nigeria and possible use of this experience to extend the results to the West African region. It would also include activities leading to enhance national and regional assessment capacity and institutional strengthening on issues of POPs contaminated lands/sites. Over and above it will establish planning details for pilot case demonstration for identification and assessment of use of low cost but environmentally sound remediation technologies in selected hotspots in the two participating countries. The activities would also address outcome of issues of socio-economic importance namely Stakeholder Involvement and Establishment of Information Management System (IMS), Public Awareness and Environmental Education Programme.

Therefore a regional approach will have a far-reaching effect for other countries in the region to move towards environmentally sustainable economic and industrial development.

The successful destruction and clean-up of the POPs stockpile and associate waste matrices (e.g. contaminated soils and sediment) in the demonstration area would eliminate the source of heavily contaminated leachates that is continuously feeding into the Guinea Current Large Marine Ecosystem (GCLME) and consequently would obviate a major source of PCB to the GCLME's input inland waters, thus mitigating what is currently a very serious public health problem in the Region, while simultaneously addressing designated hotspots in the GCLME Region, which is the subject of a series of interventions under the International Waters Operational Programme (OP) # 8 of the GEF.

There are a number of ongoing programmes and projects, which are being supported by different donors in both countries, which, because they are closely related to the proposed project, provides leverage for obtaining further donor support. A summary of the ongoing programmes and projects is mentioned.

Project Design:

As previously enumerated the project is a response to address problems of inadequate capacity in developing countries in identifying and remediating POPs contaminated lands/sites based on systematic investigation and risk assessment studies.

With the ASP putting emphasis on environmentally sound disposal of obsolete stocks of POPs pesticides, an obvious follow-up is the need to develop capacity for the identification and remediation of POPs contaminated lands/sites. African countries therefore need a national/regional approach to clean the agricultural and industrial land/sites contaminated with POPs and other similar contaminants.

The overall objective of the programme is to build capacity and strengthen institutional arrangement and develop appropriate strategies for identifying sites contaminated by chemicals listed in annexes A, B and or C of Stockholm Convention. The project will also assess the viability of environmentally

sound and low-cost remediation technologies. Results of these pilot project experiences will be extended to other countries in the region.

The immediate objective of the programme includes:

- Policy and legal frameworks developed for management of contaminated lands/sites;
- Institutional capacity strengthened for mitigation of land contamination and sustainable land management.

Evidence for government commitment and sustainability:

The sustainability is described. The Governments of participated countries is mentioned.

This Project Brief takes into account sustainability by linking project benefits to countries sustainable development benefits as well as through expanding the scope of contaminants beyond the POPs group to Persistent Toxic Substances (PTS).

Available evidence indicates that contents of the dirty oil (PCB contaminated oil) reservoir in both countries are unofficially and illegally sold out to:

- Enterprising women who illegally use the oil or possibly PCBs to formulate beauty creams for sale on the open market
- Welders for use in welding machines as coolants
- People who apply them as lubricants in domestic sewing machines
- Other entrepreneurs who formulate mixtures with sawdust for industrial and domestic use as fuel

Project barriers, risks, sustainability and commitment:

Project very detailed describes potential barriers and risks of project realization.

The most important topic of information campaign concerning to the application of this approach is to describe to Civil Society that is necessary to destroy all obsolete POPs stocks and contaminated wastes because the present disposal and storage in unacceptable and potential dangerous for the environment and human.

The five principal risks that need to be taken into account for this programme and project include:

- The possibility that the programme and project will not be sustainable for financial and other reasons beyond the life of the GEF intervention.

  The risk is low due to the fact that the capacity building achieved in the project would be broadly applicable to many similar toxic contaminants.

- The possibility that there exists inadequate and ineffective political will, government support and actual commitment for the Programme and Projects.

  This is low since the project puts emphasis on policy/legal frame work, counties driven countries ownership approach and will be implemented under the supervision of a committee at Ministerial level indicating full commitment.

- The possibility of inadequate time frame in which to complete and achieve the outlined tasks

  The risk is none due to the fact the implementation will be based on a work plan that will be monitored periodically and remedial action and adjustments made to meet the timely inputs to achieve the outputs:

- The possibility of inadequate and ineffective stakeholder participation during the project as well as the possibility of conflicting long term stakeholder priorities.

  The risk is low due to the fact that during the preparation of the country NIPs and the present project brief all the stakeholders played an important role and even wanted expanded coverage of toxic contaminants and not restrict only to POPs.

The capacity building, especially in public awareness, environmental education, NGOs and stakeholders' involvement and establishment of a well functioning IMS will provide the long term knowledge upgrade of public, civil servants and civil society which will have its own momentum for providing information on POPs land pollution and consequent impact on other environmental matrices including water bodies.

In the project sufficient cooperation/linkage with projects related to Stockholm Convention in the region is envisaged in the implementation of the project.

During the project brief preparation there has been a great cooperation and understanding and full involvement and interaction among the national experts, several Ministries and NGOs in order to keep the partnership, countries ownership and countries driven approach.

There will be no creation of any new stand-alone centre but only existing institutions/laboratories will be upgraded thereby increasing the probability of long-term sustainability and replicability.

Experience gained during project brief preparation has resulted in improved understanding of the barriers to be overcome during full project implementation. The major barriers identified to date include inadequate national policy on POPs, inadequate policy and legal framework, inadequate comprehensive scientific/socio-economic data, ineffective enforcement of regulations and legislation, lack of a national classification system, absence of clear responsibilities and limited coordination, inadequate financial resources, inadequate awareness and information, lack of capacity and experience in selecting environmentally sound cost effective technology for soil remediation, lack of capacity to conduct risk management decision for contaminated land/site remediation.

Replicability of the project:

Experiences gained during the project realization in both countries can be very helpful for other countries especially as far as the better understanding of potential barriers during project implementation in other countries. This project can lead to optimum procedure with using of experiences and results, what can be important especially as far as the applications in other countries.

Most importantly the proposed project will bring out tool kits for systematic identification of sites contaminated by POPs and methodologies to be adopted in the region for decontamination of the contaminated sites. Such tool kits could eventually benefit the whole Africa region.

Project funding:

Project will be funding by GEF, the Government of Nigeria and Ghana. As I mentioned, the guarantee of national partners should be suitable if will be done officially as soon as possible.

The items of incremental costs and project financing tables look reasonable, but it is impossible to evaluate during the short period and without more detailed description of them, how are realistic.

Linkages to other programs and action plans at regional or sub-regional levels:

Direct linkage with the development of National Implementation Plans in the Parties through GEF funded Enabling Activities exists and can be very useful as a potential additional application of this approach and technology or potential future co-operation of countries of Africa in the destruction of waste in both countries. The experiences and information from this project realization should be a valuable resource for many others.

Other beneficial or damaging environmental effects:

Projects also briefly summarize global benefits for other GEF projects such conservation of biological diversity or improved water quality and explain the potential effects of environmental present POPs for these global problems.

Degree of involvement of stakeholders in the project:

The role of stakeholders in the phase of Project preparation is described as a unique and can be very helpful during the future steps of project implementation and realization. Project will organize and covered some additional workshops and activities for better public understanding of the project.

Throughout the project preparation stakeholders' participation and discussions were given cardinal importance and this will continue to be a major feature of the project implementation. The project will stress participation within the two countries through workshops, IMS and dissemination of information giving transparency. NGOs along with relevant ministries will be part of the public awareness and environmental education programmes.

Summary:

The Project "Regional project to develop appropriate strategies for identifying sites contaminated by chemicals listed in Annexes A, B and/or C of the Stockholm Convention" has a great relevance to global and regional solution of POPs problems as far as the disposal of obsolete POPs stocks, wastes and contaminated environmental matrices such as soil or sediments.

Project defines expected risks and barriers, which can be limited steps for application in the developing countries and in the countries with economy in transition.

Based on my professional experiences, I consider this project as very well prepared and selected approach as suitable for the destruction on POPs stocks and wastes without additional harmful environmental releases.

I recommend this project to accept.

Moscow, 21/03/2006

Prof. Dr. Ivan Holoubek

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ANNEX 3B: UNIDO RESPONSE TO STAP REVIEW

The STAP Review given under Annex 3A is self-explanatory and does not raise any critical comments or queries regarding the project brief. It broadly agrees with the project design, objective, outputs and the activities that will be done to achieve the outputs, sustainability and replicability. Under project funding it specifically says “the items of incremental costs and project financing tables look reasonable, but it is impossible to evaluate during the short period and without more detailed description of them, how are realistic”. The authors of the project brief are aware of this and further refinement will be made during the full project preparation stage. Overall the STAP review is favourable to the contents of the project brief.

FAO comments on the GEF proposal for a Regional project to develop appropriate strategies for identifying sites contaminated by chemicals listed in Annexes A, B and/or C of the Stockholm Convention and UNIDO response

Comments:

1. The principle of a project to develop expertise, capacity and methodologies for addressing POPs (and other chemical) contaminated sites is welcome. This is a topic fraught with technical, scientific, economic and political difficulties where an objective approach is badly needed.

2. The project brief recognises the synergy with the ASP, but does not appear to be cognisant of the tools developed under the ASP and the methodologies to be applied in participating countries, including Nigeria. Each ASP country project will include a detailed national inventory and risk assessment of all obsolete pesticide stores and sites contaminated by obsolete pesticides. Thus it is anticipated that the ASP will produce a significant part of the national inventory of POPs contaminated sites in Nigeria, which the current proposal addresses. In addition the ASP could make available tools that have been developed with the support of GEF for the inventorization and risk assessment of chemical stockpiles and contaminated sites. The existence of the methodology and tools seems to fulfil one of the main objectives of the proposed project.

3. The UNIDO proposal focuses on institutional and policy development and proposes additionally to carry out pilot remediation activities. It seems that an important step may be missing from the process in that the survey process is not clearly defined and no risk assessment process is proposed which will allow sites to be prioritized for action on the basis of the risk they pose to health and the environment. Without such an assessment it is not clear on what basis sites will be selected for pilot remediation.

UNIDO response

FAO review is in support of the project and raises the issue of Risk Assessment/Management for dealing with POPs contaminated sites. In fact, this is one of the main themes of the project reflected as the systematic identification methodology to be adopted and will have the full spectrum of risk identification/risk assessment/management leading to decision making on remediation of POPs contaminated land. In line with Risk Based Decision Making (RBDM) process, there will be classification system of contaminated land based on level of contamination, location of the sites, pathway and receptors of contaminants, environmental and health indicators and consultation with all relevant stakeholders. There will be a continuous interaction with ASP programme in the region along with the strategy to prevent future contamination of soil with POPs and other PTS.

ANNEX 4: MONITORING AND EVALUATION PLAN

The project objectives, outputs, activities, information on experimental laboratory scale and technology selection will be reviewed and evaluated according to GEF/UNIDO project evaluation policies and procedures. Experimental scale tests and investigations results on at least 4 sites for land remediation of POPs contaminated sites in order to verify and validate the site selection methodology, the framework for remediation and the selected technology options based on BAT/BEP. Two committees, the Regional Ministerial Committee (RMC) and the Regional Steering Committee (RSC) will be meeting regularly to monitor and provide necessary coordination. The Regional Coordinator (RC) will prepare the reports of these meetings (RMC and RSC). The RC will prepare progress reports and submit to UNIDO Hqs. every three months. UNIDO Project Manager will submit a yearly Project Implementation Report (PIR) to the GEF Secretariat. The table below shows the activity and responsibility of stakeholders in reporting on project progress activities. This takes into account the technical aspects of implementation.

Type of M&E activity	Responsible parties	Timeframe	GEF (US$)	Other (US$)
Baseline activities report	UNIDO Project Manager (Task Manager)	3 months after the start of the project	N.A	30,000
Regional Ministerial Committee meetings report	Regional Coordinator	On biannual basis	20,000	20,000
Regional Steering Committee reports	Regional Coordinator	Twice a year	30,000	40,000
PIR	RCU/UNIDO	Once a year	0	20,000
Mid-term review report	UNIDO Project Manager, international consultant and UNIDO M&E branch	After two years of the start of the project	20,000	30,000
Terminal evaluation including financial auditing	UNIDO M&E branch and independent evaluation consultant	At the end of the project	25,000	20,000
Total			95,000	160,000

The mid-term review will assess the criteria used for hot spots identification, impact on stakeholders, progress of IMS and public education and the progress of the methodology for site identification/investigation/use of toolkit for appropriate technology selection as well as the review will cover the government's response to the proposed policy/legal framework. Output 6 also covers the M& E approach for both technical and logistic implementation indicators. The monitoring and evaluation GEF budget is US$ 95,000 (excluding UNIDO staff costs, which are covered by the Agency fee). The table below shows the monitoring and evaluation plan.

Indicative Monitoring and Evaluation Plan

Intervention Logic	Targets	Objective verifiable and quantitative indicators	Results
Output 1: Regional organization/ arrangement for timely and well-monitored project implementation (Project Coordination)	- National/Regional coordination established for execution of various activities - All relevant key stakeholders fully involved in decision making process	- Organizational set up with RMC, RCU and NCUs in place, TORs for all units/committees and well-defined workplan prepared.	Each component of the project implemented at national/regional levels with proper coordination involving all stakeholders including government officials, civil societies and industries.

Intervention Logic	Targets	Objective verifiable and quantitative indicators	Results
Output 2: **Establishment of policy/legal framework for management of POPs contaminated sites**	- National/international experts drafting policy/ legal framework for management of POPs contaminated land - Enactment of policy/legal framework as law - Trained personnel in Ghana and Nigeria for enforcement of above law - Regional seminars on policies and capacity building organized in cooperation with ECOWAS with reports	- Policy/legal framework on POPs contaminated soils drafted, passed parliaments of Nigeria and Ghana and incorporated as part of the government land use management plans in place. At least 2-4 enforcement cases reported based on toolkit using identification techniques and risk assessment studies. - Two awareness and stakeholders workshops on policy and enforcement issues of POPs contaminated land organized and evaluated. - Organization of regional seminars on policies and capacity building in cooperation with ECOWAS.	- - POPs contaminated sites policy/legal framework enactment and enforcement systems established in the 2 countries with an outreach effect for the sub-region and in support to general land use planning.
Output 3: **National/Regional Capacity Building and institutional strengthening**	- Production of regional/ national classification guidelines documents - MoU developed between research centre in a developed country and centres in Ghana and Nigeria	- Regional/national classification guidelines documents produced including trained staff for POPs contaminated site identification, risk assessment/ management. - Two Geoenvironmental Centres established and operational in the two countries. - Specialised contaminated sites units established in the respective Ministry of Environment of the two countries.	- National/Regional capacity developed for identifying POPs contaminated sites and their classification based on risks. - Institutional capacity built on government and public/private institutions.
Output 4: **Toolkit for selection of low-cost environmentally sound remediation technology and establishment of national GCs**	- Upgrade of two laboratories to Geo-environmental centres capable of identifying/ analysing POPs contaminated land.	- Toolkit for developing systematic strategies to identify POPs contaminated lands and selection of appropriate low-cost technology for contaminated land remediation.	Toolkit for identification of POPs contaminated land and selection of appropriate low cost technology for remediation produced and validated

Intervention Logic	Targets	Objective verifiable and quantitative indicators	Results
	- Training of personnel on site remediation / analysis of contaminants / risk analysis / management - Preparation of toolkit for site identification and selection of appropriate low cost remediation techniques - Experimental scale tests and investigations results on at least 4 sites for land remediation of POPs contaminated sites in order to verify and validate the site selection methodology, the framework for remediation and the selected technology options based on BAT/BEP	- Four pilot experimental scale tests performed in the two countries using the toolkit to verify and validate.	
Output 5: **Establishment of IMS framework for stakeholders engagement /public education/ awareness related to POPs contaminated sites**	- Data base on POPs contaminated sites and IMS training manual - Use of websites, newsletters, mapping of potential POPs contaminated sites in the region available to all stakeholders / public	- An IMS set up based on toolkit for systematic investigation and identification of POPs (and other PTS) contaminated sites. - Linkage to UNIDO's electronic portal on contaminated sites. - Records of public awareness / education campaign and health impact data due to contaminated (POPs) sites available in the IMS.	- The countries having access to information (IMS and Portal) at different levels for proper understanding of risk awareness/ management, avoiding future contamination of POPs. - Countries and sub-region having capacity to assess socio-economic impact of POPs contaminated sites.
Output 6: **Regional Monitoring and Evaluation plan**	Objectively evaluate implementation of the project according to workplan, achievement of outputs, assessing the cost-effectiveness and sustainability of the outputs in accordance with GEF M&E policies and procedures	- Assessed and documented baseline indicators at the beginning of the project. - Four PIRs, 8 RSC reports and mid-term review report prepared. - Two RMC meetings organized. - Final Terminal evaluation report prepared.	Progress and Terminal Evaluation reports with findings, recommendations, lessons learned and evidence of sustainability of the project outputs benefiting the region.

ANNEX 5: TERMS OF REFERENCE FOR CONSULTANTS AND SUBCONTRACT

TERMS OF REFERENCES FOR INTERNATIONAL/NATIONAL CONSULTANTS

1. **Post Title:** Chief Technical Advisor (CTA), part time

   Duration: 1 to 2 months/year

   Date required: September 2007 to 2010

   Duty Station: Home based with field visit to Ghana, Nigeria and Cardiff (UK)

   Counterparts: UNIDO Programme Manager, relevant staff of Pollution Control, Federal Ministry of Environment, Abuja, Nigeria and Ministry of Environment and Science, Accra, Ghana

   Duties: The CTA, in consultation with the UNIDO project manager and the Regional Coordination will facilitate the implementation of the project both in project coordination and technical inputs needed. In this, he/she will prepare the terms of references for all the units described in organizational chart. He will closely interact with the subcontractor(s), Regional Coordinator and assist in organizing major expert group meetings and training programmes and also presents technical papers as needed. He/she will prepare necessary job descriptions for short-term consultants. He/she will make sure that the quality of inputs is in line with the requirements. He/she will be a member of the Project Steering Committee and will help in organizing the annual meetings and help in preparing the minutes of the meetings. He/she will also provide necessary help and advice in preparing the toolkit and in setting up of model experiments in soil remediation technology related to POPs contamination. The CTA is also expected to participate fully in the M&E of the project and make recommendations as needed for the project to stay on course to meet the outputs and objectives.

   Qualifications: Advanced university degree in Chemistry /chemical engineering, environmental chemistry with several years of professional experience in cleaner technology in chemical industry with emphasis on agrochemicals, toxic and hazardous waste management including POPs and chemical safety. Extensive experience in implementation of UNIDO technical assistance projects is required. Working in International Conferences at senior level dealing with chemicals management, hazardous waste, environmental issues desirable. Experience in managing POPs national NIP projects desirable.

   Language: English

2. **Post Title:** Regional Coordinator

   Duration: 24 m/m over a period 2007-2010

   Duty Station: Home based with travel to Lagos, Accra, Cardiff, Vienna and others if needed

   Counterparts: UNIDO Programme Manager, relevant staff of Pollution Control, Federal Ministry of Environment, Abuja, Nigeria and Ministry of Environment and Science, Accra, Ghana

   Duties: The Regional Coordinator, in consultation with the project manager, the CTA and the project counterparts will be in charge of the Regional Coordinator Unit to be established in the Regional Industrial Development Office of UNIDO. Apart from the day-to-day administration of office, he/she is expected to coordinate all activities of the project linking both vertically and horizontally given in the project organizational chart. His/her office will be responsible for maintaining all files of the project, oversee the work of the National Coordinator Units, maintain linkage

with the Regional Steering Committee and through it the Regional Ministerial Committee. Will provide all amenities to international experts and assist in organizing regional workshops, training courses directly or through the national Coordinator units. Will make sure that all activities are performed in a timely manner in accordance with the work plan. Will participate in Regional Steering Committee and Project Steering Committee meetings as needed and submit reports. Will take active part in the M&E of the project and provide all assistance during mid-term and final evaluations. As given in the project document, submit progress reports and make sure all necessary reports are submitted in a timely manner.

Qualifications: Advanced university degree in Science or in management/economics must have several years of professional experience in managing office dealing with administration/budget management. Experience in working with international staff is a must. Experience in handling industry/environment/investment related projects, dealing with Government and NGOs very desirable.

Language: English

3. **Post Title:** Consultant on policy/legal framework related to POPs contaminated sites

Duration: 1 m/m during 2007 - 2010

Duty station: Home based with travel to Cardiff (UK), Ghana and Nigeria

Counterparts: UNIDO Programme Manager, relevant staff of Pollution Control, Federal Ministry of Environment, Abuja, Nigeria and Ministry of Environment and Science, Accra, Ghana

Duties: The expert, in consultation with the counterparts mentioned above and national and international consultants will provide necessary inputs for drafting a policy/legal framework on POPs contaminated sites in the two countries. Based on the work already done, the consultant will provide the necessary inputs to either amend the existing laws and give necessary advice and help in reaching the milestones ear marked in policy development. He/she is expected to follow the work plan and provide inputs for implementation of the policy once it comes into force. He/she is expected to assist short-term training groups visiting UK to show them the working methodology in developed countries such as in the UK and in the European Union.

Qualifications: A lawyer or policy analyst with long-standing experience in environmental laws and international agreements linked to environment, pollution or chemical industries. Must be familiar with national or regional policy making and methods of implementation of such laws.

Language: English

4. **Post Title:** Consultant on IMS, public Awareness and Environment Education related to POPs contaminated sites

Duration: 6 w/m during 2007-2010 (during the lifetime of the project)

Duty Station: Home based with travel Ghana, Nigeria and Vienna

Counterparts: UNIDO Programme Manager, relevant staff of Pollution Control, Federal Ministry of Environment, Abuja, Nigeria and Ministry of Environment and Science, Accra, Ghana

Duties: The expert, in consultation with the counterparts mentioned above and national and international consultants and will provide necessary inputs based PDF-B

findings and set up a database and an IMS to increase public awareness, stakeholders' full participation and provide transparency to the issue of POPs contaminated sites and their management and proper remediation and development if deemed necessary. He/she would be fully involved in organizing training programmes in IMS, on POPs contaminated sites in the two countries. In addition, the specialist will provide necessary inputs to "the toolkit" for systematic identification of POPs contaminated sites and selection of appropriate economically feasible technologies for site remediation in the two countries. He/she is expected to help in project evaluation and submit reports as needed following the work plan.

Qualifications: Advanced university degree in basic Science or computer science with long-standing experience in database setup, data management and public education/awareness. Experience in environmental industrial issues and working in academic or governmental or non-governmental organization is essential. Experience in developing countries desirable.

Language: English

5. **Post Title:** Consultant on Contaminated land remediation technologies especially low cost remediation of POPs contaminated sites

Duration: 6 w/m over a period 2007-2010

Duty Station: Home based with travel to Ghana and Nigeria

Counterparts: UNIDO Programme Manager, relevant staff of Pollution Control, Federal Ministry of Environment, Abuja, Nigeria and Ministry of Environment and Science, Accra, Ghana

Duties: The expert, in collaboration with the counterparts mentioned above and national and international consultants will provide necessary inputs in setting up of Geo-environmental Centres in Ghana and Nigeria and take necessary action to set up model experiments to develop suitable technologies for remediation of POPs contaminated sites. In this he/she will take into account BAT/BEP and the situation in the region regarding applicability and affordability. He/she will train the trainers, conduct workshops and contribute extensively to the "toolkit" on systematic identification of POPs contaminated sites and development of appropriate economically feasible and environment friendly technologies for remediation, if deemed necessary. He/she will closely interact with two laboratories chosen for the establishment of the national Geo-environmental Centres.

Qualifications: An advanced degree in civil or environmental engineering with extensive R&D experience in land remediation technology, in environmental industrial issues, managing contaminated sites, spent mining areas or steel or other chemical industries. Experience in cost/benefit analysis of land remediation is important. Experience in land development with public private partnership will be an added advantage.

Language: English

6. **Post Title:** Consultant on Risk Assessment/Risk Management and Hazard ranking

Duration: 4 w/m over a period 2007-2010

Duty Station: Home based with travel to Ghana and Nigeria

Counterparts: UNIDO Programme Manager, relevant staff of Pollution Control, Federal Ministry of Environment, Abuja, Nigeria and Ministry of Environment and Science, Accra, Ghana

Duties: The expert, in consultation with the counterparts mentioned above and national and international consultants will provide necessary substantive in puts in risk identification/assessment/ management related to contaminated sites of toxic chemicals and will train trainers and other experts in this topic. To this end he/she will organize workshops/seminars to counterparts including stakeholders, government officials. He/she will contribute to the "toolkit" to be prepared in the project and identify indicators and establish regular methodology of consultation process with all stakeholders. Is expected to submit reports as needed and fully assist in Monitoring and evaluation of the project at different stages of implementation.

Qualifications: An advanced degree in science or engineering or risk management/industrial safety with specialization in risk identification/assessment/management process. Must have good credentials of international involvement in organizing workshops, advanced training with case studies. Experience if chemical contaminated sites especially of toxic chemicals would be a major advantage.

Language: English

7. Post Title: Consultant on socio/economic impact of toxic contaminants and indicator development

Duration: 3 w/m over 2007-2010

Duty Station: Home based with travel to Ghana and Nigeria

Counterparts: UNIDO Programme Manager, relevant staff of Pollution Control, Federal Ministry of Environment, Abuja, Nigeria and Ministry of Environment and Science, Accra, Ghana

Duties: The consultant, jointly with the counterparts mentioned above and national and international consultants will provide necessary inputs for helping in looking into socio/economic impacts in the region due to POPs and other similar toxic chemicals contaminated sites in the region. He/she will train nationals in data collection, setting up of parameters for socio/economic/health indicators, proper assessment of data taking into account reliability of interpretation. Will organize workshops in the region on socio/economic impact studies. Will also help in M&E of the project at various stages by developing set indicators and milestone apart from what has already been identified. Will help in project evaluation, reliability of data and submit reports as needed.

Qualifications: A lawyer or policy analyst with long-standing experience in environmental laws and international agreements linked to environment, pollution or chemical industries. Must be familiar with national or regional policy making and methods of implementation of such laws.

Language: English

Formation and Draft Terms of Reference for Regional Ministerial Committee (RMC)

1. Introduction:

Over the last 60-70 years, the chemical industries both in developed and developing countries have used thousands of chemicals and their innumerable intermediates and formulations for various outlets. These chemicals did vastly improve the standard of living and saved millions and millions of lives from hunger and diseases. However, some selective toxic and persistent organic chemical pollutants did remain in the environment for long periods of time. They not only migrated from one environmental matrix to another carried by air and water currents, and being lipid soluble, but also tended to enter the higher food chain and bioaccumulate in the fatty tissues of humans and animals. Following a number of consultation meetings with international experts lasting over a decade, the international community identified 12 chemicals called "the dirty dozen" and agreed that the human health and environment should be protected from these 12 persistent organic pollutants or the so-called POPs. They consisted of eight pesticides, two industrial chemicals and two highly toxic by-products called unintentionally produced POPs (UPOPs). In May 2001, more than 120 countries signed a historical treaty in Stockholm called the Stockholm Convention to protect human health and environment from these POPs. The Convention with 30 articles became legally binding during May 2004, when a 50th country ratified the convention document. To help developing countries and countries with economy in transition, which signed and ratified the Convention, the Global Environment Facility (GEF) worked out a financing mechanism for capacity building in the form of enabling activities in dealing with POPs implicated in the Stockholm Convention. UNIDO as one of the Executing Agencies with Expanded Opportunities has been helping more than 40 countries including Ghana and Nigeria in their enabling activities to prepare their National implementation Plans (NIPs).

2. NIP of Ghana and Nigeria

Under the NIP, the countries are obliged to prepare among other activities, a database covering:

- Inventory of Production
- Inventory of use
- Inventory of import/export
- Inventory of stockpiles
- Inventory of sources
- Inventory of polluted sites

During the enabling activities, countries such as Ghana and Nigeria realized the importance of problems posed by POPs contaminated sites and the problems of identifying the sites and the level of contamination. In line with Section 1e of Article 6 of the Stockholm Convention on POPs, which states: "*endeavour to develop appropriate strategies for identifying sites contaminated by chemicals listed in Annexes AB and /or C, if remediation of those sites is undertaken, it should be done in an environmentally sound manner*", Ghana and Nigeria prioritised the POPs contaminated sites as one of the major issues.

3. PDF B Regional Project:

Ghana and Nigeria in a joint approach applied through UNIDO for GEF funding under the PDF-B to prepare a regional programme to develop capacity building in systematic identification of POPS contaminated sites, carry out risk assessment/prioritzation and select and develop appropriate technologies for remediation and carry out remediation, if required in accordance with BAT and BEP. The PDF-B project was approved in July 2005. During the implementation of the PDF-B, the Geoenvironmental Research Centre (GRC) located at Cardiff University, UK was identified as a technical partner in dealing with POPS contaminated sites. With its vast experience in dealing with brown field sites remediation in Wales, UK under a private/public partnership and in doing R&D in land remediation and also with fully experienced staff and experimental facilities unique in Europe, GRC agreed to participate as a technical partner in the project. The above-mentioned PDF-B project was implemented with the full participation of the Federal Ministry of Environment, Nigeria, the Environmental Protection Agency (EPA) of Ghana Ministry of Environment and several national and international experts along with the technical experts of GRC, Cardiff. During September 2005-May 2006, consultations of all relevant stakeholders in Ghana and Nigeria took place and the full Project

Brief was prepared and submitted to GEF for approval. The project after going through a GEF review mechanism was cleared in August 2006. The project will be unique in the sense that it will be the first major project under the Stockholm Convention executed by UNIDO and funded by GEF and other partners to develop capacity in Ghana and Nigeria on environmentally sustainable management of POPs contaminated land /soil.

The project has six outputs and activities of the project over a four-year period will lead to these six outputs:

Output 1	A suitable organization arrangement set up for timely and well monitored implementation of the project
Output 2	Establishment of Regional policy and national legal frameworks for the management of contaminated sites
Output 3	National and Regional capacity building and institutional strengthening
Output 4	Toolkit for the selection of environmentally sound and economically feasible remediation technologies for Ghana and Nigeria
Output 5	Establishment of environmental IMS and framework for stakeholders engagement and public education and awareness programme
Output 6	Regional Monitoring and Evaluation Plan

4. Modalities of implementation:

Under the guidance of the Project Steering Committee (PSC) of the PDF-B project, the modalities of implementation of the main project were discussed in detail. Based on the experience gained during the implementation of PDF-B of the project, the organizational set up was agreed upon in the 3rd PSC meeting held at the GRC, Cardiff, UK in November 2006. It was agreed that a Regional Ministerial Committee hereafter referred to as RMC, should be an apex body of the project to broadly oversee the implementation and provide guidance and assistance to address any problems or barriers to achieve the objectives following the agreed work plan. It will also endorse any major changes if needed to the implementation of the project. It was also anticipated that such an apex body would provide full access and participation to all stakeholders and civic bodies in a participatory approach. The composition of the RMC and its functions are given below:

5. Composition of the Regional Ministerial Committee (RMC):

The members of RMC will consist of Ministers or their senior designates from the Ministry of Environment and Science, Ghana and the Federal Ministry of Environment, Nigeria. In addition, but not limited to, there will be ministers or their senior designates from the Ministries of Agriculture, Law, Land development /planning and industries.

6. Function of the RMC

The RMC, from time to time, will be debriefed by the Regional and National Coordinators of the project on the progress of implementation and give advanced information about any problems that are affecting the quality of project implementation, outputs and the workplan. The RMC will meet twice, once in Abuja and once in Accra. The meeting will be organized by the respective NCUs in consultation with the Regional Coordinator. The meeting will be chaired by the minister or designated person of the host Ministry. The National Coordinator of the host country will act as the Rapporteur for the meeting. The agenda and the papers for discussion will be prepared by the NCUs in consultation with the RCU. The meeting will discuss the progress of the project and make recommendation for future implementation and facilitate reaching the milestones earmarked with indicators related to activities and outputs. The Chief Technical Advisor (CTA) will also participate in the meetings, if possible.

The cost of the RMC meetings will come from the in-kind contribution of the Governments. The reports of the RMC meetings will be cleared at the appropriate level in the lead ministries prior to distribution.

Draft Terms of Reference for National Coordination Units (NCUs)

Introduction:

Based on the implementation of PDF B project, UNIDO, in accordance with the recommendations of the 3rd Project Steering Committee Meeting held in November 2006 at the Geoenvironmental Research Centre, Cardiff, will be setting up various units and committees to oversee and facilitate the implementation of the project. Such an implementation will follow an agreed work plan to provide the necessary inputs in order to reach the six outputs envisaged in the project.

These six outputs are as follows:

- **Output 1:** A suitable organisation arrangement set up for timely and well monitored implementation of the project
- **Output 2:** Establishment of Regional Policy and National Legal Frameworks for the management of contaminated sites
- **Output 3:** National and Regional Capacity Building and Institutional Strengthening
- **Output 4:** Tool kit for the selection of environmentally sound and economically feasible remediation technologies for Ghana and Nigeria
- **Output 5:** Establishment of environmental IMS and framework for stakeholders engagement and public educational and awareness Programme
- **Output 6:** Regional Monitoring and Evaluation Plan

Under the agreed organisation set up, UNIDO in consultation with the relevant national counterpart organisations will establish a Regional Ministerial Committee, Regional Steering Committee, Regional Coordinating Unit and two National Coordinator Units, one in Ghana and one in Nigeria, This is the terms of reference for the NCUs to be set up.

Location of NCU s

The exact location of NCUs will be decided by the Project counterpart organisations *viz* the Environment Protection Agency (EPA) of the Ministry of Science and Environment in Ghana and the Dept. of Pollution Control of the Federal Ministry of Environment in Nigeria. The office should be of reasonable office space, located in a good area with good infrastructure and communication facilities. It should have basic furniture and other utility services and support staff, which will be taken as part of the government contribution in kind.

Staff of the NCU

The NCU should have a National Project Coordinator, a programme officer and a secretary. At the early stages they will be working part time but could become full time depending on the workload with the progress of project implementation. From time to time, the NCU will also accommodate international and national experts and the Director of the proposed National Geoenvironmental Centre and the Information Management System.

Sub-units of NCUs called desks.

As already agreed, the NCUs will have four sub-units (called desks) to support various activities to be implemented under the regional project. These sub-units directly deal with the major outputs of the project at national level. These are:

- The Policy Desk, linked to Output 2
- The Remediation Technology Desk linked to Outputs 3 and 4
- IMS Desk linked to Output 5
- Public awareness/education Desk linked with all outputs

It should be noted that Output 3 on capacity building would be applicable to all sub-units (called desks) including some of the others such as the RCU and the various Committees. Each sub-unit (desk) could be located within the NCU or in a place conducive for carrying out the required activities.

Functions of NCUs:

The NCU will function under a National Coordinator who will coordinate all national activities under each output. In this, the unit will provide all the necessary services to national and international experts making use of the sub-units (desks). Under a subcontract arrangement with UNIDO, they should recruit the following national experts to work in the project alongside with project counterparts:

1. National expert in policy/legal framework development
2. National expert in capacity building in dealing with contaminated sites
3 National expert on technology development in soil remediation of sites contaminated by POPS or other toxic chemicals
4. Data collection / information management specialist
5. Monitoring and evaluation specialist

These national experts will interact with international experts in the same fields and provide support and technical inputs for the establishment of the national GRC and IMS units.

The NCUs will closely interact with relevant NGOs and private organizations to promote public/private partnership and in providing transparency to legal policy enforcement, decision process in the whole spectrum of activities regarding environmentally sustainable management of POPs and other persistent toxic chemicals contaminated soils in the countries/region.

While all the external inputs and some internal inputs will be supported under a subcontract arrangement between UNIDO and the NCU (through the project), it is important that the NCUs make sure that all local activities are fully supported from the in-kind contribution of the participating Governments as given in the project document.

Coordination of work with Regional Coordination Unit (RCU), the Regional Steering Committee and the Regional Ministerial Committee

The NCU will keep in constant contact with the RCU and is expected to meet the various requirements such as submission of suitable candidates for training both in the country and outside the region. The nomination forms will be submitted to UNIDO through the RCU. The RCU based on its terms of reference will interact with the NCUs to implement various activities. These include getting nominations of candidates for group and individual trainings. All those trained in well-known institutions abroad will conduct two training sessions during the project lifetime and will be the future trainers in their respective field.

In addition, the NCU in consultation with RCU will provide necessary information to the RSC and RMC members and help in organizing meetings as required.

Recruitment of national experts

The NCUs will be responsible for the recruitment of national experts (within and outside the subcontract) as required by the project as and when required for a specified period to support various desks. It will also provide support to international experts and other national experts (directly hired by UNIDO) assigned to the project.

The activities, but not limited to, of the sub-units (desks) are given below:

Policy Desk linked to output 2:

- Drafting of Contaminated Land Policy, legal framework strategy and regulation with special emphasis to POPs and similar chemicals.
- Risk assessment and Risk management policy requirements
- National Classification System for contaminated lands/sites
- Hold two national/regional stakeholders forums on policy matter related to POPs contaminated lands/sites including enforcement issues and understanding
- Through NCU/RCU/RSC, keep the RMC fully informed about progress and requirement to enact the policy/legal framework in an appropriate manner during the end of the second year of project implementation.

- Follow the tentative workplan for this output developed during the PDFD-B project implementation according to the timeframe for milestones (likely to change depending on the approval date of full project.)

First draft of national policy in place	December 2007
Final national policy in place	September 2008
Policy legal framework enacted	December 2008 to January 2009
Monitoring enactment/enforcement	December 2008 to December 2010

The Remediation Technology desk linked to Outputs 3 and 4:

- Along with national/international experts and the RCU, organize local/national training needs on various aspects of contaminated land including IMS for decision-making support tool.
- Make necessary preparations to assist the Director of the GRCs in Ghana and Nigeria on the physical establishment (building, staff, basic equipment and new equipment) of National GRC within a selected institution.
- Recruit national experts to work along with international expert to develop the systematic identification of POPs contaminated sites and development of suitable technology for remediation of such contaminated sites if deemed necessary in accordance with national/regional risk assessment /management requirements and taking into account BAT/BEP.
- Provide necessary support to GRC, Cardiff and the RCU in preparing the proposed toolkit for systematic identification and technology selection process.

IMS desk linked to Output 5:

- National/international experts set up database using an IMS working group.
- Develop IMS strategic plan and oversee its implementation.
- Organize two (interim and final) workshops for national/regional stakeholders.
- In addition, hold two networking events in each country.
- Deploy for regional benefits websites/newsletters and systems for internal and external dissemination of POPs related information mainly on contaminated land/sites.

Public Awareness/Education Desk linked with all outputs

This is closely linked to IMS desk

- Keep the public, relevant NGOs, industries on issues related to POPs contamination.
- With national/international experts develop social/environmental indicators to assist in risk awareness/assessment/management methodology and use it for taking action on potential hot spots and identified POPs contaminated sites.

The NCU along with the RCU will do the M&E of normal implementation of the project and render all the necessary assistance during the mid-term and final evaluation of the project.

International experts to support the project:

During the implementation of the project, UNIDO through a subcontract with the Geoenvironmental Research Centre, Cardiff and from other sources will assign the following international experts. They will work closely with the CTA, RCU, NCUs and the Project Steering Committee.

Expert on legal and policy issues	2m/m including 2 visits to the region
Institutional Capacity Building	4m/m including around 4 visits to the region
Remediation technology	4m/m including around 4 visits to the region
Risk identification /assessment/ Management/hazard ranking	4m/m including around 4 visits to the region

Socio economic impact assessment / indicator development/monitoring	4m/m including around 2 visits to the region
IMS	3m/m including 3 visits to the region
Total	21m/m including19 visits (each visit 8-10 days duration)

Training:

Trainees to be trained	No. of trainees	Total duration	Place
Running of National GRC	2	2 x 2 m/m	GRC, Cardiff, UK
Managing contaminated Sites	4	4 x 2 m/m	GRC, Cardiff, UK
Technology development	4	4 x 3 m/m	GRC, Cardiff, UK
Hazard analysis	4	4 x 1 m/m	GRC, Cardiff, UK
Toolkit preparation	2	2 x 1 m/m	GRC, Cardiff, UK
IMS	2	2 x 1 m/m	GRC, Cardiff, UK
TOTAL*	18	32 m/m	

** This is based on the full project budget of $4,100,000. If full co-financing is not forthcoming, the m/m and visits will be reduced accordingly.*

Short-term trainings*:

Field	No. of persons	Duration
Managing brown field sites	6-10	2 visits of less than 2 weeks
Policy issues/implementation		
Public/private partnership in land development		
IMS		

Visits and size of the team depend on getting full co-financing

Draft Terms of Reference for the Regional Coordination Unit (RCU)

1. Introduction

Based on the approval of the above project, UNIDO in accordance with the recommendations of the Project Steering Committee will be setting up various units and committees to oversee and facilitate the implementation of the regional project. Such implementation will follow an agreed work plan to provide the necessary inputs in order to reach the 6 outputs envisaged in the project. The key unit is the Regional Coordinator Unit hereafter referred to as "RCU". In the last PSC meeting held during 8-10 November 2006 at the Geoenvironmental Research Centre (GRC), Cardiff, it was agreed to set up the main RCU in Abuja at the Regional Industrial Development Office (RIDO) of UNIDO. The main advantage of such an arrangement would enable a good communication among all parties and stakeholders involved and the UNIDO Hqs. and better monitoring and evaluation of the progress of the project. The RCU will be the core unit of the project as shown in the organizational arrangement of the proposed full-sized project.

2. Terms of Reference of the RCU

Staff of the RCU

The RCU will occupy the important position in coordination of the project among the various stakeholders in the region, project counterparts, the UNIDO Hqs., the technical partner (GRC) in Cardiff, the Chief Technical Advisor so that all activities are implemented based on the agreed work plan**.** A Regional Coordinator (RC) will lead the RCU on a part time basis. He/she will be assisted by a part time secretary and a part time programme officer**.** The office will be equipped with basic office equipment and the staff will be trained, as needed in project coordination and implementation formalities. The RCU will have a sub-unit located at the UNIDO office in Lagos, Nigeria and the UNIDO office in Accra, Ghana. In both Ghana and Nigeria, the RCU will function under the supervision and support of the respective UNIDO Country Representatives.

Functioning of the RCU

The Regional Coordinator, in consultation with UNIDO Programme Manager, the CTA of the project, the UNIDO Country Representatives and senior project counterparts will use the office to coordinate all activities to implement the project in order to achieve the 6 intended outputs. The RCU will be provided with regional experts on an *ad hoc* basis for necessary assistance. This would involve getting nomination forms of trainees, fellows going on short-term training and getting CVs of national experts and providing assistance obtaining visas, local transports and travel estimates.

3. Coordination required by the RCU for various outputs

Output 1: A suitable organization arrangement set up for timely and well-monitored implementation of the project

In order to achieve the necessary project coordination, the RCU will assist in the formation of a Regional Ministerial Committee (RMC) and a Regional Steering committee. In this, it will provide necessary advise to the project counterpart organization regarding the constitution of the above mentioned Committees and provide the terms of reference for these Committees in consultation with UNIDO and the CTA. In addition, the RCU will oversee the formation of the National Coordination Units with required staff and national consultants with necessary equipment. The staff of the RCU will be given necessary training in skill share workshops to facilitate project coordination/implementation and monitoring. It will maintain all office bookkeeping of correspondence, administrative matters and reports of meetings and experts. The RCU will arrange the first inception workshop soon after the start if the implementation of the project.

Output 2: Establishment of regional policy and national legal frameworks for the management of contaminated sites

This output is an important indicator for sustainability and replicability of the project. The implementation will start early and completed before the completion of other outputs. In this the RCU will interact closely with the Policy Desk in the NCUs. It will facilitate interaction of national and international policy consultants to draft the policy/legal framework for management of POPs contaminated sites in the region. The RCU will keep the RMC and RSC informed regarding the policy developments and will facilitate speedy adoption of the drafted policy for enactment and necessary action being taken to enforce the law/legal framework. In consultation with UNIDO HQs. and the CTA, the RCU will arrange coordination mechanism for organizing relevant workshops making sure that all stakeholders are kept informed.

Outputs 3 and 4: National and Regional Capacity Building and Institutional Strengthening and Toolkit for the selection of environmentally sound and economically feasible remediation technologies for Ghana and Nigeria

These two outputs are the mainstay of the project in developing national and regional capacity for systematic identification and technically managing POPs contaminated sites and developing appropriate technology in line with BAT/BEP. In this, the RCU will facilitate all the coordination required between the participating institutions in Ghana and Nigeria and the technical partner institution GRC, Cardiff directly and or through UNIDO. The two Geoenvironmental Centres to be established in Ghana and Nigeria need to be monitored in terms of proper staffing, equipment and functioning with the assistance of national and international experts. The RCU will provide the necessary coordination to organize work shops, expert group meetings and short-term trainings.

Output 5: Establishment of environmental IMS and framework for stakeholders engagement and public educational and awareness Programme

This output is very important in terms of creating public awareness and education to maintain transparency so that the experience gained could be replicated in the region. The RCU will provide all the assistance to run Information Management System dealing with POPs contaminated sites. The output involves establishing websites, newsletters and a robust database. The RCU will provide the necessary assistance to involve relevant NGOs in the region.

Output 6: Regional Monitoring and Evaluation Plan

The role of the RCU is very important in coordinating experts in developing indicators and participates in the normal M&E of project implementation. It will play an important role in assisting the UNIDO/GEF mid-term and final evaluation of the project. The RCU will provide all the logistics, information, organizing meetings in the region and provide all the reports and minutes of the meetings.

4. Reports:

The RCU apart from the book keeping of files, administrative reports, expert reports, etc. will prepare reports of the RMC and RSC meetings. The RCU will also make sure that the NCUs get the reports from national experts and copies of these reports are kept in the RCU.

Draft Terms of Reference for Subcontract on the "Provision of Soil Remediation and Information Technologies for capacity building for environmentally sustainable management of POPs contaminated sites in Ghana and Nigeria"

General Background and Aim of the Project

1. Introduction:

Over the last 60-70 years, the chemical industries both in developed and developing countries have used thousands of chemicals and their innumerable intermediates and formulations for various outlets. These chemicals did vastly improve the standard of living and saved millions and millions of lives from hunger and diseases. However, some selective toxic and persistent organic chemical pollutants did remain in the environment for long periods of time. They not only migrated from one environmental matrix to another carried by air and water currents, and being lipid soluble, but also tended to enter the higher food chain and bioaccumulate in the fatty tissues of humans and animals. Following a number of consultation meetings with international experts lasting over a decade, the international community identified 12 chemicals called "the dirty dozen" and agreed that the human health and environment should be protected from these 12 persistent organic pollutants or the so-called POPs. They consisted of eight pesticides, two industrial chemicals and two highly toxic by-products called unintentionally produced POPs (UPOPs). In May 2001, more than 120 countries signed a historical treaty in Stockholm called the Stockholm Convention to protect human health and environment from these POPs. The Convention with 30 articles became legally binding during May 2004, when a 50th country ratified the convention document. To help developing countries and countries with economy in transition, which signed and ratified the Convention, the Global Environment Facility (GEF) worked out a financing mechanism for capacity building in the form of enabling activities in dealing with POPs implicated in the Stockholm Convention. UNIDO as one of the Executing Agencies with Expanded Opportunities has been helping more than 40 countries including Ghana and Nigeria in their enabling activities to prepare their National implementation Plans (NIPs).

2. NIP of Ghana and Nigeria

Under the NIP, the countries are obliged to prepare among other activities, a database covering:

- Inventory of Production
- Inventory of use
- Inventory of import/export
- Inventory of stockpiles
- Inventory of sources
- Inventory of polluted sites

During the enabling activities, countries such as Ghana and Nigeria realized the importance of problems posed by POPs contaminated sites and the problems of identifying the sites and the level of contamination. In line with Section 1e of Article 6 of the Stockholm Convention on POPs, which states: "*endeavour to develop appropriate strategies for identifying sites contaminated by chemicals listed in Annexes AB and /or C, if remediation of those sites is undertaken, it should be done in an environmentally sound manner*", Ghana and Nigeria prioritised the POPs contaminated sites as one of the major issues.

3. PDF B Regional Project:

Ghana and Nigeria in a joint approach applied through UNIDO for GEF funding under the PDF-B to prepare a regional programme to develop capacity building in systematic identification of POPS contaminated sites, carry out risk assessment/prioritzation and select and develop appropriate technologies for remediation and carry out remediation, if required in accordance with BAT and BEP. The PDF-B project was approved in July 2005. During the implementation of the PDF-B, the Geoenvironmental Research Centre (GRC) located at Cardiff University, UK was identified as a technical partner in dealing with POPS contaminated sites. With its vast experience in dealing with brown field sites remediation in Wales, UK under a private/public partnership and in doing R&D in land remediation and also with fully experienced staff and experimental facilities unique in Europe, GRC agreed to participate as a technical partner in the project. The above-mentioned PDF-B project

was implemented with the full participation of the Federal Ministry of Environment, Nigeria, the Environmental Protection Agency (EPA) of Ghana Ministry of Environment and several national and international experts along with the technical experts of GRC, Cardiff. During September 2005-May 2006, consultations of all relevant stakeholders in Ghana and Nigeria took place and the full Project Brief was prepared and submitted to GEF for approval. The project after going through a GEF review mechanism was cleared in August 2006. The project will be unique in the sense that it will be the first major project under the Stockholm Convention executed by UNIDO and funded by GEF and other partners to develop capacity in Ghana and Nigeria on environmentally sustainable management of POPs contaminated land /soil.

The overall objective of the project is to build capacity and strengthen institutional arrangement and develop appropriate strategies for identifying sites contaminated by chemicals listed in annexes A, B and/or C of the Stockholm Convention on POPs. The project will also assess the viability of environmentally sound and low-cost remediation technologies. Results of these experimental project experiences will be extended to other countries in the region,

The immediate objectives of the project are:

- the development of policy and legal frameworks for management of contaminated lands/sites; and
- the strengthening of institutional capacity for mitigation of land contamination and sustainable land management, potential hotspots identified and prioritised for pilot testing of appropriate low-cost environmentally sound technologies, if remediation is required.

The immediate objectives are to be achieved through six major outputs as follows:

Output 1	A suitable organization arrangement set up for timely and well monitored implementation of the project
Output 2	Establishment of Regional policy and national legal frameworks for the management of contaminated sites
Output 3	National and Regional capacity building and institutional strengthening
Output 4	Toolkit for the selection of environmentally sound and economically feasible remediation technologies for Ghana and Nigeria
Output 5	Establishment of environmental IMS and framework for stakeholders engagement and public education and awareness programme
Output 6	Regional Monitoring and Evaluation Plan

In order to allow the Geoenvironmental Research Centre **(**GRC), Cardiff, UK to participate in the full project, a subcontract arrangement is proposed as follows:

4. Subcontract Arrangement

Scope of the Terms of Reference for the subcontract:

The Geoenvironmental Research Centre (GRC), Cardiff, UK, in collaboration and consultation with the UNIDO Project Manager, the Chief Technical Advisor (CTA) and all the project counterparts is expected to fully participate in the various activities envisaged in the full project to achieve the above-mentioned outputs. The major inputs expected from the GRC, Cardiff, UK as subcontractor will contribute heavily to Outputs 3, 4 and 5 while actively participating in Outputs 1, 2 and 6, as needed. The Terms of Reference (ToR) of the subcontract sets out the responsibilities of the subcontractor to provide specific inputs to build Regional capacity in Ghana and Nigeria to systematically identify, investigate sites/land contaminated with POPs implicated in the Stockholm Convention including other xenobiotics with similar properties covered in other international agreements. The countries should develop capacity to carry out risk assessment/management to rank and prioritize action to deal with potential hotspots in the participating countries. With the assistance of the subcontractor, the project is expected to design and develop a robust toolkit for the selection of environmentally sound and economically feasible remediation technologies in accordance with BAT/BEP.

Subcontractor's Inputs

Under the ToR, the subcontractor will make its technical staff and facilities available for the project especially for the above mentioned Outputs 3, 4 and 5 and some of the M&E outputs. One of the key elements, among others, is the establishment of two well-staffed and equipped Geoenvironmental Centres within the existing institutions in Ghana and Nigeria. The local staff will be trained by GRC staff both in Cardiff, UK and in their own countries so that in the long run they can become self standing and sustainable institutions.

Under the ToR, it is expected that the subcontractor will provide necessary experts for adequate time to work in the project, which is expected to last for four years. Expertises required are in the areas of:

- Institutional capacity building including development of private/public partnership
- Risk assessment/risk management of contaminated sites
- Soil analysis for POPs contamination
- Suitable land remediation technology development in accordance with BAT/BEP
- Information Management system
- Socio- economic impact indicators and monitoring
- Public education /awareness

In all these areas including policy /legal framework, the subcontractor's experts will be assisted by national experts from Ghana and Nigeria, selected international experts and the CTA. The project implementation will follow the tentative work plan agreed in the 3rd Project Steering Committee meeting. The toolkit to be prepared will be done jointly with all the relevant national/international experts (see Appendix 1 for contents of the toolkit).

The subcontractor, in line with the activities and outputs of the project and in consultation with UNIDO and the project counterparts will organize and host workshops/training sessions (individual and groups)/expert group meetings, etc. as well as in the field and actively participate in them.

Expert Requirements:

In order to technically contribute to the activities for Outputs 3,4 and 5, the following experts are to be made available to the project by the GRC, Cardiff, UK and these experts will be working with UNIDO Project Manager/CTA and national and other international experts:

Field of specialization	Qualification	Experience	Period required/place
Institutional capacity building in managing contaminated sites especially of POPS contaminated sites	Civil Engineer or an environmentalist or industrialist	Long standing experience dealing with industrial contaminated land and in restoration of sites with public/private partnership	4-6 m/m during the period of the subcontract, Mainly in home based with 4-6 visits to the field as required.
Remediation technology development/soil analysis/R&D on soil remediation	Civil engineer/ Chemical engineer or environmentalist	Long standing experience in soil remediation, model/pilot scale remediation techniques. Experience in soil analysis preferable	4-6 m/m during the period of the subcontract, Mainly in home based with 4-6 visits to the field as required.
Risk identification/ Assessment/management/ hazard ranking	Chemist / Chemical engineer/ Environmentalist/ safety specialist	Long standing experience in hazardous assessment/hazard ranking of toxic/hazardous activities including contaminated land	4-6 m/m during the period of the subcontract with a minimum of 2 visits to the field.
Socio economic impact assessment /indicator development and monitoring	Sociologist/ economist or environmentalist	Long standing experience in socio economic aspects/ public education	4 m/m during the period of subcontract with a minimum off 2 visits to the field.
Information Management System	IT specialist and data collection management	Long standing experience in data management, networking and public awareness exercise	3-4 m/m during the period of subcontract with 3 visits to the field.

** m/m given is based on estimation. Minor adjustment could be applied by discussion with UNIDO and RCU*

Training of the trainer:

This is a very important activity in the saga of regional capacity building to identify, manage, mitigate and remediate POPS contaminated sites. During the implementation of the project, the subcontractor will provide training of senior personnel from Ghana and Nigeria on areas related to capacity building in identification, hazard ranking, soil analysis, carrying out experiments to develop suitable technologies for soil remediation, IMS, public education and awareness. Most of these trainings will be done mainly in Cardiff, UK and some in the field. UNIDO, the subcontractor and the national counterparts will select suitable persons who could become future trainers in their field of expertise. The training will be done either on an individual basis or in groups. Under the subcontract, the GRC will cover the coast of training, local arrangements (accommodation, issuing letters for visas, visiting sites or institutions) while the cost of travel and daily subsistence allowance will be provided by the project.

The estimated number and training period is given below:

Field	Numbers	Duration*	Location
Establishing and running GRC under the context of Ghana and Nigeria	4 (two from Ghana and two from Nigeria)	1m/m	GRC, Cardiff with field visits as needed.
Contaminated site identification/ sampling/analysis and reporting	4 (two from Ghana and two from Nigeria)	3m/m	GRC, Cardiff and other laboratories as needed
Pilot scale experiments on soil remediation/selection of appropriate technology/BAT/BEP	4 (two from Ghana and two from Nigeria)	4m/m	GRC, Cardiff and other places as needed
Hazard identification/assessment/ranking/ prioritization	4 (two from Ghana and two from Nigeria)	2m/m	GRC, Cardiff
Tool kit preparation	One each from Ghana and Nigeria	1m/m	GRC, Cardiff
Information management system	One each from Ghana and Nigeria	1m/m	GRC Cardiff and visit to relevant institutions

** m/m are based on estimation. Minor adjustments could be made in consultation with UNIDO and the RCU*

Trainings:

It is important that senior level people including decision makers from the Government, NGOs, participating institutions make a short-term training in the UK to look into the mode of operation of managing contaminated lands, policy / legal framework issues related to contaminated lands, working of public/private partnership in development, functioning of GRC, Cardiff and information management systems. It is expected that the training could consist of 5-8 persons for a period of 15 days. GRC will organize and arrange the trainig as needed based on discussion with CTA and the field office within the framework of the subcontract and UNIDO will provide travel costs and daily subsistence allowance of the trainees through the project.

Establishment of Geoenvironmental Centres (GC) in Ghana and Nigeria:

GRC, Cardiff in consultation with the CTA and national counterparts will provide advice and planning in the design, staff requirements, equipment needed in setting up the GC in Ghana and Nigeria. They will also propose, organize and participate in carrying out remediation experiments in GRC, Cardiff and in the field. Sustainability of the project depends very much on continuous operation of the local GCs during the project and also beyond the lifetime of the project. The establishment and functioning

of the GC in Ghana and Nigeria will make the necessary contribution to the setting up of the IMS and the preparation of the toolkit.

Information Management System /Public Awareness/education:

These are important part of capacity and knowledge building of stakeholders and the public and provide replicability and transparency to the project. The GRC, Cardiff experts and the counterparts will interact closely to set up a robust database and data management system related to POPs contaminated sites. In the long-term, local groups will operate the database to create public awareness transparency while identifying and managing POPs contaminated sites.

The toolkit:

This is one of the prime outputs of the project. It will be unique in the sense that it will be used as UNIDO reference document for training on dealing with systematic identification of POPs contaminated sites, appropriate technology selection and development. In the long run, the toolkit will be used not only in the region but also globally by UN and other organizations. The contents and design of the toolkit will be developed with GRC experts and other international and regional experts. The basic content of the toolkit is given in Appendix 3 but could be modified as needed.

Monitoring and Evaluation:

Apart from the regular GEF/UNIDO evaluation, the GRC with UNIDO and the field office (RCU) will set up indicators and milestones to follow the timely progress and achievement of the project. The GRC with RCU's and UNIDO's help will organize the yearly Project Steering Committee meetings to discuss the results achieved.

Reports:

As part of the subcontract, the GRC will submit detailed annual reports on the progress of the project, work carried out by their staff with findings and recommendations. The subcontractor will also cooperate and contribute to the UNIDO/GEF mid-term and final evaluation exercises and reports.

Payment schedule:

First Payment:, upon signature of the contract	20%
Second Payment, upon submission/clearance of the first report	30%
Third Payment, after mid-term evaluation report	20%
Fourth payment, after submission of third report and draft tool kit	20%
Final Payment, after Final Evaluation Report, submission and clearance of final report	10%

Appendix 1: Toolkit Contents (to be reviewed)

Title: Guidance Document for systematic identification of POPS Contaminated Sites and application of appropriate technology development based on BAT/BEP and application for remediation of POPs contaminated sites.

Contents (proposed)

1. Introduction
2. Contaminate Land/Sites
1. Definition of POPs Contaminated land/sites
2. Studies needed to identify potential contaminated sites
3. Investigation of potential sites
4. Hazard identification/assessment/hazard ranking
5. Selection of appropriate technology based on BAT/BEP
6. Carrying out model experiments
7. Decision making process
8. Public awareness/education
9. Costing of application selected technology
10. Funding requirements
11. Carrying out remediation including prevention of contamination and monitoring process

ANNEX 6: RESULTS OF PDF-B IMPLEMENTATION

Implementation of PDF-B project GF/RAF/005/001

The PDF-B project was approved in June 2005 and implementation started in September 2005 with the appointment of Chief Technical Advisor (CTA) and a Project Steering Committee (PSC). The first meeting of the PSC took place in Cardiff University, Wales, UK during September 2005. The method of implementation, organizational chart, workplan with responsibilities were agreed. Following this, national and international consultants as well as an institution with long-standing experience in the UK on land reclamation, the GRC, Cardiff, UK were assigned to provide the necessary technical inputs in association with the UNIDO Project Manager and CTA in order to achieve the outputs of the PDF-B project. A one-week discussion seminar to benefit senior project counterparts in Ghana and Nigeria was organized, which dealt at length the policy/legal framework, enforcement, technology of land remediation, risk assessment/management, practical aspects and benefits of private-public partnership in contaminated land reclamation. Following the discussion seminar, the CTA visited Nigeria and Ghana to prepare the groundwork for the planned visit of the GRC experts to the field in 2006. The CTA metamorphoses all the national project counterparts, visited some of the potential hot spots and laboratories in Ghana and Nigeria.

The GRC mission consisting of policy/legal expert, capacity building institution strengthening specialist, contaminated land remediation technology and IMS specialist visited Ghana and Nigeria during January to February 2006, participated in two one-day seminars on Policy/Legal framework and one workshop on appropriate technology selection for land reclamation. Relevant ministries, bilateral/multilateral donor agencies, industry representatives, NGOs, press, etc. attended both the seminars. Following the seminars, UNIDO visited many international agencies to discuss the project and seek cooperation.

The draft Project Brief was prepared and the second PSC was organized in Cardiff from 27 February to 2 March 2006 to finalise the Project Brief. The Project Brief has been submitted to GEF for approval and received clearance in August 2006. Minutes of the three (3) PSC meetings are attached as Appendix 1 to Annex 6.

Appendix 1: REPORT ON THE 1ST PROJECT STEERING COMMITTEE MEETING
Cardiff University, Wales, United Kingdom
28 to 29 September 2005

1. Participants:

1.1. Geoenvironmental Research Centre (GRC), Cardiff University, Wales, U.K.

Professor Hywel.R. Thomas, Director, GRC and Professor of Geotechnical Engineering
Dr. Peter J. Cleall, Lecturer
Dr. Rob W. Francis, Project Manager
Dr. David Huw Owen, Department Manager
Dr. Aleksandra Koj, Senior Research Associate
Dr. Talieb Mahdi, Senior Research Associate
Dr. Suresh C. Seetharam, Research Associate
Ms. Pauline Townsend, Administrative Assistant (Part time)
Prof. Keith Williams, Division of Materials and Minerals (during laboratory visit)
Mr. Ravi Metha, Chief, Analytical laboratory (during laboratory visit)
Mr. Devin Sapsford, Research Associate (during laboratory visit)

1.2. Counterpart Institutions:

Prof. E. O. Nsenkyire, Chief Director, Ministry of Environment and Science, Accra, Ghanay
Prof. O.A. Afolabi, Director, Department of Pollution Control and Environmental Health, Abuja, Nigeria

1.3. UNIDO:

Dr. Mohamed Eisa, Chief, POPs Unit, Multilateral Environmental Agreement Branch
Dr. B. Sugavanam, Chief Technical Advisor, UNIDO Consultant

2. Introduction:

Following the approval of the above project by GEF under its PDF-B scheme, the implementation of the project started with the establishment of a Regional Steering Committee (RSC) and appointment of a Chief Technical Advisor. In order to:

- bring an understanding of this very first GEF approved project on POPs contaminated sites;
- establish a linkage and coordination between the various present and future participants of the project and the ongoing Enabling Activities projects in Ghana and Nigeria for developing the National Implementation Plan (NIP) for POPs;
- agree on a workplan, role and responsibilities to meet the very tight time schedule for implementing the project; and
- come up with a full project brief for submission to the GEF Council.

The above RSC meeting was organized at the Geoenvironmental Research Centre (GRC) of Cardiff University.

3. Minutes of the meeting:

3.1. Presentation by the GRC

Dr. Mohamed Eisa chaired the meeting and introduced the participants and after opening remarks by Dr. Eisa and Professor Thomas, the meeting adopted the agenda. Prof. Thomas gave a detailed presentation of the activities of the GRC. He said that the GRC was the first centre in the field of Geoernvironmental Engineering in Europe. The major objective of GRC was to bring about a close partnership and collaboration between industry and the GRC and find answers to practical problems and not operate in an academic isolation. Many of their research projects in the GRC are industry driven and thereby helping the economy/environment of the region and the society at large. Their areas of interests include, among others, developing risk identification/ assessment tools, collaboration with organizations under a European networking system, chemical movement in

water/soil matrices and study socio-economic impact of contaminated areas. He described various courses run by the GRC, covering MSc in Geoenvironmental Engineering, industrial training, advanced research leading to Ph.D. and post doctoral work in industry related problems, short and full academic courses, geoenvironmental monitoring, sustainable management of farm wastes, etc. He said that in Wales there are a number of lagoons created by steel works, and the sludge in these lagoons are being investigated for taking further action. They are also looking into arsenic pollution of ground water in Bangladesh, West Bengal i*nsitu* remediation of contaminated lands including POPs contamination. He specially mentioned about a project in Kuwait related to oil pollution that resulted from the 1990 Iran-Iraq war. They are already collaborating with the International Atomic Energy Agency (IAEA) in conducting training courses related to nuclear waste issues. They have many projects dealing with SMEs in the region.

Based on their work and help to the industry, they have assisted 151 companies and helped to create six new companies. Special mention was made to their project called RESCUE (Regeneration of European Sites in Cities and Urban Environment). A manual entitled *Best Practice Guidance for Sustainable Brownfield Regeneration* has been prepared under this programme. They have also identified and developed sustainability indicators and apparently their Geoenvironment Networking has been very successful. Another programme they have just embarked on is called *Sustainable Urban Environment (SUE)* where they map the flow and model the fate and transport of pollutants. He mentioned about different types of training courses they could do for degree courses or for a short-term dealing with specific topics in the areas of land contamination. The GRC is also giving greater attention to the study of socio-economic impact of contaminated sites. A hard copy of the presentation and a CD were provided to the participants.

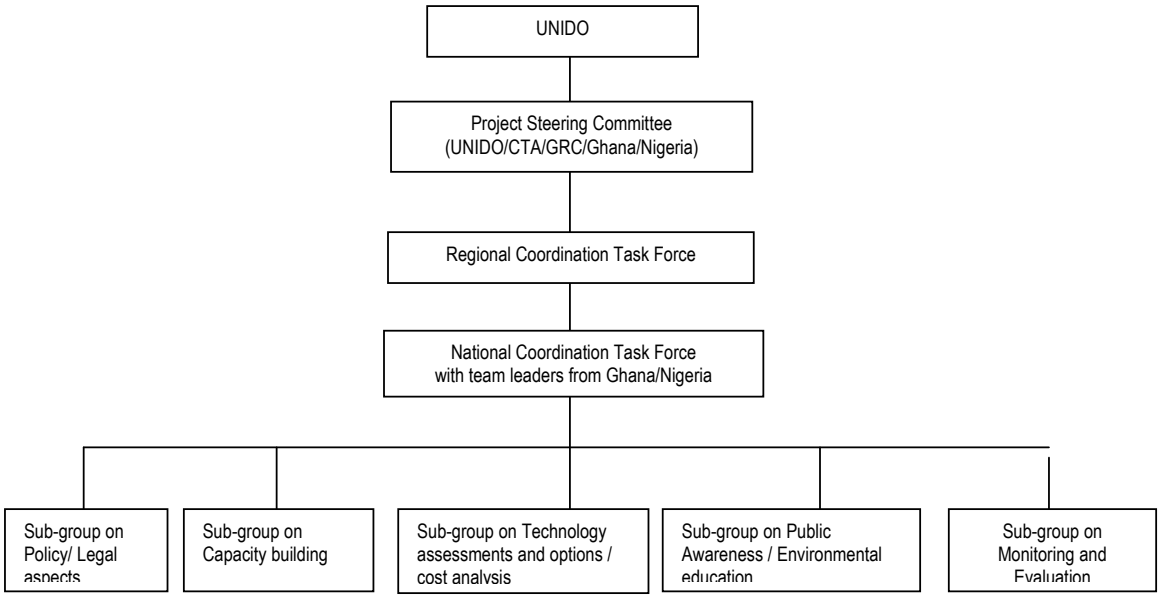
The Chairman thanked Prof. Thomas for his presentation and highlighted some of the activities and expertise that would benefit UNIDO projects in developing countries. Prof. Edward Osei Nsenkyire congratulated Prof. Thomas for his excellent presentation and based on the expertise, coverage of activities, laboratory facilities and the wealth of experience available at GRC he said that it would be very helpful for the implementation of the project. On a broader perspective he said that Ghana would be interested in pursuit of sustainable development. He specially mentioned about distance learning, rehabilitation of lagoons, land regeneration of mined sites, landfill engineering and sustainable urban environment. He added that areas such as capacity building, bioremediation of POPs contaminated sites, models of soil behaviour and ground water problems are of great importance.

He would be keen on Universities working closely with the GRC through exchange of relevant staff and students. He specifically mentioned about the Graduate School of Environmental Science at Knust and the School of Nuclear and Applied Sciences at the University of Ghana. He concluded that the projects under the Multilateral Environment Agreements (MEAs) to which Ghana is a signatory or has ratified could be taken up for future collaboration.

Prof. O.A. Afolabi, said that he was very much excited about the breadth and depth of activities and expertise at the GRC and would like to have a long-term relationship between Nigeria/Nigerian institutions and the GRC. In a broad sense he would be willing to collaborate on issues of capacity building and institutional strengthening, broad range of areas of environmental management and POPs related issues. Other areas could be the Decision Support System software, modelling, twinning of Nigerian universities (e.g. Open University) and other institutions with GRC. The idea to commence the process of developing an African Centre for Environmental Strategy was mentioned and wanted a possibility of facilitation of this process by UNIDO and the GRC could be explored.

3.2. Presentation by UNIDO

The Chairman explained the functioning of GEF and circumstances leading to the approval of the project on POPs contaminated sites. He explained the CTA's role in the project and the tight time schedule for completion of the project activities. Following this, the CTA presented an introduction to the development of the chemical industries, in general, the role of chlorine and the historical development of various Conventions and global milestones leading to Environmentally Sustainable Manufacture. He gave detailed account of the project, the various segments dealing with objectives, outcomes, activities and outputs. The prepared draft tentative work plan was discussed step by step and a modified work plan was agreed. The institutional arrangements for the implementation of the project was discussed and agreed by the Regional Steering Committee:



The Chairman informed that the GRC participation could be through a Memorandum of Understanding (MoU). He added that the GRC in collaboration with the CTA could contribute to technology options, capacity building, policies, economic and financial issues, social aspects, development of indicators and IMS.

3.3. Laboratory visit

A tour of the laboratories was arranged where among other things, experiments on sludge from steel manufacturing company lagoons, model experiments on the trafficking of waste based manufactured soils reinforced with waste plastic fibres, to be used in grass covered areas subjected to vehicular traffic were being carried out. The laboratory tours included a visit to new analytical laboratories, 3D Visualization theatre for a better view of sections of materials and structures, instruments for interpretation, trouble shooting and solving problems were being carried out. The visitors were informed that soon they would be doing analysis for dioxins/furans/PCBs in selected industrial wastes. The visit gave a good understanding of the type of facilities available for future cooperation in managing contaminated land in an environmentally sound manner.

4. Detailed discussion of the workplan

The meeting continued after the laboratory visit. The Chairman summarized the time schedule for the programme including the follow up phase as:

- September 2005 — Kick off meeting
- March 2006 — Full Project Brief for submission to GEF
- June 2006 — Comments from GEF/ Final project Document /Approval of Project
- Completion of project: — Two years after approval

Based on the workplan, Prof. Thomas presented the activities on a monthly basis. To facilitate taking action and implementation, Prof. Afolabi suggested keeping it as a working document along with the agreed workplan.

Finally the meeting discussed the immediate task of the implementation arrangements for carrying out activities and delivering various outputs according to a tight schedule agreed in the workplan. The Chairman wanted GRC to provide the following consultancies:

- Capacity building 2.0 w/m over 4 months
- IMS (Information Management System) 1.0 w/m over 3 months
- Technology Assessment/options 2.0 w/m over 4 months
- Policy /legal frame work 1.0 w/m over 3 months
- Monitoring and Evaluation 1.0 w/m over 3 months

The Chairman said that all the 2.0 w/m assignments will include two missions of two weeks each to the field and 1.0 w/m assignments will include one mission of two weeks duration. In all the above fields, senior national experts will be working for 2.0 w/m over a period of 4 months. The GRC and the participating countries will provide CVs of candidates and job descriptions will be prepared by the CTA. The Chairman informed that the project would cover the salary, travel and daily subsistence allowances of GRC consultants. He added that reasonable expenses incurred during the training courses at the GRC could also be covered.

Prof. Afolabi suggested that in order to have an effective and smooth implementation of the project, there should be a one-week interactive seminar early on between the senior national consultants and the GRC consultants in Cardiff. This was agreed and the seminar was suggested during end October 2005 and the first field mission of the GRC consultants will take place during the second or third week of November 2005 to work with the same national consultants. Such a discussion seminar will cover the following:

Day 1	General introduction /Wales Development Agency/Environmental Agency
Day 2	Economic aspects /Technical Solutions
Day 3	Social aspects
Day 4	Net working/LRN (Land Regeneration Network)
Day 5	Risk Assessment

It was agreed to have the next meeting of the Regional Steering Committee during the end of February 2006 in Cardiff. (see Annex 5 for Report on Discussion Seminar)

5. Conclusion

The meeting came to a conclusion after closing remarks by the Chairman and Prof. Thomas of GRC.

REPORT ON THE 2ND PROJECT STEERING COMMITTEE MEETING
Cardiff University, Wales, United Kingdom
1st to 2nd March 2006

1. Participants

Geoenvironmental Centre (GRC):

Prof. H. Thomas, Director
Dr. Rob W. Francis, Project Manager
Dr. David –Huw Owen, Development Manager
Dr. Talib Mahdi, Senior Research Associate
Dr. Rob Sleet, Representing GRC from Envirogene, Cardiff
Dr. Aleksandra Koj, Research Associate

Ghana/Nigeria

Prof. Johnathan A. Allotey, Executive Director, EPA, Ghana, (National Project Coordinator)
Prof. O. A. Afolabi, Director, Department of Pollution Control and Environment Health, Federal Ministry of Environment (National Project Coordinator)

UNIDO

Dr. Mohamed Eisa, Project Manager, UNIDO, Vienna
Mr. Adegboyega O. Ajani, Regional Coordinator, UNIDO Office, Abuja
Dr. B. Sugavanam, CTA

2. Agenda

The meeting was chaired by Dr. Eisa and adopted the following Agenda:

Wednesday, 1st March 2006

13:30 – 13:45	Introductory Remarks by Prof. Thomas and Dr. Eisa
13:45 – 14:45	Progress since the 1st Project Steering Committee meeting by the CTA
14:45 – 16:00	Discussion on the Project Brief
16:00 – 17:00	Gaps in the Project Brief (co-financing, cost-sharing, selection of laboratories Training in actual m/m and number of senior trainees to be trained abroad Linkages to other programmes by CTA/GRC/Project Coordinators/Dr. Eisa)

Thursday, 2nd March 2006

10:00-10:30	Further discussions on Project Brief
10:30 – 10:45	Timeframe for GEF submission and follow-up to full project leading to approval (Dr. Eisa)
10:45 – 12:20	Strategy to approach donors, expansion of programmes to cover other countries
12:20 – 13:15	Recommendations and follow-up
13:15 – 13:30	AOB and closing of the session

3. Proceedings of the Meeting

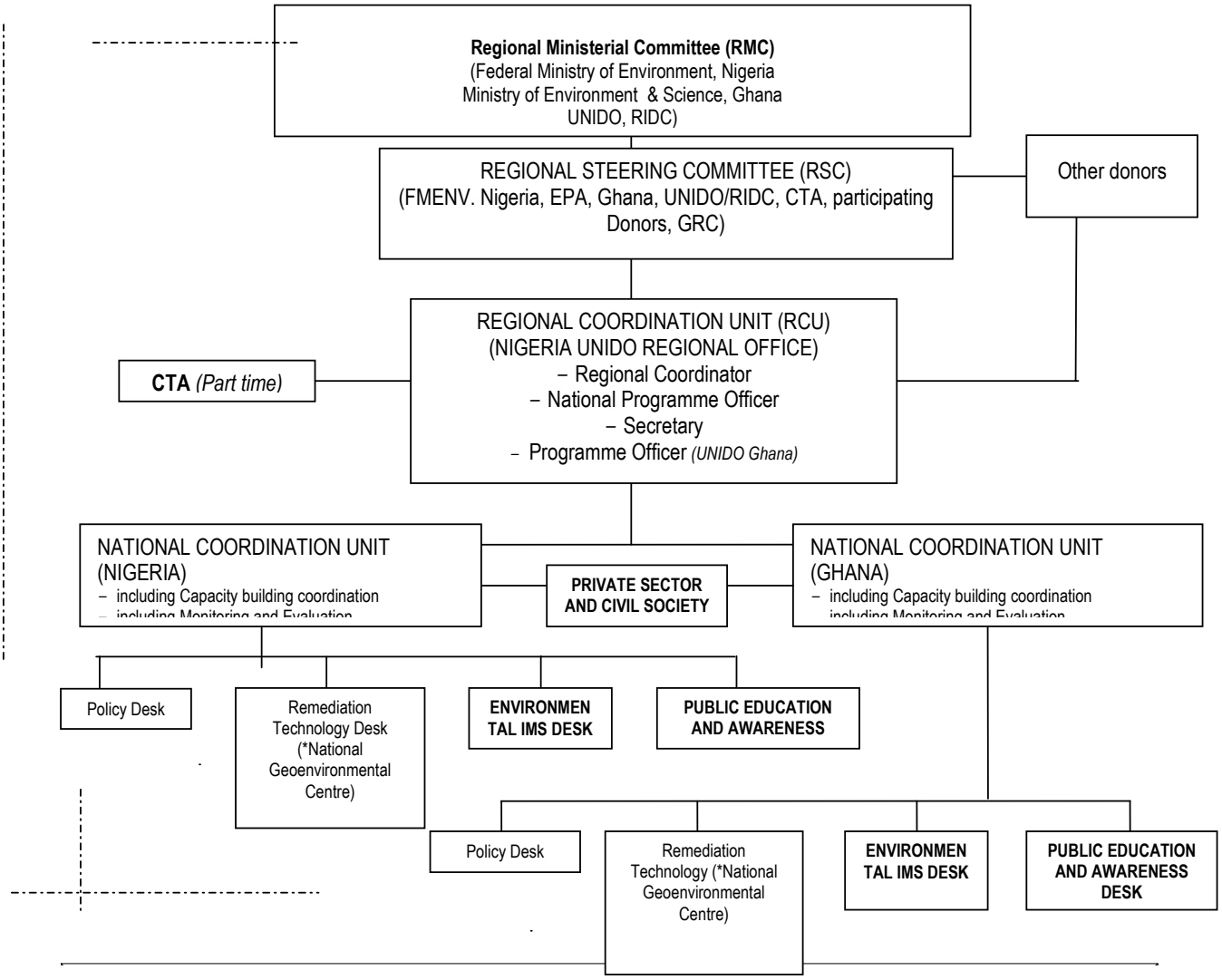
After the initial introductory remarks, the CTA presented the progress of the project since the 1st Project Steering Committee Meeting held in September 2005. He gave a summary of various activities carried out according to the agreed work plan in the 1st PSC meeting. He gave a brief account of the Cardiff Discussion Seminar (see Annex 5) held in November 2005, the CTA mission in December 2005 and January-February 2006 and the GRC field mission in January-February 2006. During these missions, detailed discussions took place with national experts, various ministries, industries and visits to the laboratories in Lagos and Accra. Based on the findings and discussions, the team jointly prepared the project brief covering different areas. During the mission,

two one-day seminars were organized in Abuja on Technology Option and another in Accra on Policy and Legal Framework. National experts further discussed the draft Project Brief in detail during a meeting in Ibadan, Nigeria from 13-16 February 2006. Multidisciplinary audience from ministries, civil society and universities attended the one-day seminars mentioned above. During the field visits, many potential donors were consulted regarding their work and possible support and linkages to their programmes. The CTA also mentioned that in the Ibadan meeting, it has been agreed to present two project brief versions: one with a budget of US$ 4.0 million and another for US$ 6.0 million.

Following the CTA's presentation, the Chairman suggested that the meeting should take up the US$ 4.0 million project proposal. He said that the GEF funding of possible US$ 2.0 million should be matched at a minimum ratio of 1 to 1. The meeting went through the draft proposal paragraph-by-paragraph and agreed on all the suggested modification. The organizational structure for the implementation of the project was discussed in detail and it was agreed that the Regional Industrial Development Office in Abuja would accommodate the Regional Project Coordinator unit. The UNIDO offices in Accra and Abuja will have a project office to assist the RPCU office. The meting was informed about the strong interest shown by the NGOs, industries and also some of the donors met during the mission. Ghana and Nigeria informed about the availability of supporting letters from the Governments. The organizational arrangement given in Fig.1 was agreed.

The CTA agreed to prepare the Project Executive Summary. The Chairman explained the time schedule followed by GEF to consider project briefs, the procedure for submitting comments and follow-up for the full project preparation. He informed that 24 March 2006 is the final date of project brief submission and by a series of comments and suggestions from GEF and other agencies within two weeks. Based on this, UNIDO will resubmit the proposal for inclusion and consideration by GEF Council by first week of June 2006. By end of June 2006, the approval status of the project will be known. During this period, it was agreed that UNIDO along with other parties will follow a set procedure to meet potential donors for financial support and GRC will also look into the possibility of their contribution mainly in kind to the project. The meeting came to a close after a vote of thanks.

Figure 1: Proposed Organizational Chart for the implementation of the Regional Project



** **Note:** The Centre will not be a stand-alone institution. It will be established within existing institutions in order to be cost effective and sustainable in the long-term.*

REPORT ON THE 3rd PROJECT STEERING COMMITTEE MEETING
Cardiff University, Wales, United Kingdom
7-9 November 2006

1. PARTICIPANTS:

GEO-ENVIRONMENTAL RESEARCH CENTRE (GRC)

Prof. H. Thomas, Director,
Prof. M. Loxham
Dr. Rob Francis
Dr. Talib Mahdi
Dr. (Ms) Alexandria Koj

Ghana/Nigeria

Mr. John Pwamang, Director, Chemicals, EPA Ghana (representing National Project Coordinator)
Dr. O.O. Dada, Deputy Director, Dept. of Pollution Control, Federal Ministry of Environment, Nigeria (representing National Project Coordinator)

UNIDO

Dr. Mohamed Eisa, Project Manager, UNIDO, Vienna
Mr. Adegboyega O. Ajani, Regional Co-ordinator, UNIDO RIDC, Abuja, Nigeria
Dr. B. Sugavanam, CTA

2. Agenda

The meeting which was chaired by Dr. M. Eisa of UNIDO reviewed and adopted the draft agenda for the meeting and carried out deliberations on the issues contained in the agenda and reviewed all the documents prepared for the meeting.

3. Introduction

Prof Thomas, Director, GRC, welcomed participants to the meeting and expressed the pleasure of the GRC to collaborate with UNIDO and the two countries in the implementation of the project. He noted with satisfaction the tremendous achievements that had been made in the development and approval of the full project since the last meeting of the Steering Committee in March 2006 and looked forward to the successful implementation of the project to the benefit of all the stakeholders.

The Project Manager, Mr. Eisa thanked the GRC for hosting the meeting and all the participants for their efforts in the development of the full project as well as their commitment to the project. He also expressed his appreciation for their presence at the meeting. He informed the meeting of the approval of the full project by GEF and looked forward to their continued support and cooperation in the implementation of the full project.

4. Proceedings of the Meeting

The meeting went through the Minutes of the last Steering Committee meeting held in March 2006 at GRC, Cardiff and adopted it without any amendment.

The Chief Technical Adviser (CTA) presented to the meeting the progress report of the project since the last Steering Committee meeting. After giving a rundown of the list of documents prepared for the meeting he made a presentation of the activities carried out during the implementation of the PDF-B project and achievements made in the delivery of the expected

outputs, which culminated in the approval, by the Global Environment Facility (GEF) of the project brief prepared for the full project. The CTA also presented to the meeting the development objectives of the full project as well as implementation strategy and financing arrangements/mechanism. He noted that the project is unique as no other agency is working in the area of POPs contaminated sites for GEF in Africa. He also informed the meeting that GEF only approved laboratory scale pilot remediation and that no on site remediation will be carried out as this has been left for implementation under the public-private partnership (PPP) arrangement.

The representative of the National Project Coordinator for Ghana reported to the meeting on the preparatory activities carried out in mobilizing co-financing resources, private sector and civil society participation in the implementation of the project. He expressed optimism that resources will be mobilized from both the UNDP and DANIDA from on-going technical assistance programmes in the areas of land management and water security/water quality management respectively. According to him the University of Ghana has expressed interest to cooperate and support the programme particularly in establishing the Geo-Environmental Research Centre. He informed the meeting that efforts have been put in place to involve the civil society and the private sector in the implementation of the project in areas of environmental education, awareness raising and socio-economic impact assessment. The Ghanaian Chamber of Mines has agreed to cooperate and collaborate in the implementation of the project through provision of in-kind support.

The representative of the Nigerian National Project Coordinator expressed the commitment of Nigeria to the project and informed the meeting that efforts are being made by the Government to mobilize resources to meet the co-financing requirement of the project. He mentioned that the oil companies operating in Nigeria and some private sector industries are being contacted for financial support to the project. He also disclosed that the federal ministry of Environment is discussing with both the World Bank and UNDP on related projects from which funds can be mobilized for the project. The Government is also looking at using the polluter pays principle to mobilizing funds for the project from defaulting companies. He informed the meeting that the Ministry is also using its contacts within GEF to expand the scope and coverage of the project. According to him the National Project Coordinating Unit for Nigeria will be located within the Federal Ministry of Environment in Abuja for ease of coordination.

The meeting later went into intensive deliberations and discussions on the approved project brief and related documents, proposed workplan, implementation arrangements and requirements for various components of the project as well as the budget and contribution in kind and cash from the key partners and collaborators. The GRC, Cardiff informed the meeting that out of the US$700,000 (£400,000) indicated in their letter of support dated 24 March 2006 the sum of US$245,000 (£140,000) will be their in-kind contribution while the rest will be covered by the project. The meeting requested that GRC should provide details of the costing of their inputs to the project totalling US$ 700,000 (£400,000) during the four-year duration of the project to assist in preparing the Terms of Reference for the engagement of their services under a subcontract arrangement. A number of decisions and recommendations were made that will ensure the smooth take-off of the project and a successful implementation of the project.

The meeting agreed that the two countries should review outputs 1 and 2 (project coordination and policy/legal framework) and advise on the milestones to be achieved, the GRC Cardiff look into outputs 3, 4 and 5 (capacity building, technology transfer/establishment of GRC and IMS) while UNIDO and GRC, Cardiff also look into activities under output 6 (monitoring and evaluation). The meeting agreed on the following milestones for the initial take-off of the project:

- establishment of the various coordinating units to be achieved by first quarter of 2007
- inception meeting to be organized by February 2007
- first draft of national policy on POPs contaminated sites prepared by December 2007
- final draft of national policy on POPs contaminated sites prepared by September 2008
- draft regional policy on POPs contaminated sites prepared by December 2008

5. Decisions and Recommendations

The meeting arrived at the following decisions and recommendations based on the outcome of the discussions and deliberations carried out:

a) Output I: Project Coordination

i) The Government of Nigeria and Ghana to provide to UNIDO in writing the exact location of the National Coordinating Unit (NCU) for the project and host institutions for Geo-Environmental Research Centre as well Information Management System (IMS)
ii) The Government of both Ghana and Nigeria should assign capable and competent staff for the operation of the NCUs
iii) The Governments of Ghana and Nigeria should identify a suitable young and qualified candidate for the post of the Director of the GRC who will be trained at the GRC, Cardiff on geo-environmental research and business development
iv) The CTA should prepare the Terms of Reference for the Regional Ministerial Committee, Project Steering Committee, Regional Project Coordinating Unit and the National Coordinating Unit.
v) Following the signing of the MOU between UNIDO and ECOWAS The regional Project Coordinating Unit should contact ECOWAS Secretariat in Abuja, Nigeria to discuss their areas of interest under the project which can be funded through support from the European Union under the EU – ECOWAS collaboration and cooperation.
vi) The GRC-Cardiff should prepare a proposal for the establishment of similar GRCs in Ghana and Nigeria by end of 2006
vii) The GRC should provide an itemized breakdown and costing of their services to the project during the life-time of the project
viii) The CTA should prepare the TOR for the services to be provided by GRC under a subcontract arrangement
ix) The next meeting of the Committee will be held in six months as stipulated in the project document.

6. Closing

The Chairman, Dr. Mohamed Eisa thanked participants for their support and cooperation and GRC for hosting the meeting and providing the necessary administrative and logistic support. He enjoined members to immediately embark on the necessary follow up actions to ensure that the implementation of the project takes off in earnest in January 2007.

The Director, GRC-Cardiff, Professor Thomas, Director, thanked participants for a successful meeting and re-affirmed the commitment of GRC-Cardiff to the project. He looked forward to the cooperation and support of all parties for the success of the project.

The meeting was brought to a close.

Appendix 2: NGO/CIVIL SOCIETY COMMITMENT TO THE PROJECT

The NGOs have been consulted in both the enabling activities and the PDF-B projects. They took great interest in the various consultation meetings held during the years 2004 to 2006. In particular, the two one-day seminars in Accra, Ghana and Abuja, Nigeria organized under the PDF-B project were attended by more than 30 NGOs, companies and press in each country.

A NGO in Nigeria called Nigerian Environmental Society (NES) is actively involved in the national sensitization to POPs contamination. They organize workshops and are actively involved in the NIP and PDF-B activities. As an example copy of a letter from NES to UNIDO, Nigeria is copied below.

Copy of letter to Mr. Ajani/UNIDO Regional Coordinator, Abuja, Nigeria

Quote:
Dear Ajani,

I am forwarding our IPAM, which will precisely give you some information and you could also visit IPEP home page for IPEP projects details on http://www.oztoxics.org/ipepweb/. Click on projects, view countries or project index. At the moment 3 NGOs from Nigeria are participating in the IPEP network after a regional capacity building programme in Tanzania, they are Nigerian Environmental Society (NES), Friends of the Environment (FOTE), Nigerian Environmental Study Team (NEST).

Our (NES) Project workshop objectives are:

* To raise awareness and enlighten stakeholders and the general public on POPs issues and POPs contaminated sites (hotspots) in the Nigeria environment.
* To present to stakeholders current information on types of contaminants present, ownership, storage and condition of stocks based on the project findings.
* To build capacity of stakeholders towards the phase one activities of the African Stockpile Programme (ASP) in the management and reporting of POPs and POPs pesticides in Nigeria.
* To propose environmental benign ways (low cost environmentally sound remediation technologies) of cleaning up contaminated sites, etc.

The Guest Speaker (an erudite environmental scientist of international repute) is Prof. Oladele Osibanjo (Director, African Regional Centre, Basel Convention and HOD, Chemistry Department, University of Ibadan) who will speak on “Global and National POPs Situation”. Other technical presentation by Dr. Lawrence Ezemonye (Associate Prof. Department of Life Sciences, University of Benin) who would speak on “Identification and Control of POPs contaminated (Hotspots) in Lagos”. Goodwill messages are also expected from international NGOs such as Pesticides Action Network, U.K and AGENDA, Tanzania and UNIDO.

Expected to grace the event are environmental professionals and environmentalist, Government officials, MAN, Farmers Associations, Chemicals Users (owners, distributors, associations) national NGOs and CBOs, Media, UNIDO/UNDP, SON, NAFDAC, etc.

I hope you find this information useful. Let me know if you require more information.
Unquote

Appendix 3: SAICM AFRICA REGIONAL GROUP MEETING REPORT

PROPOSED INSTITUTIONAL ARRANGEMENTS FOR SAICM (SAICM/PREPCOM.3/INF/11)

Submitted by the African Group

BACKGROUND

The text adopted at the African Regional Meeting held in Saly, 15-18 March 2005, was used as the departure point for further consultation within the African region, to elaborate the criteria and to examine possible options for the SAICM Institutional Arrangements.

1. The SAICM institutional arrangements should operate an open, transparent, and inclusive process involving the participation of all responsible and relevant stakeholders at international, regional, sub-regional and national levels in its deliberations.

Functions

2. Successful implementation of SAICM will require arrangements to ensure the following functions are undertaken.
   (a) Ensure that all activities in the Global Plan of Action are effectively implemented, taking into account any existing activities
   (b) Promote compliance with existing international instruments
   (c) Monitor and report on progress on implementation
   (d) Review SAICM measures and priorities, and update as needed, to ensure SAICM implementation is on track to meet the SAICM overall goals and targets
   (e) Provide policy guidance on the continuing implementation of SAICM
   (f) Promote coherent governance at international, regional and national level
   (g) Work to ensure that the necessary financial and technical resources are available for implementation
   (h) Ensure ongoing participation of private sector, labour public interest organizations and science (academic institutions) and intergovernmental organizations with relevant mandates
   (i) Communicate the recommendations of SAICM to the appropriate intergovernmental organization governing bodies and other relevant institutions
   (j) Liaise with focal points which may be established to facilitate implementation of SAICM at the regional and national levels
   (k) Evaluate the performance of the financial mechanism in support of SAICM
   (l) Promote the strengthening of the countries' national chemicals management coordination mechanisms, capacities and abilities
   (m) Ability to emerging issues as they arise

Criteria

3. The criteria for any additional institutional arrangements for SAICM need to include the following:
   - Must have sustainable funding sources and mechanism
   - Must not duplicate the mandates of other existing institutions
   - Must have political/policy capacity
   - Must have administrative and technical capacity

4. Political/policy capacity

- Include multi-stakeholder participation;
- Multi-sectoral in nature;
- Ability to take authoritative decisions that will be implemented nationally;
- Ability to influence international/intergovernmental organizations involved in chemicals management;
- Ability to promote coherent and co-ordinated approach;
- Capacity to secure the collaboration and cooperation of national, regional and international bodies;
- Capacity to help strengthen national coordinating mechanism and national capabilities for chemicals management;
- Ability to ensure that the governing bodies of intergovernmental organizations give full and appropriate considerations to SAICM decisions.

5. Administrative and technical capacity

Ability to:

- Evaluate the implementation of the SAICM Action Plan and progress towards achieving the 2020 goal.
- Prepare progress reports.
- Engage stakeholders.
- Establish and implement mechanism to ensure that recommendations are conveyed to international organizations.
- Assist in identifying gaps in scientific knowledge.
- Promote information exchange and scientific and technical cooperation.
- Advise Governments in their work on chemicals management.

6. **Possible options for the institutional arrangements for SAICM**

The following options could be considered for the SAICM institutional arrangements:

(a) To assign responsibility to one or more existing intergovernmental organisations involved in chemicals management;

(b) To assign responsibility to the IFCS with the possibility of revising its Terms of Reference;

(c) Possible combination of (a) and (b) above.

7. **Proposal**

Since the mandates of existing IOMC institutions include many of the activities listed in the concrete measures, it is proposed that the SAICM institutional arrangements complement the functions of existing institutions and not duplicate them. Successful SAICM implementation will require full support from all relevant intergovernmental organizations.

8. While recognizing the fact that the SAICM process has developed with the participation of all stakeholders, the momentum achieved should be retained to undertake the even greater challenge of overseeing implementation. It is therefore proposed that institutional arrangements for SAICM be established by the International Conference on Chemicals Management (ICCM) as follows:

(a) The SAICM preparatory process will be converted to a Review Conference using the rules of procedure adopted for the preparatory process and which will provide the political/policy oversight.

(b) The SAICM Review Conference will be supported by a secretariat, which will provide the administrative and technical support required. The Secretariat will undertake the

functions assigned to it by the Review Conference, under the direction of the Expanded Bureau, UNEP and WHO may jointly undertake responsibility for the operation of the secretariat. Ideally, the functions of the SAICM secretariat and the IOMC secretariat (based within UNEP); as well as upon the work and experience o the IFCS and IOMC Secretariats (based within WHO).

(c) Each country should establish a National SAICM Focal Point, which should ideally, should be based within a national inter-ministerial /inter-agency chemicals coordinating body.

(d) The Review Conference will meet every two years to ensure effective implementation of the SAICM Global Plan of Action.

(e) The Expanded Bureau formula will be used for a SAICM Bureau to under the functions delegated to it by the Review Conference and will meet at least once annually.

(f) Regional Groups will be established, to facilitate monitoring and review of implementation in their region and to facilitate regional reporting to the Review Conference. SAICM regional groups should ideally meet intersessionally. Such Intersessional work groups may meet face-to-face or may operate by email and teleconference.

(g) The SAICM Review Conference may establish intersessional work groups with well-defined terms of reference that report back to the SAICM Review Conference and/or Bureau. Such intersessional work groups may meet face-to-face or may operate by email and teleconference.

(h) Relevant Intergovernmental organizations are requested to assume responsibility for activities that fall within their mandate and:

i. Adopt SAICM at the earliest governing body meeting after the adoption of SAICM High Level Conference;

ii. Ensure that the necessary resources are made available through their budgets to implement the assigned responsibilities;

iii. Agree that their governing body will periodically review decisions of the SAICM Review Conference, and will give programmatic and budgetary consideration to requests from the SAICM Review Conference;

iv. Report periodically on progress in implementation of their assigned SAICM responsibilities to the SAICM Review Conference.

9. The functions of the SAICM Review Conference will be to:

(a) Ensure that all SAICM activities effectively implemented,

(b) Promote compliance with existing international instruments and programmes,

(c) Monitor and report on progress of implementation,

(d) Provide policy guidance on implementation,

(e) Promote coherent governance at international, regional and national level,

(f) Work to ensure that the necessary financial and technical resources are available for implementation,

(g) Ensure ongoing participation of private sector, labour, public interest organizations and science (academic institutions) and intergovernmental organizations with relevant mandates,

(h) Evaluate the performance of the financial mechanism in support of SAICM,

(i) Promote the strengthening of national chemicals management coordination mechanism, capacities and abilities,

(j) Address emerging issues as they arise.

10. The functions of the Secretariat will be to support the activities of the Review Conference by undertaking the following tasks:

(a) Collection and collation (and, in part, evaluation) of information on SAICM implementation;
(b) Synthesize and review reports submitted by stakeholders;
(c) Preparation of progress reports;
(d) Promote engagement with stakeholders;
(e) Ensure that recommendations from the policy body are conveyed to international organizations involved in chemicals management;
(f) Help identify gaps in scientific knowledge;
(g) Promotion of information exchange and scientific and technical cooperation;
(h) Advise Governments as necessary;
(i) Communicate the recommendations of SAICM to the appropriate intergovernmental organization governing bodies and other relevant institutions;
(j) Liaise with SAICM focal points.

SAICM Focal Points

11. To sustain an integrated approach to managing chemicals, it is recommended that Governments establish central bodies to implement SAICM on an inter-ministerial or inter-institutional basis. Mechanisms must therefore be established at national and regional levels to promote and facilitate implementation as follows:

(a) Each country should establish a national focal point, to interact with the SAICM institutional arrangement;

(b) The SAICM focal point should represent the country's inter-ministerial body or inter-institutional arrangement where established.

(c) Each Focal Point should have one or two alternates, ideally all from different ministries or agencies.

(d) The national SAICM Focal Point should receive the invitation to participate in the SAICM Review Conference.

ANNEX 7: PPG COMPLETION REPORT

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Project title: Regional project to develop appropriate strategies for identifying sites contaminated by chemicals listed in Annexes A, B and/or C of the Stockholm Convention – Ghana and Nigeria

Project No.: GF/RAF/05/001
GEF ID: 2720

Activity Completion Report on the use of GEF Project Preparation Grant (PPG) as of 30 April 2007

Approved			Actual			
Proposed activities at approval	GEF Financing	Co-Financing	Completed Activities	GEF Financing committed	Co-financing committed	Uncommitted Funds
Output 1: Overview of policy and legal framework for the management of contaminated lands	**$150,000**	**No breakdown**		**$148,000**	**$20,000**	**$2,000**
1.1 Drafting group on contaminated land policy, strategy and regulations			Working groups on policies, strategy and regulations were established.			
1.2 Working group on risk assessment and risk management policy requirements			The working group on policy consisting of national and international experts discussed in depth (both in Ghana and Nigeria) the risk assessment and risk management policy requirements of the project and information were incorporated in the full Project Brief.			
1.3 Working group on financial and economic incentives			An advanced discussion seminar for high-level decision makers from Ghana and Nigeria took place in Cardiff, UK in Nov. 2005 where policy issues related to contaminated lands/sites including risk assessment were discussed.			
1.4 Working group on National Classifications systems for contaminated lands			A one-day seminar on policy issues was organized in Ghana for the benefit of stakeholders, news media and donors.			

Approved			Actual			
Proposed activities at approval	GEF Financing	Co-Financing	Completed Activities	GEF Financing committed	Co-financing committed	Uncommitted Funds
Output 2: Assessment of national and regional level capacity building and institutional strengthening	**$140,000**	**No breakdown**		**$138,500**	**$10,000**	**$ 1,500**
2.1 Local/national training needs on various aspects of contaminated lands management including IMS as decision-making support tools			Various training needs for contaminated sites management for local experts were identified and incorporated in the Project Brief.			
2.2 Training needs on design and implementation of POPs contaminated land management plans			A one-day regional seminar was organized in Abuja for the benefit of stakeholders, government officials and the news media.			
2.3 Need for establishment of inter-sectoral committees for the joint management of contaminated lands at local, national and regional levels			It was agreed to set up an intersectoral committees at various levels during the implementation of the Full-sized Project.			
Output 3: Identification of national expertise available to perform pilot case project for identification, assessment and use of low cost but environmentally sound remediation technologies in selected hotspots	**150,000**	**No breakdown**		**$148,200**	**$20,000**	**$1,800**
3.1. Working group on methodologies for identification of POPs contaminated land and hot spots			Activities completed through inter disciplinary expert group meetings organized in Ghana and Nigeria. The one-day regional seminar in Abuja on low cost remediation technologies addressed all issues on methodologies for identification of POPs contaminated sites and hotspots, assessment of best available technologies, risk and social impact, which were then incorporated in to the full Project Brief. It was agreed to come up with a toolkit for systematic identification of POPs contaminated soil in the region.			
3.2. Working group on assessment of best available low cost remediation technologies						
3.3. Technical groups on identifying implementation elements of remediation technologies related to community perception of risks and social impact.						

Approved			Actual			
Proposed activities at approval	GEF Financing	Co-Financing	Completed Activities	GEF Financing committed	Co-financing committed	Uncommitted Funds
3.4. Scientific group on continuous identification of special capital requirements for post implementation monitoring.			This will be part of the M&E plan of the full project.			
Output 4: Outlines of a frame for stakeholder involvement and establishment of IMS, public awareness and environmental education programmes	**120,000**	**No breakdown**		**$116,700**	**$10,000**	**$3,300**
4.1. Information material needed to develop a data base for contaminated soil			All the activities were carried in interdisciplinary expert group meetings organized in Ghana/Nigeria and through a discussion seminar organized in Cardiff for national experts.			
4.2. Establishment of IMS to disseminate methodologies and techniques on best practices.			A robust IMS will be established and will be operated by trained personnel. Electronic portal on land remediation has been initiated and task team has been set-up.			
4.3. Strengthening of public awareness for communities and environmental education			The regional seminars held in Abuja and Accra were attended by more than 30 NGOs, companies and the press in each country.			
Output 5: Monitoring and Evaluation plan	**50,000**	**No breakdown**		**$50,000**	**$10,000**	**0**
5.1. Working group on M&E for the project			All the activities were completed in expert group meetings and will be further detailed during the full project implementation. The Project Steering Committee met three times (Sept. 2005, March 2006 and Nov. 2006) to evaluate progress and addressed among other items the M&E plan.			
5.2. Task for development of indicators						
5.3. Task for development of targets						
5.4. M&E consolidated plan						

Approved			Actual			
Proposed activities at approval	GEF Financing	Co-Financing	Completed Activities	GEF Financing committed	Co-financing committed	Uncommitted Funds
Output 6: Preparation of full Project Brief	**$40,000**	**No breakdown**		**$40,000**	**$10,000**	**0**
6.1. Formation of Project Steering Committee and Managers Task Force			Activities 6.1 to 6.2 were completed			
6.2. Compilation and integration of all inputs emanating for project activities						
6.3. Preparation of full Project Brief			1st draft of the Project Brief was discussed in the 2nd PSC meeting and the final version was discussed during the 3rd PSC. Also co-financing was seriously discussed for follow-up at the government/ministry level.			
6.4. Complete full project document with detailed budget, TOR, work plan and implementation timetable			Executive Summary, Project Brief and Annexes documents were completed except the ToRs for various groups including sub-contract arrangements. Negotiations with donors are still ongoing.			

Project Preparation Grant Management

	Approved			Committed		
	Staff weeks	GEF financing	Co-financing	Staff weeks	GEF Financing	Co-financing
Personnel		25,000	8,000	49	24,400	5,000
Local Consultants		128,000	30,000	144	108,300	20,000
International Consultants		264,000	22,000	106	280,900	20,000
Training		60,000	20,000		82,000	10,000
Office equipment		20,000			23,000	10,000
Travel:						
Local		53,000			84,000	
International		30,000			30,000	5,000
Subcontract		20,000			0	0
Miscellaneous		50,000			8,800	10,000
Total	**Not defined**	**650,000**	**80,000**	**299**	**641,400**	**80,000**

Outputs from completed project preparation activities:

Introduction:

Soon after the approval of the PDF-B project, a Project Steering Committee was formed and the 1st Project Steering Committee meeting took place in Cardiff (28-29 September 2005), which mainly discussed the implementation of the PDF-B in line with outputs and activities of the approved PDF-B. The implementation strictly adhered to the proposed timetable in the 1st PSC meeting. The report of the meeting is attached as Annex 6.

Output 1: Overview of policy and legal frameworks for the management of contaminated lands

Activities	Results
1.1 Drafting group on contaminated land policy, strategy and regulations	• A policy/legal framework working group was formed to address the activities of this output consisting of the CTA, international consultant on environmental laws and regulations/ enforcement, two senior nationals from Ghana and Nigeria and two national coordinators of Ghana and Nigeria along with the officer of the UNIDO Regional Industrial Development Office, Abuja. • Two intensive group discussions (over a 2-week period) were held in Abuja and Accra to analyse the existing policies, regulations in the 2 countries, findings and recommendations of the NIPs and prepared a consolidated account of the existing environmental laws and identified the gaps that need to be addressed. • A week long Discussion Seminar of senior national/international consultants took place in Cardiff (Nov. 2005) and extensively covered the legal aspects in industrialised countries on land contamination and the requirements for Africa in general and Ghana/Nigeria in particular. In addition, 2 separate inter-country meetings of legal experts took place in Accra, Ghana (Jan. 2006) and Ibadan, Nigeria (Feb. 2006) where compilation of all the existing environmental laws/regulations were done. The activity and lessons learned were compiled for inclusion in the Project Brief.
1.2 Working group on risk assessment and risk management policy requirements	• The risk assessment of land contamination/management and incorporating them in the policy/legal framework for both Ghana and Nigeria discussed by the policy/legal framework working group supported by risk assessment experts. In an international discussion seminar held in Cardiff, a one-day session covered this aspect along with capacity building. In a one-day seminar in Accra, the findings and requirements were reported to all relevant Government officials/stakeholders.
1.3 Working group on financial and economic incentives	• The working group considered these incentives but it was agreed that this should be form as part of the implementation of the Full-sized Project at the Ministerial level so that the follow-up project assures sustainability and replicability.
1.4 Working group on National Classification Systems of contaminated land	• The legal policy working group recommended that a national and later at regional level, a classification system for contaminated lands should be established based on risk assessment/type of project usage. This was also part of the Outputs of 2.3 and 4. A detailed work plan for this policy /legal framework/enforcement and training has been agreed for this output in the implementation of the Full Project.

Activities for **Outputs 2 and 3** were assigned to a group consisting of the CTA, the Regional Industrial Development Officer, UNIDO-Abuja, 2 international consultants and 4 national consultants and national coordinators

Output 2: Assessment of national and regional level capacity building and institutional strengthening

Activities	Results
2.1 Local / national / regional training needs on various aspects of contaminated lands management systems including on information management systems and decision making support tools.	• The group held discussions at various levels in different institutions including NGO organizations and assessed the individual country needs and compiled them for a coordinated national / regional approach to address the issue. The recommendations of the various sub-groups were consolidated for the main project implementation. The groups visited various laboratories in Lagos and Accra and short-listed 4 laboratories based on the infrastructure facilities and skilled staff and assessment of the training needs of both countries.
2.2 Training needs on design and implementation of POPs contaminated land management plans	• As a continuation of Activity 2.1, the training needs were assessed for management of contaminated lands in general and POPs contamination in particular. A visit was organized to potential hotspots in Lagos and Accra where the sub-groups made on-the-spot assessments.
2.3 Need for establishment of Intersectoral Committees for the joint management of contaminated land at local, national and regional levels	• The importance of Intersectoral Committee was emphasized and agreed in the group discussions and the Project Steering Committee meetings and incorporated in the Organizational set-up for the implementation of the Full Project.

Output 3: Identification of national expertise to perform pilot case project for identification, assessment and use of low cost but environmentally sound remediation technologies in selected hotspots in the region

Activities	Results
3.1 Working group on the methodologies for identification of POPs contaminated land and hotspots	• The same sub-group that looked after Output 2 looked into this important capacity building for carrying out selected low-cost technologies. In Ghana, one institution was selected and in Nigeria, one will be selected based on short-listing of two institutions. It was agreed to have 2 institutions (not stand-alone) that will act as Geo-environmental Research Centres (GRCs) that will take up the development of a systematic support tool for the identification of POPs contaminated land based on robust methodology and such a tool could be replicated in other countries in the region. This will be done in close consultation with all stakeholders involved especially in ranking, monitoring, containment and mitigation based on risk assessment/management.
3.2 Working group on assessment of best available low-cost technology (technology transfer)	• The working group (for Outputs 2 and 3) recommended the systematic approach in doing experimental scale remediation methods and come up with suitable low-cost remediation technologies that could be taken up for practical application.

Activities	Results
3.3 Technical group on identifying implementation elements of remediation technologies related to community perception of risks and social impact. 3.4 Scientific group on continuous identification of social capital requirements for post implementation monitoring.	• The same sub-group realized the importance and sustainability of this aspect and a one-day seminar in Abuja and the Discussion Seminar in Cardiff carefully looked into this complex subject and the necessary elements have been incorporated in the Project Document including promotion of "ppp" based on developing realible socio-economic impact of contaminated lands and their future developments, if taken up.

Output 4: Outlines of frame for stakeholder involvement and establishment if IMS, public awareness and environmental education programmes

Activities	Results
4.1 Information material needed to develop a database for contaminated sites. 4.2 Establishment of IMS to disseminate methodologies and techniques on best practices. 4.3 Strengthening of public awareness for communities and environmental education.	• The IMS discussions in Ghana and Nigeria revealed the existence of good information dissemination system in the country and how information on contaminated lands could be integrated with existing systems. Role of NGOs especially women NGOs were specially emphasised for incorporation in the Full Project implementation. The requirements of setting up a reliable/robust IMS database for the region and also creating pubic awareness and environmental education were identified. All these requirements were accordingly included in the Project Brief. Later, it was decided that UNIDO will set-up an E-portal for interactive interaction by stakeholders on the management of contaminated lands.

Output 5: Monitoring and Evaluation plan

Activities	Results
5.1 Working group on M&E for the project. 5.2 Task for development of indicators. 5.3 Task for development targets. 5.4 M&E consolidated plan	• All sub-groups jointly discussed the M&E of the implementation of the Full Project, developing indicators based on existing situation and project evaluation based on UNIDO/GEF evaluation methodologies and also taking into consideration suggestion by the GEF/PM. Based on this, a consolidated M&E plan was developed and agreed in the 3rd PSC meeting.

Output 6: Preparation of a full Project Brief

Activities	Results
6.1 Formation of PSC and Management task force	• A Project Steering Committee was formed and met 3 times during the PDF-B implementation. The Management task force mainly operated in the field led by the national coordinators supported by the CTA, UNIDO Project Manager and the RIDO in UNIDO Abuja.
6.2 Compilation and integration of all inputs emanated in project activities. 6.3 Preparation of the Full Project Brief in accordance with GEF established format.	• Full Project Brief in accordance with the GEF format was approved by the Council in August 2006.
6.4 Following approval by GEF, the PSC would develop and finalise project document including detailed budget, TORs, work plan and implementation time table	• The Project Document taking into account the comments of the GEF/PM is now finalised for CEO endorsement.

Link documents to various activities and outputs

1. Minutes of three Project Steering Committee meetings (September 2005, February 2006 and November 2006)
2. National/international discussion seminar, Cardiff, November 2005 (in CD format)
3. Minutes of Regional expert group meetings in Accra, Ghana (January 2006) and Ibadan, Nigeria (February 2006)
4. Technical reports of CTA
5. GRC, Cardiff Mission Report to Ghana and Nigeria
6. Policy Report by Mr. Robert Sleat
7. Reports on 2 one-day meetings with stakeholders on policy/legal framework and assessment low cost technologies for contaminated land remediation and news media coverage
8. Full project brief
9. Draft TOR for NCUS, RCU and for GRC Cardiff.