



PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Medium-sized Project

THE GEF TRUST FUND

Submission Date: July 11, 2007

Re-submission Date: September 17, 2007

Re-submission Date: October 17, 2007

Re-submission Date: December 18, 2007

PART I: PROJECT IDENTIFICATION

GEFSEC PROJECT ID¹: 3342

GEF AGENCY PROJECT ID:

COUNTRY(IES): Global

PROJECT TITLE: Development of the Methodology and Arrangements for the GEF Transboundary Waters Assessment Programme (TWAP)

GEF AGENCY(IES): UNEP, (select), (select)

OTHER EXECUTING PARTNERS: UNEP/DEWA in partnership with IOC/UNESCO, UCC-Water, UNESCO-IHP, SIWI, NOAA, IUCN

GEF FOCAL AREA (S): International Waters,(select), (select)

GEF-4 STRATEGIC PROGRAM(S): IW SP1-4

NAME OF PARENT PROGRAM/UMBRELLA PROJECT:N/A

INDICATIVE CALENDAR	
Milestones	Expected Dates
Work Program (for FSP)	
CEO Endorsement/Approval	5/2008
GEF Agency Approval	6/2008
Implementation Start	7/2008
Mid-term Review (if planned)	not planned
Implementation Completion	6/2010

A. PROJECT FRAMEWORK (Expand table as necessary)

Project Objective: to develop the methodologies for conducting a global assessment of transboundary river, lake, and groundwater basins, Large Marine Ecosystems, and ocean areas for GEF purposes and to catalyze a partnership and arrangements for conducting such a global assessment								
Project Components	Indicate whether Investment, TA, or STA**	Expected Outcomes	Expected Outputs	Indicative GEF Financing*		Indicative Co-financing*		Total (\$)
				(\$)	%	(\$)	%	
1. Development of transboundary waters assessment methodologies for the GEF IW global assessment	STA	GEF adopts the assessment methodologies for its Transboundary Waters Assessment Programme that can help support Results-based Management in the International Waters Focal Area	A scientifically valid methodology for a comparative global assessment for each of 5 types of transboundary water systems: lake basins, river basins, groundwater basins, Large Marine Ecosystems, and areas of ocean space.	635,000	47	710,000	53	1,345,000
2. Development of a partnership among	STA	The partnership among	A finalised assessment programme	220,000	56	170,000	44	390,000

¹ Project ID number will be assigned initially by GEFSEC.

agencies and organizations to conduct the GEF Transboundary Waters Assessment Program		agencies and organizations is established and institutional arrangements finalised to conduct the GEF Transboundary Waters Assessment Programme.	document to describe the assessment units, involved institutions and partners, estimate for required financial resources, and timeframe for conducting actual assessment and associated capacity building, based on the methodologies developed in Component 1.					
4. Project Management				95,000	44	120,000	56	215,000
Total project costs				950,000	49	1,000,000	51	1,950,000

* List the \$ by project components. The percentage is the share of GEF and Co-financing respectively to the total amount for the component.

** TA = Technical Assistance; STA = Scientific & technical analysis.

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

	Project Preparation*	Project	Agency Fee	Total
GEF	35,000	950,000	98,500	1,083,500
Co-financing	40,000	1,000,000		1,040,000
Total	75,000	1,950,000	98,500	2,123,500

* Please include the previously approved PDFs and planned request for new PPG, if any. Indicate the amount already approved as footnote here and if the GEF funding is from GEF-3.

C. INDICATIVE CO-FINANCING FOR THE PROJECT (including project preparation amount) BY SOURCE and BY NAME (in parenthesis) if available, (\$)

Sources of Co-financing	Type of Co-financing	Amount
Project Government Contribution	(select)	
GEF Agency(ies)	In-kind	430,000
Bilateral Aid Agency(ies)	Grant	100,000
Multilateral Agency(ies)	In-kind	225,000
Private Sector	(select)	
NGO	In-kind	100,000
Others	In-kind	145,000
Total co-financing		1,000,000

PART II: PROJECT JUSTIFICATION

A. STATE THE ISSUE, HOW THE PROJECT SEEKS TO ADDRESS IT, AND THE EXPECTED GLOBAL ENVIRONMENTAL BENEFITS TO BE DELIVERED: The transboundary water systems of the world support the socioeconomic development and wellbeing of a significant part of the world's population. These waters continue to be degraded by multiple and complex human-induced stresses, including global climate change, and sustainability of resources exploitation and environment management seems questionable for many of them. Among the constraints to the effective management of transboundary

waters and to global political recognition of the plight of these economically critical waters is the lack of a systematic, periodic assessment of their changing conditions. The situations seem so complex that decision-makers do not properly understand or address the subject or the root causes of degradation and loss.

If the GEF is to properly cope with these complexities, set priorities for GEF funding allocations with its modest finance, and document the results of its investments in relation to the changing state of these transboundary systems globally, a periodic global transboundary waters assessment programme needs to be established. The GEF's Technical Advisory Group for strategy development in International Waters (IW) focal area identified the need for such an assessment programme in early 2007, and the GEF Council included this corporate need for a Transboundary Waters Assessment Programme (TWAP) in its approved GEF 4 Strategy for International Waters to assist in results-based management for the future.

Such a global, comprehensive assessment has not been undertaken. The situation is quite complex with many agencies collecting some assessment information and global science organizations undertaking modeling and making projections based on the data collected. Additionally, there is no GEF programme to capture and analyze the time series of data collected by GEF IW projects, which can be a valuable addition to global assessments. UNEP does have the responsibility and comparative advantage for undertaking assessments in the GEF and globally through its various programmes including the Global Environment Outlook (GEO). With fragmentation in the various agencies' responsibilities and mandates and the GEO not currently being able to capture the changing state of transboundary water systems, such a programme would be valuable globally. However, there has been no catalyst to begin the complex work of bringing partners together to collaborate and share information toward such a global assessment.

The proposed medium-size project is to develop a partnership among organizations, the methodology for assessment/results tracking for each of the five categories of transboundary water systems (see below for designation of the five categories) under the Transboundary Waters Assessment Programme (TWAP), and the arrangements needed so that the baseline transboundary waters assessment may be conducted following completion of the MSP. The periodic assessment would then be sustained in the future through the partnership of agencies and organizations and would include data series collected by GEF IW projects that would be useful to those agencies and to the GEO process of UNEP. Project preparation finance is needed to bring agencies and partners together to develop the strategy and arrangements for undertaking this project. The data, the modeling, the sources of information are disparate, located in many different places, including regional organisations or in academic networks funded by research programmes and sometimes by governments. Details on such methodologies and appropriate processes for how to conduct such assessments through the partnership will not be available until the MSP is completed. The strategy and details for the processes to be undertaken in the MSP cannot be provided until such agencies and science-based organisations come together and agree on sharing information, collecting it from disparate sources, and developing terms of reference for how to accomplish this in the MSP.

The underpinnings of the proposed projects would be as follows:

The Earth's waters will be divided into five categories of transboundary water systems (transboundary aquifer systems, transboundary river basins, transboundary lake basins, Large Marine Ecosystems (LMEs) and areas of ocean space. Polygons would be utilized in a GIS system to characterize individual systems as assessment units, for example the Senegal River Basin, the Benguela Current LME, or a current, gyre system or region in the oceans. Various attributes would be assigned to those polygons for various assessment criteria/indicators/projections to enable a relative assessment among each of the systems within the five categories. The MSP would involve development of possible indicators to be used, identification of possible source of information/data and identification of assessment units. The MSP will also develop practical arrangements for actually carrying out the assessment, including necessary institutional basis and framework, identification of necessary partnerships for data collection and assembly, identification of capacity building needs so organizations can contribute, and the strategy for carrying out the assessments.

The TWAP should involve a periodic assessment based on the selected indicators and existing institutional frameworks mandated by agencies/organizations that handle those particular issues related to transboundary waters. Partnerships will be established with various United Nations (UN) agencies, international/regional NGOs, the CGIAR system, and scientific organizations to develop the assessment methodologies tailored for each of the five categories of transboundary

water systems in order to gather, assess quality, and assimilate data and information as well as harmonizing data management systems.

The main concerns for the assessment for each of the five categories of the transboundary water systems are still to be determined. They may include indicators for: water withdrawals, use, availability, and projections; precipitation, variability, and projections; water quality, pollution loading estimates, surrogate projections; aquatic/marine living resources and habitats, including time series of harvesting from FAO, measures of threat or loss or value (primary productivity from satellites, fishing pressure, by-catch estimates, etc and freshwater wetlands as well as mangroves, coral reefs, sea-grass beds, tidal flats); groundwater extraction/discharge, groundwater recharge, contamination, and vulnerability; ocean current fluctuations, oceanic ecosystems and living resources, warming from satellite time series, salinity changes.

The MSP implementation will be coordinated by UNEP (Division of Early Warning and Assessment) through many partners already engaged in assessment efforts. Expert groups would be organized with each of the groups tasked with development of a methodology for the assessment of each of the five categories of transboundary water systems. Another small working group comprising of regional organizations and supporting organizations with relevant materials may be established to assist. Overall guidance would be provided by the project steering committee, comprising of UNEP, lead agency for each expert group as well as other co-financing organisations and including the GEF Secretariat. The following participants are confirmed to contribute to the development of methodologies: (a) transboundary groundwater systems: UNESCO-Groundwater (lead), UNEP, IGRAC (international Groundwater Resource Assessment Centre); (b) transboundary river basins: UCC-Water and Stockholm International Water Institute (co-leads), IUCN, ETH, FAO ; (c) transboundary lake basin systems UNEP (lead) with ILEC; (d) and (e) LMEs and ocean spaces: IOC-UNESCO (lead), NOAA, GRID-Arendal, WCMC, LOICZ and GESAMP. Many other partners are needed and will be invited to participate including FAO (fisheries), WHO, WMO, various institutes, science networks, and the CGIAR system (International Water Management Institute in Sri Lanka).

The MSP activities would be carried out through three-four expert group meetings and working groups to develop specific institutional arrangements for the global assessment. Although there is currently no institutional mechanism in place to undertake these periodic assessments specifically focused on transboundary water systems, several observing and assessment activities conducted by a number of global and regional agencies, and these assessment underway or planned can provide the basis for a network of interested parties to conduct periodic assessments.

Agreed methodologies for periodic worldwide assessments will serve as a way of tracking relative results over time for GEF purposes in setting priorities for its resource allocation based on the understanding of baseline environmental and water resource conditions and tracking the longer term relative results of its interventions. In this manner, GEF can make more effective use of its resources for addressing higher priority water bodies and can report the impact of the use of its funding. UNEP and other UN organizations would use the results to contribute to the global assessments each organization carries out (such as Global Environment Outlook of UNEP, UN-wide World Water Development Report coordinated by UNESCO). Regional organizations may use the assessment results as baseline and track improvement of the environmental and water resource situations against the baseline. National governments would use the results to set national programmatic priorities between transboundary and domestic water issues.

Further to the presented project framework above, the following is the abbreviated logframe to focus on the two major outcomes anticipated from the project.

Objectives	indicators	Means of Verification	Assumption
Develop feasible methodologies for assessment of five categories of transboundary water systems	Methodologies developed by expert groups, thoroughly reviewed by peer reviewers, and accepted by major partners and experts.	The minutes of the steering committee meetings that show the development process, and adoption of them.	Selected partners and experts have technical capacity to discuss the methodologies. Aquifers: there are enough cases where assessments of transboundary aquifer systems were carried out systematically. Surface water systems: There will be a good analysis of data availability on socio-economic development in the basins, which have influence on the surface water quality and availability. LMEs: NOAA's modules can be further developed to provide a comprehensive but easy-to-apply methodologies. Data should be available without relying on large-scale cruises. Ocean space: The assessment discussion would not lead to political discussion. There will be understanding on the division of the open ocean spaces for assessment purposes.
Establish the partnership and prepare framework arrangements for carrying out the global assessment	Arrangements developed based on the experiences and existing programmes of the regional bodies and GEF projects. Recommendations on the capacity building for implementing the methodologies are realistic and cost-effective.	The minutes of the steering committee agree on the arrangements that are based on the experiences and existing programmes. The expert review of the arrangements indicates that the arrangements are feasible and cost-effective.	The project can collect the information on the experiences of GEF and non-GEF initiatives on the assessment of the transboundary water systems.

B. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH NATIONAL PRIORITIES/PLANS: The proposed MSP is global in scope and is primarily for the benefit of the GEF, UNEP and other UN and international organizations to better serve developing countries, countries in transition, and Small Island Developing States. All the beneficiary countries are GEF-eligible countries under the GEF IW focal area. While this proposed project is global in scope, it can potentially support existing GEF IW projects and all future GEF IW projects, most of which are country-driven, by providing feasible assessment methodologies that can be adapted and implemented for all transboundary water systems. The proposed MSP will be linked to planned and ongoing observing and assessment activities, including GEF projects, by building on them and adding value to the data and information they produce, through analysis and synthesis. TWAP will also provide a basis for identifying regional priorities within the defined assessment units, but will also capture national priorities. Therefore, the project will support the national and transboundary priorities in international waters of practically every GEF-eligible country.

The project will be closely linked with the UNEP Regional Seas Programme (RSP), under which 18 RS Conventions and action plans are in existence around the world, as well as with the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA). The countries are also parties to other international agreements and frameworks with relevance to aquatic issues, such as UNFCCC, FAO Code of Conduct for Responsible Fisheries, Ramsar, MARPOL, a number of River Basin Organisations and Commissions. The assessments will also support efforts towards achievement of the WSSD targets (which countries have endorsed) related to fishery stocks and access to freshwater and sanitation, for instance by allowing countries to track progress towards achieving these targets and making required interventions.

C. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH [GEF STRATEGIES](#) AND STRATEGIC PROGRAMS : The MSP is consistent with GEF IV International Waters Strategy, which focuses on the targeted learning aspect of GEF IW projects. The mandate to establish a GEF Transboundary Waters Assessment Programme was identified in the GEF Council-approved International Waters Strategy (paragraph 38). The project will contribute to the strategic programmes 1-4 of the same strategy.

D. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES: The proposed project will have particularly close linkages with GEF IW projects. Since the mid-1990s, GEF has supported country-driven projects for improving transboundary management of aquifers, freshwater basins, LMEs, and selected ocean areas. The project will provide valuable information and experiences for enhancing GEF IW projects. GEF programmes that relate directly to TWAP include its entire IW portfolio, which can use the assessments from TWAP in developing Transboundary Diagnostic Studies (TDAs) and Strategic Action Programmes (SAPs), and adopt the methodologies as appropriate. At the same time, the project will benefit from GEF IW projects and other assessment activities through the capture of data and information and sharing of experiences. The process for regular assessments will also provide a platform for GEF and other international and regional agencies to monitor the results of interventions in transboundary waters.

In keeping with its mandate to keep under review the state of the global environment, UNEP DEWA, is implementing or participating in several ongoing global and regional environmental assessments, as well as the planned UNGA 60/30 Regular Process. The proposed project will have close linkages with these activities and programmes, through the sharing of data and experiences. The project will also be closely linked with the Regional Seas Programme and the GPA.

Other international agencies/organisations whose activities and programmes are particularly relevant to the project, and with which close linkages will be established include: (i) FAO is involved in various activities worldwide related to monitoring of fisheries resources and the promotion of responsible fisheries. It also maintains several pertinent databases and information systems of direct relevance to the project. These include time series of freshwater and marine fish landing statistics by country, which are also being used by the University of British Columbia Fisheries Centre in its Sea around Us project to develop ecological indicators related to fishing for Large Marine Ecosystems. FAO also maintains databases and information systems; (ii) IOC engage in several pertinent activities and programmes in the marine area. Of particular importance is the Global Oceans Observing System (GOOS), which it has developed and is continuously implementing. Currently, standard GOOS products include regular oceanographic measurements, and the system is being further developed to monitor and forecast indicators of marine pollution, primary productivity, sediment transport and erosion, among others; (iii) UNESCO: Two programmes with particularly close linkages with the project are the International

Hydrological Programme (IHP) and the World Water Assessment Programme (WWAP). Since the inception of IHP, progress has been achieved in methodologies for hydrological and groundwater studies and training and education in the water sciences. Greater emphasis is being placed on the role of water resources management for sustainable development and the adaptation of the hydrological sciences to cope with the expected changing climate and environmental conditions. The global ISARM (Internationally Shared Aquifer Resources Management) programme is a multi-agency effort aimed at improving the understanding of scientific, socioeconomic, legal institutional and environmental issues related to the management of transboundary aquifers. WWAP focuses on terrestrial freshwater and serves as an "umbrella" for coordination of existing UN initiatives within the freshwater assessment sphere. In this regard, it links strongly with the data and information systems of the UN agencies, for example Global Resource Information Database (GRID), GEMS-Water (UNEP); Global Runoff Data Centre(WMO & FAO), International Groundwater Resources Assessment Centre (WMO and UNESCO), the water supply and sanitation databases (World Health Organization and United Nations Children's Fund); and (iv) Ocean Interaction in the Coastal Zone (LOICZ): LOICZ has developed scientific knowledge and tools that address global change in the coastal zone, focusing on material flux and human dimensions at regional and global scales.

E. DISCUSS THE VALUE-ADDED OF GEF INVOLVEMENT IN THE PROJECT DEMONSTRATED THROUGH INCREMENTAL REASONING : GEF has invested one billion dollars in order to address the transboundary waters concerns identified by countries based on site-specific analyses of the transboundary waters and root causes for degradation in their resources and environment. Currently there is no global/regional mechanism specifically focused on the assessment of transboundary water systems although there are a number of global/regional assessment programmes which are either focusing on specific issues (such as fisheries) or assessing both transboundary and domestic issues altogether in a limited manner. There is no way to utilize the data coming from GEF international waters projects and there is no global system to track status of these water systems over time to know whether they are improving or degrading. Without a framework of TWAP as outlined above, GEF and international communities risk spending funding in the wrong places and would not be able to demonstrate results over time relative to other water bodies. This project would design the methodology and develop the partnerships and implementation arrangements with existing, fragmented programs to serve GEF corporate needs as specified in the GEF 4 Strategy for International Waters approved by the GEF Council.

F. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS, THAT MIGHT PREVENT THE PROJECT OBJECTIVE(S) FROM BEING ACHIEVED, AND IF POSSIBLE INCLUDING RISK MEASURES THAT WILL BE TAKEN: There will be a risk that development of methodologies is based neither on the existing assessment activities by various UN and other organisations nor on the availability of data and information for actually applying the methodologies. As described above, the project is taking an approach to develop methodologies based on the existing assessment initiatives by UN and other organisations, which are actually carrying out assessments on specific topics and storing primary data as well as assessment results. In order to mitigate the risk, the project will establish partnership of institutions that have developed their assessment methodologies and carried out assessments, so that the GEF Transboundary Waters Assessment Programme can be built on the existing initiatives and on the data and information available. The project will adopt a two level assessment approach i.e. level 1 globally, with the developed guidelines and level 2, in regional polygons which could serve as international case studies with time series, which would bring their own methodologies, possibly within some framework provided. The above abbreviated logframe also indicates the assumption for the development of a methodology for each of the four categories of the transboundary water systems.

G. DESCRIBE, IF POSSIBLE, THE EXPECTED COST-EFFECTIVENESS OF THE PROJECT: The project seeks to minimize costs and add value in the following ways: (i) Building on the foundation established by the Global International Waters Assessment project funded by GEF and others, as well as on ongoing assessment processes, GEF IW projects, and establishing partnership of agencies carrying out regular assessment and gathering relevant data and information will result in significant cost effectiveness, compared to the situation where the project could be initiated without this foundation and partnership; (ii) Developing a methodology that will be widely applicable at national, regional and global levels, as well as in ongoing and planned activities and programmes represents a cost effective means of continuing the assessment; (iii) Development of partnership and effective coordination at regional and global level will help to avoid duplication of effort, and hence increase cost-effectiveness; and (iv) Capturing data from existing related initiatives and programmes is a further cost-effective exercise. By focusing the assessment process on data and information management, new assessment

results can be obtained in a timely and cost-effective manner by regularly updating and revising data and information stored based on the GIS based data and information management systems.

H. JUSTIFY THE COMPARATIVE ADVANTAGE OF GEF AGENCY: In keeping with its mandate to keep under review the state of the global environment, UNEP DEWA, is implementing or participating in several ongoing global and regional environmental assessments, as well as the planned UNGA 60/30 regular process. The proposed project will have close linkages with these activities and programmes, through the sharing of data and experiences. DEWA's mission is to provide the world community with improved access to meaningful environmental data and information, and to help increase the capacity of governments to use environmental information for decision-making and action planning for sustainable human development. DEWA Water Assessment Strategy contributes to the overall implementation of the UNEP Water Policy and Strategy. The strategy provides an integrated water assessment approach that will tackle freshwater and coastal/marine water issues with greater focus and impact. The project will also be closely linked with the Regional Seas Programme and the GPA.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):
(Please attach the [country endorsement letter\(s\)](#) or [regional endorsement letter\(s\)](#) with this template).

(Enter Name, Position, Ministry)	Date: (Month, day, year)
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(Enter Name, Position, Ministry)	Date: (Month, day, year)
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B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for project identification and preparation.	
Maryam Niamir-Fuller Director, UNEP Division of Global Environment Coordination. 	Takehiro Nakamura Project Contact Person
Date: December 18, 2007	Tel. and Email: +254-20-7623886; takehiro.nakamura@unep.org
Name & Signature GEF Agency Coordinator	Project Contact Person
Date: (Month, Day, Year)	Tel. and Email: