UNITED NATIONS ENVIRONMENT PROGRAMME

Programme des Nations Unies pour l'environnement Programa de las Naciones Unidas para el Medio Ambiente
Программа Организации Объединенных Наций по окружающей среде برنامج الأمم المتحدة للبيئة
联合国环境规划署

Project Title

Global foundations for reducing nutrient enrichment and oxygen depletion from land based pollution, in support of Global Nutrient Cycle

Project Executing Agency

UNEP

Duration of Project
May 2011 – April 2015
(4 years as per original project document)

Redesigned for 3 years
(April 2012 to March 2015)

Project Budget and sources of funding

GEF Trust Fund Grant	USD 1,718,182
Co-financing by Partners	USD 2,398,165
Total Project Budget	USD 4,116,347

Key Highlights

Since the formulation of the project, its approval by the GEF Secretariat and actual start of the implementation of project activities there has been a significant variance of time. This Inception Report has been prepared in consultation with key project partners and local level stakeholders to address all critical issues pertaining to the project scope, objectives, outcomes, outputs, budget and time of delivery of each outputs in the light of this time gap from the date of approval to start of implementation and the changes that have taken place with reference to science and policy making in addressing sustainable nutrient management at various levels.

It is worth noting that at the global level the governments have made commitments to promote sustainable nutrient management through the adoption of the Manila Declaration during the third intergovernmental review meeting of the Global Programme of Action for the Protection of the Marine Environment from land-based activities (GPA/IGR-3). Through the Manila Declaration, the governments have agreed "to support the further development of the Global Partnership on Nutrient Management and associated regional and national stakeholder partnerships, *as well as* their activities, including assessments as agreed by the partnership, and sharing of best practices using extension and advisory services for policy makers and farmers" and committed to actively engage themselves and step up their "efforts to develop guidance, strategies or policies on the sustainable use of nutrients so as to improve nutrient use efficiency with attendant economic benefits for all stakeholders, including farmers, and to mitigate negative environmental impacts through the development and implementation of national goals and plans over the period 2012-2016, as necessary".

In consideration of the above noted enabling policy environment, also due to strong commitments of both state and non-state partners of the Global Partnership on Nutrient Management (GPNM), and taken into account the various activities initiated by the national governments and through the GPNM, during the Inception Workshop all stakeholders and partners unequivocally voiced their opinions to limit the project implementation period to 3 years (April 2012 to March 2015).

The project logframe and time line for delivery of outputs have been adjusted to reflect the change in project duration as agreed during the inception workshop.

Project Rationale

The rationales for project intervention operate on two linked scales are still valid and relevant. Firstly, the project interventions relating to nutrient over-enrichment and oxygen depletion in coastal areas are in defined locations of Manila Bay in the Philippines and Chilika Lake in India. Secondly, at a broader scale, the project addresses issues relating to overall level of excess nutrient use and the resulting dynamics global nutrient cycle and brings them into the domain of publics discourse and decision making through the GPNM and other relevant international fora.

The arguments for broader scale interventions and engagement of the project through a vibrant and strengthened GPNM can be summarized as follows:-

- the very large increases in the levels of nutrients such as nitrogen and phosphorous having entered the world's environmental media because of human activity - agriculture, wastewater, burning of fossil fuels

- the global extent, nature and developing severity of the environmental problems caused by this nutrient excess, including air and ground water pollution, and in the case of coastal waters eutrophication and oxygen depletion and the associated damage to ecosystems, biodiversity and coastal water quality

- the increasingly global and cross-boundary drivers leading to these problems, problems which are set to increase, notably in coastal waters, in severity and scope in the light of increased food and energy production, and coastal urbanization to the growing economic cost of countries and their stakeholders

- the complexity of the issues - given that nutrients are multi-source, have multi-effects, and impact at various scales - and the relative lack of awareness of the problems excess nutrients bring

- the need for countries and their stakeholders to shift towards a focus on sustainable production and use of nutrients if key development goals such as food and energy security (Green Economy) are to be achieved sustainably

- this means lower nitrogen and phosphorous inputs to human activities through agreed efforts to limit and treat discharges, promote efficiencies and incentives in production, and make full use of re-cycling opportunities

- *but* the lack of a sufficient governance and management framework (at global and national levels) to trigger effective, strategic and practical action by countries and their stakeholders to control and reduce nutrient use in the way described.

The logic for project intervention should be seen in this broader context of the underlying causes for nutrient over-enrichment and the need to change patterns of use.

The more specific arguments proposed for project interventions can be summarized as follows:

- the project directly addresses the underlying problem described above of the lack of a sufficient governance and management framework for governments and stakeholders to take effective action on reducing nutrient inputs and improving efficiency of use,

- it does this in a practical, systematic and catalytic way, which, has the clear potential to promote and instigate transformative change on the management of nutrient over-enrichment contributing to broader environmental sustainability benefits,

- the project can be successful in fulfilling this aim because it is constructed so as to provide countries in a coherent and accessible way with the information, tools, and policy options, necessary to stimulate and incentivize *cost effective action in developing nutrient reduction strategies* to the benefit of coastal areas and stakeholders generally,

- a key part of which is that the project, through the application of tested nutrient source-impact models in conjunction with best practice policy options, will for the first time provide a replicable 'road map' approach as to which investments and actions across a range of nutrient related sectors can be most cost effective and environmentally beneficial,

- and because the project structure, recognizes that success in countries in initiating the necessary transformative action will also require a supportive political trigger and catalyst linked to the right integrated institutional and stakeholder framework, which brings out the wider sustainable development benefits of more effective nutrient management,

- to this end, the project design and outcomes, including modeling and best practice work, are set within, and seek to further promote cross sectoral integrated management in the form of integrated watershed and coastal management, making full use of related initiatives such as the Global Programme of Action (Washington GPA), the regional seas programme, and the GEF IW trans-boundary programme,

- at the same time, a Global Partnership on Nutrient Management, provides an over-arching catalyst to political and institutional engagement in international and regional fora, working across the GEF nutrient related portfolio to set in motion associated regional and national stakeholder partnerships, and providing an on-going platform for the uptake and application of the project outcomes

Underpinning and connected to these arguments are a number of clear timing rationales for project intervention in the way proposed at this juncture.

First, unless technological advances and policy changes are implemented nutrient inputs to watersheds associated with agriculture, sewage and fossil fuel combustion are projected to more than double by 2050 (Millennium Ecosystem Assessment 2006) with consequential intensification of eutrophication and hypoxia in many regions, notably in Asia and Africa. There will be a growing economic cost to countries in terms of the degradation of valuable marine and coastal natural resources and the services and jobs they provide, which could undermine targets set by the global community and make it harder to achieve elements of the MDGs and the Manila Declaration adopted by the governments during the GPA/IGR-3. Further degradation of coastal ecosystems could also undermine their contributing to meeting climate change. Effective project intervention is timely.

Secondly, the GEF portfolio (and other initiatives) of nutrient related work in various regions has advanced to a point where an overview and inventory of best practice measures and tools should be effectively brought together for global benefit in a systematic policy toolbox – one of the project outcomes. GEF can build on its initial leadership through heightened attention to nutrients in a more integrated, cross programmatic and cross GEF agency manner.

Thirdly, modeling and analytical techniques have likewise advanced to the point where the causes and effects of nutrient over-enrichment in watersheds around the world can be effectively quantified. They can combine and integrate the impacts of drivers and sources of nutrients, and be used to evaluate and map present day contributions of different watershed based nutrient sources to coastal nutrient loading and their effects, indicating when nutrient over-enrichment problem areas are likely to occur, and estimate the

magnitude of expected effects of further nutrient loading on coastal systems under a range of scenarios. This provides a frame of reference by which to assess the likely impact and thus cost-effectiveness of the various policy options related to managing nutrient impacts from key source sectors, which are brought together under the policy toolbox.

This combination of policy toolbox and modeling techniques will enhance the capacity of resources managers and policy makers to anticipate impacts of nutrient over-enrichment, providing in effect a road map as to which investments and decisions policy makers can better make in addressing root causes of coastal over-enrichment through nutrient reduction strategies.

In this context, the value of the Manila Bay watershed in order to apply and insert the combination of modeling and tool box provides a further compelling rationale in support of the project. The nature of the watershed and its institutional and stakeholder structure will enable highly policy relevant interventions – a nutrient reduction plan based on full cross agency and stakeholder engagement – to be facilitated, making full use of the modeling and best practice approach described above. Underpinning this is a specific legal requirement from the Philippines Supreme Court that the Philippine government agencies and other bodies should work together in restoring the water quality of the Bay and its coastal area, addressing in so doing the root causes of the current degradation, including the problems of nutrient over-enrichment.

These circumstances provide the opportunity to not only insert effective nutrient reduction planning into the heart of decision making in a major watershed and conurbation in a developing country consistent with national and local priorities, contributing to a real improvement in coastal water quality for millions of people, but in so doing facilitate the development of tools and approaches of wider global application.

To conclude, the broader nutrient excess context, the specific modeling, best practice and partnership approaches entailed in the project, wedded to the benefits of timing and working productively in the proposed demonstration area provide a clear and timely added value for project intervention. By addressing causes of eutrophication and hypoxia, the project is designed to initiate transformative action by countries and other stakeholders on nutrient reduction leading to the benefits:-

- of improved water quality and more resilient coastal ecosystems
- from the stimulus to the take up of adaptive integrated watershed and coastal zone management,
- and from the resulting shift towards more sustainable nutrient management generally and its contribution to moves towards a Green Economy.

Project Objective, Outcomes and Outputs

The project meets this rationale and associated benefits by setting and seeking to achieve the following objective:

> *to provide the foundations (including partnerships, information, tools and policy mechanisms) for governments and other stakeholders to initiate comprehensive, effective and sustained programmes addressing nutrient over-enrichment and oxygen depletion from land based pollution of coastal waters in Large Marine Ecosystems.*

This is to be achieved through a number of core project outcomes and outputs, which were referred to in the project rationale and which can be summarized as;

- the development and application of quantitative modeling approaches: to estimate and map present day contributions of different watershed based nutrient sources to coastal nutrient loading and their effects; to indicate when nutrient over-enrichment problem areas are likely to occur; and to estimate the magnitude of expected effects of further nutrient loading on coastal systems under a range of scenarios

- the systematic analysis of available scientific, technological and policy options for managing nutrient over-enrichment impacts in the coastal zone from key nutrient source sectors such as agriculture, wastewater and aquaculture, and their bringing together an overall Policy Tool Box

- the application of the modeling analysis to assess the likely impact and overall cost effectiveness of the various policy options etc brought together in the Tool Box, so that resource managers have a means to determine which investments and decisions they can better make in addressing root causes of coastal over-enrichment through nutrient reduction strategies

- the application of this approach in the Manila Bay watershed with a view to helping deliver the key tangible outcome of the project – the development of stakeholder owned, cost-effective and policy relevant nutrient reduction strategies (containing relevant stress reduction and environmental quality indicators), which can be mainstreamed into broader planning

- a fully established global partnership on nutrient management to provide a necessary stimulus and framework for the effective development, replication, up-scaling and sharing of these key outcomes.

Project components

The key outcomes outlined above are reflected in 4 main operational components – Component A, the global partnership, Component B, the development of the modeling techniques, Component C, the development of the Policy Toolbox and the integration of the tools with the modeling techniques, and Component D, the application of tools and modeling techniques in the Manila Bay watershed to produce actual nutrient reduction strategies both for mainstream adoption in that area, and as a model for the development and application of nutrient reduction strategies in other regions. Each component will contribute to overall lessons drawn and potential for replication and up-scaling, which will be disseminated in an inter-active way through the Component A partnership, which continues after project completion to provide sustainability.

In addition to the 4 operational components, two over-arching components are represented by *Component E - monitoring and evaluation effective project co-ordination, and Component F –management and over-sight.*

The following gives a brief overview of the main outcomes and outputs intended from components A to D.

Component A: Global Partnership on Nutrient Management addressing causes and impacts of coastal nutrient over-enrichment and hypoxia

For this component total allocation of resources stands to USD 766,500, of which USD 316,000 if from : GEF grant and the balance USD 450,500 is co-finance by various project partners.

The main outcomes of this component are (a) global partnership of stakeholders actively involved in addressing nutrient over-enrichment in coastal water and (b) GEF projects, countries and stakeholders will be better informed about the importance of eutrophication & hypoxia, including environmental and economic costs, and will have access to on-going guidance & support for development & implementation of nutrient reduction strategies.

Main outputs of the Component are

- partnership establishment and stakeholder involvement
- partnership and project communication strategy, including web platform
- global overview of nutrient over-enrichment/*eutrophication*/oxygen depletion
- synthesis report identifying emerging issues and knowledge gaps

- establishment of Community of Practice, including web-based platform targeting GEF related projects as part of IW Learn, as well as eXtension agricultural services
- participation at and input to GPA review and GEF IW conferences
- replication and up-scaling of good practices and lessons learnt

Component B: quantitative analysis of relationship between nutrient sources and impacts to guide decision making on policy and technological options

Total resources available for this component is USD 1,192,847, consisting of GEF grant USD 488,682 and 704,165 as co-finance by the partners.

Main outcomes of Component B would be 'relevant stakeholders in developed and developing countries have basis and tools available to attribute sources of nitrogen (N), phosphorus (P)and silica (Si) within watersheds; quantify past, current and potential future export of N, P and Si to the coastal zone and develop estimates of the relative efficacy of increases/decreases in nutrient export on coastal water quality at regional to international scales'.

Main outputs:

- overview of existing tools for source-impact analysis
- global data bases on nutrient loading, occurrence of harmful algal blooms and hypoxic areas, and on coastal conditions, nutrient sources and effects
- nutrient impact modeling to provide source-impact analysis at global/regional scales and in relation to Manila Bay watershed, enabling predictive capability/ assessment of effects/and development of regional models and maps
- summary models and analysis tailored to assist policy making
- training of regional and national scientists/policy experts in source impact modeling
- source impact guidelines/user manuals for integrated assessment and nutrient criteria to assist policy makers

Component C: establishment of scientific, technological and policy options to improve coastal water quality policies in LMEs and national strategy development

Total resources for this component comes to USD 771,000 consisting of GEF grant of USD 329,500 and co-finance USD 441,500.

Main outcomes of the Component are decision-makers will have informed and interactive access, to cost effective, replicable tools and approaches to develop and implement nutrient reduction strategies in LMEs.

Main outputs of this component are:

- global overview and inventory of technological/policy options to reduce nutrient over-enrichment
- in depth case studies of technology/policy options, including analysis of cost effectiveness and success
- synthesis report providing review of regulations, measures etc to reduce nutrients
- replication and up-scaling strategy for above
- consolidated policy toolbox (bringing together above outputs) containing detailed summaries of policy options, technology measures and their achievements, costs, socio-economic impacts, infrastructure required
- application of source-impact analysis from component B to the Policy Toolbox to illustrate and communicate method for integrated approach to investments and decision making on nutrient reduction

- regional and national scientists and policy experts, particularly from developing countries, trained in using the above outputs in order to develop nutrient reduction strategies

Component D: Development of nutrient reduction strategies through application of quantitative source-impact modeling and best practices in Manila Bay watershed

Total amount of resources for this component comes to USD 892,000 with USD 330,000 out of GEF grnat and USD 562,000 as co-finance by the partners.

Main outcomes will be:

- Strengthened information and decision support system on nutrient issues for the Manila Bay watershed as part of integrated approach to overall water quality
- Agreement with government agencies and relevant stakeholders in the Manila Bay watershed on nutrient reduction strategies to be implemented (incorporating stress reduction and environmental quality status indicators), including their effective insertion into integrated national water quality planning for the Bay area
- Application and implementation of ecosystem nutrient health report card in Lake Chilika, India and Laguna de Bay, Manila, including as part of overall nutrient reduction strategies for Manila Bay watershed
- Accessible up scaling and replication strategy shared interactively with countries, GEF projects & stakeholders for development and implementation of nutrient reduction strategies, both for other watersheds in the [Manila region] as well as for other regions and globally

Main outputs of this Component are:

- Development and integration of indicators, information and reporting on nutrient issues and indicators in Manila Bay watershed into Manila Bay State of Coast's reporting system
- Compilation and analysis of best nutrient reduction practices for Manila bay area engagement with key sectors
- Application of source-impact modeling and best practices to produce draft nutrient reduction strategies for Manila Bay watershed
- Adoption of nutrient reduction strategies as part of overall approach to water quality improvements in Manila Bay watershed
- Application of ecosystem health card for nutrient over-enrichment and impacts for estuarine and delta areas (developed in Lake Chilika, India, as well as Manila Bay watershed)
- Evaluation of lessons learned during the development of nutrient reduction strategies, including work on ecosystem nutrient health card in Lake Chilika/Lake Laguna

Component E: Monitoring and evaluation

To meet the standard monitoring and evaluation requirements and procedures of UNEP an amount of USD 160,000 consisting of USD 100,000 from GEF grant and USD 60,000 from partners as co-financing is budgeted.

For monitoring and evaluation UNEP best practices will be followed through use of SMART indicators, including mid-term and terminal evaluation. The M&E plan comprises two main elements: (a) monitoring of progress, and (b) evaluation of performance and achievement. Both elements will be applied to the project using comparable sets of indicators. The project Co-ordination Unit (PCU) will be in charge of monitoring the progress of project execution against agreed benchmarks. The PCU will co-ordinate the independent mid-term and terminal evaluations and provide necessary and appropriate reports – technical, administrative, financial, and periodic progress reports to the Project Steering Committee (PSC). The latter as the main

project authority will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E plan.

The role of the PCU with that of the PSC will comprise continuous monitoring and evaluation of the project and enable adaptive management changes to be recommended and appropriate action taken.

The M&E process will include the following reports (i) inception report (ii) quarterly progress reports (ii) quarterly and annual financial reports (iv) annual progress reports (v) financial audit annually and at project completion, including annual co-financing reports (vi) midterm evaluation and project completion reports and terminal evaluation.

Component F: Effective Project Management and Oversight

The key aim of an effective project management and oversight is completion of a well-managed project and timely implementation of all its activities with desired outcomes which would contribute to transformative change in policy environment to address environmental management priorities as set out in this document.

This component will provide effective day to day management and implementation of project activities through a project co-ordination unit, overseen by a project manager, with broader over-sight provided by a project steering committee comprising a mixture of government representatives, UN agencies, private sector and the scientific community.

Budget allocation for this component is USD 344,000, with USD 154,000 from GEF grant and the rest USD 90,000 from Co-financing.

This component will entail three strands of activities.

1. **Day to day project management through the Project Coordination Unit (PCU).** The PCU will be responsible for co-ordinating the project oversight activities and for ensuring that all M&E requirements are implemented according to best practice. This means ensuring quality of products, outputs and deliverables; compiling and submitting progress, financial, and audit reports and budget revisions to the PSC; addressing problems raised by the PSC; and staff and consultant management. A new project manager post will be established to provide overall project co-ordination, and who will lead the PCU.

2. **Overall project guidance by the Project Steering Committee (PSC).** The key activities for the PSC will be to guide the execution of the project, notably through approving key steps and outputs; and consideration and approval of annual operation plans and budgets, quarterly and annual technical and financial reports and final technical reports.

3. **Overall project supervision by UNEP.** UNEP as the GEF implementing agency for the project will be responsible for overall project supervision to ensure consistency with GEF and UNEP policies and procedures.

Sequencing of Component outcomes and outputs

Initial outputs were focused on developing the overall partnership architecture for the project under component A as well as the collection and review best practices to develop the policy toolbox under Component C. This prioritization was done to take advantage of, among others, GEF International waters Conference in 2011 and GPA/IGR-3 in January 2012.

Taking note of the positive outcomes of GPA/IGR-3, the Manila Declaration and Philippine Government's interest for the project, it has been decided to focus on early outputs in the Manila Bay watershed area in terms of strengthening the decision support system, and engagement with sectors and other stakeholders on nutrient reduction best practice approaches. In is envisaged this will build support for project aims in the region, notably with a view to developing a road map approach to eventual nutrient reduction strategies. The nutrient health report card is also considered as a priority action area given the enabling policy environment and strong commitment of the Chilika Development Authority to develop a sustainable nutrient management plan for the Chilka Lake command area and starts its implementation to ensure the ecological integrity of the Chilka lake, and enhance wellbeing of the people who are heavily dpendent on the Chilka lake and its ecological services.

Regarding the source-impact modeling work, the initial focus will necessarily be on data collection and assembly, including in relation to the Manila Bay watershed. Global and regional data bases will become available in years one and two of the project, and will form the basis for the development and application of first versions of the source-impact modeling. First versions of the models and associated analysis at both the global level and in relation to the Manila Bay watershed will be available at mid- term review, and subsequently for initial application and refinement in discussion with stakeholders, including in Manila Bay along with best nutrient reduction practices.

Activities then focus on practical application of the modeling and analysis and best practices to produce final versions of policy relevant models at both the global and Manila Bay levels, culminating in the latter case in the development of nutrient reduction strategies for the Manila Bay watershed in conjunction with government agencies and other stakeholders. Workshops and associated training reflect this sequencing with activities combined across components where suitable to maximize interaction between science and policy makers. A final stage would be see the nutrient reduction strategies fully integrated within broader improved water quality planning in the Manila Bay watershed and lessons drawn in conjunction with stakeholders and experts cross the work of the project for final replication and up-scaling.

Project Results Framework

Component A	**Global Partnership on Nutrient Management addressing causes and impacts of coastal nutrient over-enrichment and hypoxia**				
Outcome 1	Global Partnership of stakeholders actively involved in addressing nutrient over-enrichment in coastal waters				
Outputs (with reference to Component work plans)	Indicator	Baseline	Target	Verification	Risk/ Assumption
Partnership established at global and regional levels with stakeholders fully involved. Establishment of web based partnership platform Partnership communication strategy	Holding of at least one global partnership meeting annually with all stakeholders - governments from all leading regions, key sectoral representatives, scientific community, UN agencies - fully represented & objectives, work plan, and communication strategy agreed	Relative lack of institutional and management capacity (and awareness of importance of nutrient management) among countries & stakeholders to instigate transformative change. GPNM	By midterm, fully established global partnership, embracing analogous regional partnerships to build political, institutional and stakeholder support and engagement for nutrient reduction. By midterm, partnership playing active role in relevant international and regional fora on nutrient	Reports of Partnership meetings, PCU reports, PSC minutes, Mid Term Review	Willingness of full range of stakeholders to engage and work productively in partnership, including individual representatives providing time and commitment Partnership(s) will evolve from

	Partnership Steering Committee holds quarterly virtual meetings At least 2 regional partnerships established including the holding of their first meetings with objectives and work plan agreed Publication of agreed (by partnership stakeholders) substantive outreach material each year by global and regional partnerships in form of updated overall 'Foundations of Effective Nutrient Management' as well as regular newsletters and contributions to UNEP and other UN agency, and scientific publications within each year of project.	launched and has held first meeting to provide umbrella for triggering productive discussion and action among governments and other stakeholders	management, building on outcomes from IGR3. By end of project, partnership established in relevant fora as ongoing (post project) platform and mechanism for effective engagement with countries and stakeholders on catalyzing take up by countries of nutrient management reduction strategies Within year 1 and updated annually, effective and adaptive communication strategy which reflects and communicates (i) importance and benefits of nutrient management to governments and stakeholders countries to sustainable resource management, including food security, water quality and ecosystem conservation management, and (ii) the means, in terms of best practices, cost effective investment, ICZM etc as to how policies can be 'nutrient proofed' .		networking meetings into effective platform for political engagement and dissemination of best practice measures
Outcome 2	**GEF projects, countries and relevant stakeholders better informed about the importance of nutrient over-enrichment, including environmental and economic costs**				
Output	Indicator	Baseline	Target	Source of verification	Risk /assumption
Global overview of nutrient over-enrichment/eutrophication/hypoxia – causes, effects etc Synthesis report identifying emerging issues and gaps	Documented global overview and synthesis reports peer reviewed, published and disseminated on web based platform (Y1) targeted at relevant GEF projects,	Large amounts of information available but information dispersed	Systematic and accessible baseline of information established which readily informs GEF projects, countries, in order to meet outcome 2 above	Peer reviewed by scientific and policy experts PCU reports, PSC	Willingness of experts and organizations holding information to engage.

	governments, and fora, such as regional seas		(year one)	minutes accessible on the web-based partnership platform.	
Outcome 3	**GEF projects, countries, relevant stakeholders have access to continued guidance and support for development and implementation of nutrient reduction strategies**				
Out put	Indicator	Baseline	Target	Sources of Verification	Risk/ Assumption
Web based platform targeting GEF related projects connected/linked to IW:LEARN Community of Practice targeting GEF nutrient related projects, incorporating eXtension services on agriculture	Fully functioning web site containing access to all relevant GEF nutrient projects by the end of Y1 Availability of tested eXtension agricultural service by mid-term. Able to provide interactive exchange among stakeholders as project outcomes, eg best practices, emerge for dissemination (Y1-3) Culminating in availability of final lessons learned, replication etc (Y3)	GEF projects have a lot of information and experience, but no one place to provide systematic global overview and analysis	GEF projects and other stakeholders have interactive and informed access, supported through replication and up scaling output and maintained by ongoing partnership platform and mechanism to full range of replicable best practice tools, options, technologies, and nutrient impact analysis developed under other project components . Timing in line with output indicators set out in column 2. Countries by midterm have ongoing and supported access through the partnership platform to a tested and policy relevant model approach to agricultural eXtension services linked to regional partnerships.	Summary reports by PCU to PSC Mid Term review	Willingness of stakeholders to engage and play an effective role Best practice tools and source-impact modelling from other components is replicable
Support to facilitate implementation of the outcomes of GPA inter-governmental review. Participation at and input to GEF International Waters Conferences	Develop work plan in close consultation with the GPA Coordination Unit to facilitate implementation of the GPA IGR3 outcomes Advisory and technical support to 3-		3-5 Governments (building on commitments from IGR review) from all GEF nutrient related projects and leading sectoral stakeholders committed to incorporating (and showing how this is to be done) guidance		

Replication and up-scaling of best practices and lessons learnt	5 national governments to develop nutrient management strategy and plans Holding of well attended workshop & IW Conferences , which recognizes importance of nutrient reduction strategies to effective achievement of GEF IW portfolio (Y3) Effective and accessible replication and scaling up strategy published and endorsed by all governments involved in all GEF nutrient related projects (Y3)		and lessons learned into development of nutrient reduction strategies within 3 years of project end.		

Component B	**Quantitative analysis of relationship between nutrient sources and impacts to guide decision making on policy and technological options**				
Outcome 1	Relevant stakeholders in developed and developing countries have basis and tools available to (a) attribute sources of nitrogen (N), phosphorous (P) and silica(S) within watersheds; (b) quantify past, current and potential future export of N,P and Si to the coastal zone (c)develop estimates of the relative efficacy of increases/decreases in nutrient export on coastal water quality at regional to international scales				
Output	**Indicator**	**Baseline**	**Target**	**Sources of verification**	**Risk/ Assumption**
Overview of existing tools for source-impact analysis of nutrients in LMEs and their target audiences	Peer reviewed report received and published (Y1) giving necessary information and targeted at GEF projects/LMEs and relevant scientific and regional organisations	Number of regional seas and national initiatives as well as programmes such as LOICZ, but no systematic overview of what works and why.	Systematic overview of existing tools and models (with advantages and disadvantages) for estimating and modeling nutrient loading of coastal systems, in order to set strengthened baseline, inform policy makers of potential benefits and, raise awareness of project aims by Y1	Peer reviewed by experts, including from IOC/UNESCO programmes and INI Summary report by PCU to PSC	Availability of information (reports, analysis) and data from regional and national institutions
Global data base development on nutrient loading and occurrence of HABs, hypoxia, and effects on fish landings, abundance and	Timely receipt and dissemination on web site (targeted at relevant scientific bodies and regional organizations) of good quality, well presented and	Data available and in some cases developed into data bases. However, dispersed around various sources and developed work largely sectorally	Experts have access to global data bases and documentation on river nutrient export, nutrient release from aquaculture,	Oversight of data assembly by IOC and other experts Technical and summary reports to PSC from PCU; PSC	Availability and compatibility of data, including willingness of institutions and sectors to assist Ability to

populations.	informative global data bases and associated documentation covering all target (column 4) components effectively, and reflecting the full engagement of institutions contacted. Specifically:- -Y1 – data bases & documentation on river nutrient export and release from aquaculture); Y2 – data base & documentation on coastal conditions and coastal effects; Y3 – final data base &documentation on observed impacts – eutrophication etc, but with first version of this during mid-Y2 to enable review at mid term.	based, though coherent approaches under regional seas such as OSPAR illustrate can be effectively done with clear benefits	coastal conditions, nutrient sources and observed impacts - eutrophication, harmful algal blooms, (HABs) hypoxia, and fish by Y3. Databases in right form and sufficiently comprehensive in order to inform source-impact modeling and analysis (SP B.3 etc) – By Y3	minutes Mid Term review	standardize &/synchronize data
Nutrient impact modeling for global and local to regional nutrient source impact analysis	Maps and supporting documentation and methodology (using data bases & documentation from S B2), which indicates probable location and scale of hypoxia, HABs, and high chlorophyll (first version mid-Y2, final version Y3) providing basis for SR&ES Presentation and effective dissemination of above on web based platform under outcome A (from y2 onwards)	Overview of existing modeling tools provides the baseline	The development of accessible (to stakeholders):- -enhanced predictive capability of models with respect to nutrient sources, loads and coastal impacts -effective assessment of effects of nutrient loading in coastal marine ecosystems, and -analysis and maps of past, current and future contributions of different nutrient sources, forms and ratios in watersheds to coastal effects by Y3	Use of well established academic & research institutions to carry out and review work Technical and Summary Reports from PCU to PSC; PSC minutes Mid Term review	Sufficient quantitative data and information available to establish necessary cause-effect linkage between nutrient sources, over-enrichment and harmful impacts
Development of regional models of nutrient source-impact modeling	Cross sectoral data base and supporting documentation for Manila Bay	Manila Bay watershed, through PEMSEA, and Manila Bay coastal	High resolution river export model for Manila Bay rivers, and	Oversight by IOC Technical and Summary Reports	Sufficient quantity and quality of data (arising from

for the Manila Bay watershed demonstration area to help guide cost effective nutrient reduction planning for the watershed area	watershed on river discharge, concentration of nutrients, land use, run off, fertilizer use, manure production, population density, sewage connections and treatment, atmospheric nitrogen deposition, and aquaculture (Y1) P providing basis for SR &ES Publication of validated high resolution nutrient export model for Manila Bay and ecosystem model for Manila Bay (first versions mid-Y2, final versions end mid-Y3) providing basis for SR&ES	strategy and operational plan has well advanced information management systems to provide and help generate data No river export and ecosystem models exist for Manila Bay	ecosystem model for Manila Bay to provide enhanced capacity for experts/resource managers to analyze nutrient source-impacts in Manila Bay area, so contributing to cost-effective nutrient reduction planning by Y3.	from PCU to PSC; PSC minutes. Mid Term Review Support of Government agencies and regional organizations (PEMSEA) for work and outputs as part of overall planning for Manila Bay area	work above) to develop quantitative relationships
Contribution of component B modeling and analysis to policy tool development under Outcome C below	Summaries of results from modeling activities along with simplified but realistic models, which enable scientific and policy experts to carry out scenario and impact analysis (First version after 18 months (mid-Y2, final version mid-Y3) – targeted at relevant scientific bodies, policy fora and regional organizations.	New work and no baseline	Decision makers both globally/regionally and in relation to Manila Bay watershed have accessible tools and mechanisms to guide cost effective and integrated policy and investment decisions on nutrient reduction by Y3	Technical and Summary reports by PCU to PSC; PSC minutes	Assumptions and risks relate to those arising in relation to the development of the source-impact modeling under outputs described above, and in relation to the development of the Policy Tool Box under Outcome C.
Regional and national scientists and policy experts, particularly from developing countries, trained in using nutrients source-impact modeling/analysis	Organization and implementation of a training workshop targeting at least 30 experts from key countries (significantly affected/likely to be so by nutrient over-enrichment and hypoxia), as well as GEF nutrient related projects, trained and	N/A	Regional and national scientists and policy experts trained in source-impact modeling and its practical application in a way which provides lasting capacity improvements by mid-Y3	Report of workshop Summary Report by PCU to PSC; PSC minutes	Ability to ensure attendance of right mix of experts

	have ongoing access to the application of source impact modeling to guide decision making, with a view to their further influencing national and regional processes and international fora (end of 30 month mid-Y3)				
Nutrient source-impact guidelines and user manuals for integrated eutrophication assessment and nutrient criteria development	Timely publication of peer reviewed, comprehensive, guidelines and manuals and their dissemination on the web based platform under Component A (first version mid-Y2, final version Y3), distributed/targeted at all UNEP/IOC member governments, GEF projects, regional bodies and scientific fora.	N/A	Managers and applied researchers have effective guidance on use and implementation of nutrient source-impact analysis for research, impact assessments, and policy development by Y3	Technical Reports Summary Reports to PSC Peer review by experts	This output synthesizes certain of the previous outputs set out under Outcome B and so is dependent on their being successfully carried out
Component C	**Establishment of scientific, technological and policy options to improve coastal water quality policies in LMEs and national strategy development**				
Outcome 1	Decision makers have informed and interactive access to cost effective, replicable tools and approaches to develop and implement nutrient reduction strategies in LMEs				
Outputs	Indicators	Baseline	Target	Sources of Verification	Risk/ Assumption
Global overview &inventory of nutrient reduction best practices	Inventory report published and disseminated on web based platform (Y1), which builds on Living Water Exchange data base, and reflects substantial outreach to (i) GEF nutrient project managers/ key organizations (ii) key nutrient experts, agri-business, government, NGOs.	Wide range of potential best practices, but no overall and systematic evaluation and prioritization to assist policy makers and others	Accessible and comprehensive overview and inventory of nutrient reduction best practices, including evaluation and prioritization that are most efficient and cost effective for policy makers and key user groups such as farmers to utilize by Y1	Summary report from PCU to PSC; PSC minutes	Sufficient usable information on available on cost effectiveness and nutrient reduction efficiency Willingness of stakeholders to engage, notably private sector
Case studies of selected technology and policy options for nutrient over-enrichment reduction	At least 15 face to face meetings with experts and sectoral representatives of key nutrient sources (Y1) Working session held with cadre of well trusted	Baseline is set by C.1 above	At least 5 in depth case studies of selected technology and policy options to analyze and better understand which	Peer review by experts Summary and technical reports to	Experts and sectoral representatives willing to engage effectively

	nutrient experts to prioritize best practices Production, publication and dissemination of in depth case studies (Y2)		options work and why by Y2	PSC from PCU; PSC minutes.	
Overview and synthesis of policy, technological options, measures and regulations	Reports published and disseminated on web based platform (Y2) and targeted towards GEF projects and relevant fora	No overview and synthesis of measures, options etc available	Synthesis of measures and regulations, and global over-view of technological and policy options to assist policy makers by Y2	Summary report to PSC from PCU; PSC minutes	N/A
Replication and up-scaling of best practice options, measures etc	Strategy document produced (Y2) and disseminated on web based platform.	No baseline as this is a new activity and follows from previous sub-projects	Strategy for replication and up-scaling to help structure Policy Tool development by Y2	Summary report to PSC from PCU; PSC minutes	Options etc are replicable etc
Policy Tool Box established comprising consolidation and systematic presentation of above outputs from Component C	Report and model presentation of Policy Tool Box, including replication strategy (Y2) P providing basis for SR &ES, and distributed/targeted to all GEF projects, and governments through the GPA Coordination Unit. Web based forum established (as part of overall Partnership platform under component A): (Y2 first version, Y3 for completed version) for the broad exchange, and continual updating of the contents of the Tool Box.	N/A	Decision makers, including all GEF nutrient related projects have access to full range of available tools with rationale for use, including in relation to replication and up-scaling by Y3	Summary report to PSC from PCU; PSC minutes	The Tool Box is a compilation of outputs from previous sub-projects
Integration of Policy Tool Box with Component B source-impact modeling and analysis	Report detailing conceptual approach and method, along with communication materials and case studies, which illustrate how the source-impact modeling can be used to test the efficacy of various best practice measures from the Policy Tool Box (initial version Y2, final version end Y3).	N/A	Accessible method for integration of outputs of source-impact analyses with Policy Tool Box to support cost effective, environmentally sound decision making by Y3	Summary report to PSC from PCU; PSC minutes. Mid Term review	Dependent on successful completion of other sub-projects in producing Policy Tool Box and source-impact modeling
Engagement with and training of experts on practical application of Policy Tool Box and source-impact modeling and	Well attended knowledge sharing and capacity building workshop (mid-Y3) P: target: at least 30 experts from key countries affected significantly/likely to be so by nutrient over-	N/A	Regional/national policy experts trained in use of application of source-impact analysis to policy measures in order to develop cost effective	Summary report to PSC from PCU; PSC minutes	Successful completion of Policy Tool Box Attendance of right

analysis	enrichment and hypoxia, as well as GEF projects, trained in and have ongoing access to the application of the best practice policy tool box to guide decision making with a view to their further influencing national and regional processes, international for a and key sectors. Case studies (disseminated on web based platform) in nutrient reduction strategies (Y2 onwards) in order to produce ongoing training material post workshop.		nutrient reduction strategies.		range and quality of experts to workshop

Component D	**Development of nutrient reduction strategies through the application of quantitative source-impact modeling and best practices in the Manila Bay watershed**				
Outcome 1	Strengthened decision support system on nutrient issues in Manila Bay watershed as part of integrated approach to overall water quality in region				
Output	Indicator	Baseline	Target	Sources of verification	Risk/ Assumption
Strengthened information and reporting on nutrient issues in Manila Bay watershed	Report (Y1) with presentation of consolidated baseline data for nutrient reduction analysis along with indicators (including stress reduction and environmental quality) on nutrient sources and impacts. Report (Y1) on nutrient over-enrichment status as well as nutrient policies, regulations and best practices	Wide-ranging information available but lack of overview of nutrient status and indicators No current inventory or single source of best practices: information dispersed	Strengthened Integrated Management Information System (IMIS) under PEMSEA, including insertion of nutrient over-enrichment and reduction issues in State of Coastal Report by Y1 Nutrient baseline substantially improved along with awareness of importance and raised awareness of project aims/importance by Y1 Development and application of appropriate stress reduction and environmental quality status indicators by Y1 Baseline established as to what best practices are available and key sectors engaged on importance of tackling nutrient issues as part of overall water quality efforts by Y1	Summary report to PSC from PCU; PSC minutes	Willingness of stakeholders to make data available and engage in project and see benefits of engagement
Outcome 2	Agreement with government agencies and relevant stakeholders in Manila Bay watershed on nutrient reduction strategies to be pursued and implemented, including their effective insertion into integrated national water quality planning for the Watershed area				
Output	Indicator	Baseline	Target	Source of Verification	Risk/ Assumption
Establishing the foundations for nutrient reduction strategies in the	Workshop and case studies on how modeling/best practices work (Y2 after mid term	Strong policy commitment (underpinned by legal requirement) for	Demonstration of efficacy and policy relevance of first version of models	Report of workshop Summary report by PCU to PSC;	Source-impact modeling under B and

Manila Bay watershed based on source-impact modeling and best practices	review) Agreements (Y2) with stakeholders on process towards nutrient reduction strategies, including on draft nutrient reduction strategies with illustrative stress reduction and environmental quality status indicators. Outline nutrient reduction strategies produced before workshop and agreed with stakeholders (Y2)	comprehensive clean up of Manila Bay, including addressing root causes of poor water quality, albeit lack of specificity on role of nutrient over-enrichment	developed under Component B for Manila Bay. Support among stakeholders for taking forward nutrient reduction strategies based on application of modeling by Y2	PSC minutes	C successfully completed Attendance of appropriate range of experts
(Development and application of the final source-impact models for Manila Bay in developing nutrient reduction strategies	Workshop (mid-Y3) with agreements with different stakeholders on nutrient reduction strategies to be implemented, along with appropriate indicators. Experts from all appropriate agencies, scientific bodies and key sectors, trained in application and use of source-impact modeling/tool box Report to DENR Technical Working Group (Y3)	Baseline provided by previous outputs	Effective development and application of source-impact modeling and Policy Tool Box by Y3	Summary report to PSC by PCU; PSC minutes. Mid Term Review and Final Review (for nutrient reduction plan/strategies	Willingness of stakeholders to engage Alignment with national/regional priorities and planning processes
Development and adoption of final, integrated nutrient reduction strategies	Final draft nutrient reduction strategies (agreed with agencies and other stakeholders, including alignment with broader water quality aims for region), submitted to DENR Technical Working Group for final agreement. (Y3)				Source-impact modeling and Policy Tool Box deliver cost effective basis for nutrient reduction plan/ strategies
Outcome 3	Effective application of an ecosystem nutrient health report card for lakes, deltas, and estuaries, including as part of overall nutrient reduction strategies				
Output	Indicator	Baseline	Target	Source of Verification	Risk/ Assumption
Development and application in Lake Chilika, Orissa of the ecosystem health report card for nutrient over-	Stakeholder workshop held in Lake Chilika (Y1) attended by all leading stakeholders/agencies/sectors	LOICZ has produced an ecosystem health report card matrix ready for testing and has built up stakeholder	Ecosystem health card embracing nutrient budget model and implementation plan for Lake	Peer review by LOICZ Summary and technical reports by PCU	Willingness of local institutions and stakeholders to engage and

enrichment and hypoxia , containing stress reduction and environmental quality status indicators	Draft Management plan for applying Report Card (Y1) Applied model ecosystem health report card published and disseminated on web based platform Y2) Management plan for implementation of health report card in Lake Chilika/Bay of Bengal (Y2)	engagement in region	Chilika and estuarine/delta areas generally, including estimates of water quality for Lake Chilika and Bay of Bengal and associated stress reduction and environmental quality status indicators by Y2	to PSC; PSC minutes	provide data
Development and application of ecosystem nutrient health report card to Lake Laguna, Manila Bay	Stakeholder workshop in Lake Laguna (Y2)attended by all leading stakeholders/agencies/sectors Draft Management for applying Report Card (Y2) Agreed (with stakeholders) ecosystem health report card for Lake Laguna published and disseminated on web based platform (Y2), containing stress reduction and environmental quality status indicators Management Plan for implementation of report card in Lake Laguna area, including as part of broader nutrient reduction strategies (first version Y 2, final version Y3)	Baseline set by work in Lake Chilika and earlier LOICZ work, as well as current reporting system for Lake Laguna	Ecosystem health card embracing nutrient budget model and implementation plan for Lake Laguna, including stress reduction and environmental quality status indicators, and contributing to overall nutrient reduction strategies for Manila Bay watershed by Y3	Summary and technical reports by PCU to PSC; PSC minutes	Effectiveness of work in Lake Chilika and willingness of stakeholders in Lake Laguna/Manila Bay watershed to engage
Outcome 4	Accessible up scaling and replication strategy shared interactively with GEF projects, countries and stakeholders for development and implementation of nutrient reduction strategies				
Output	Indicator	Baseline	Target	Source of Verification	Risk/ Assumption
Replication and up-scaling strategy	Report, following small feedback workshop, published on implications and potential for replication and up-scaling and disseminated on the web	N/A	Effective testing and development of source-impact modeling and Policy Tool Box with conclusions clearly drawn as	Summary and technical reports by PCU to PSC; PSC minutes; Final evaluation reports	Effective application of modeling and tools which enables potential for up-scaling

	based platform for catalytic exchange among stakeholders, including policy makers and GEF projects. P, incorporating relevant material on SR &ES derived from nutrient reduction strategy development		to potential for up-scaling and replication by end of project as contribution to overall project outcomes and sustainability at component A replication and upscaling.		and replication to be realized
Components E & F	**Effective project co-ordination, management and oversight**				
Project Coordination Unit (PCU) established	Approved (by PSC) work plan and budget for staffed PCU.	No PCU	PCU staffed and project executed according to approved work plan and budget with agreed terms of reference for PCU & follows the requirements of the M&E plan, including response to unforeseen changes to circumstances through approved adaptive management procedures	SC minutes APR/PIR reports Mid-term and terminal evaluations Financial audit reports	PCU staff successfully recruited Agreement on location of PCU Support for work plan by SC
Established Project Steering Committee (PSC)	PSC meetings.	No PSC	SC meetings completed according to plan. Adaptive management changes to project recorded	SC, and IA and EA minutes	Representatives of SC participate in meetings
Establishment of implementation arrangements in Manila Bay watershed	Arrangements via PEMSEA as task manager and member of PCU .	N/A	Arrangements and meetings completed according to plan	PCU reports to PSC; PSC minutes	Willingness of Manila Bay stakeholders/institutions to participate
Exit Strategy	Strategy accepted.	N/A	Exit Strategy	PSC	Agreement from all stakeholders to continue activities Willingness of countries to adopt project outcomes and to replicate/upsc

					ale
Effective M&E mechanism established for project	Approval of Inception Report by PSC with detailed and revised M&E plan.	N/A	SC with support from PCU to implement agreed M&E plan	Reports to PSC MTE and TE reports	PCU with support from PSC establish and operate M&E plan
Appropriate M&E indicators addressing P, SR and ES reviewed and adopted to monitor progress	Approval of detailed and revised set of indicators to be used to assess mid-term and terminal stages of the project.	N/A	PCU to oversee development and use of GEF indicators and report to PSC progress to achievement.	Reports to SC MTE and TE reports APR/PIR reports	PCU with support from PSC establish and operate revised indicators to monitor project performance

Risk analysis and risk management measures

The following indicates risk, including climate change risks, which might prevent the project objectives from being achieved, and risk measures that may be taken.

Project related risk	Mitigation measures	Risk level
Governments and stakeholders willing to engage and take action There may be constraints in terms of willingness and ability to take nutrient reduction measures the face of resource problems and lack of recognition of benefits vis a vis more overt food and energy security benefits	Project design in terms of global and associated partnerships for triggering political, institutional and stakeholder engagement and wider benefits of nutrient management; focus on practical and global gains of water quality, stronger ecosystems, and fisheries. Project work streams in working with stakeholders on tool box design; eventual outcome in terms of cost effective analytical measures to guide decision making The GEF IW Conference and GPA inter-governmental review will be used as key opportunities to engage and build support See also demonstration area	Low. Governments' commitment is reflected in the Manila Declaration adopted during the GPA/IGR-3 in January 2012
Comprehensive experts involvement It is essential that this project utilizes existing research and experiences from other projects and initiatives in order to provide a thorough and solid assessment of nutrient over-enrichment, their emission sources and socioeconomic and environmental impacts, along with their economic costs.	This risk is minimized by ensuring the involvement of key research institutes, networks and programmes. In particular, the project design reaches across the full range of the GEF portfolio and uses a leading and experienced manager for tool box development. The Global Partnership provides full stakeholder engagement, including access to non GEF initiatives	Low
Limited private sector involvement Lack of clear understanding of the cost-benefit of nutrient reduction measures, will impede the uptake and/or buy in of such measures by the target key economic sectors notably the agricultural and industrial sectors.	The project must work closely with the industrial and agricultural sectors. Industry is considered a key partner in this project and a targeted approach toward this group of stake-holders will be developed in the context of the project. The activities for the development of the	Medium (at global level private sector's engaged though has been achieved their engagement at national level is yet to be ascertained)

	tool box have a strong element of engagement with the agri-business sector in particular. The added value of UN agencies such as Habitat and FAO will be used to engage agriculture and wastewater sectors	
Lack of engagement and take up in demonstration area There needs to be effective testing of key component outputs in an appropriate application area in order to show tangible benefits of project outcomes to countries and stakeholders and so form basis for replication and up-scaling.	Institutional/policy and stakeholder needs/analysis has been thorough and demonstrates clear willingness to work with and apply outcomes to benefit of water quality clean up, including adverse nutrient impacts, in Manila Bay by cross agency and cross sectoral alliance to benefit of citizens.	Low (both in the Philippines and India the project secured governments' buy-in)
Data and information gaps There needs to be sufficient and appropriate data and information available globally, and in the application area, across a full range of sectoral sources and watersheds/coastal areas in order to fully develop the quantitative modeling and analytical work. The data sets form the essential basis regarding the analysis of costs and benefits of future implementation of nutrient reduction technologies and policy measures.	The key Global NEWS model has already been tested, including in its relationship with and collaboration with other data and modeling effort. A range of accessible data sets are available for the development of the global model and there is a clear willingness for co-operation. IOC/UNESCO in particular will make use of the full range of their programmes and related initiatives, and UNEP/GPA will likewise facilitate in relation to their programmes, including regional seas. Stakeholder analysis has demonstrated that the main demonstration region has a wide range of information available and accessible and that stakeholders are willing to play a full role	Low. Engagement of local universities and support from GPNM partners (e.g., ETH Zurich's support for Laguna Bay on study of Phosphorus) will be of great help in addressing this)
Science-policy linkages (a) the importance of nutrient reduction strategies is relatively not well known outside of scientific circles and there needs to be good linkage and inputs between the scientific community and policy makers (b) related to 1. above, the process of developing the policy toolbox and national/regional nutrient strategies may not be as effective in identifying the most cost-effective key policy and technological options to be implemented if policy makers are not supportive of the project and involved in the project development cycle at the appropriate time.	The Global Partnership on Nutrient Management has been established to bring stakeholders together. The International Nitrogen Initiative has played a full role in project development and leading governments also consulted. Scientists and policy makers are part of the GPNM steering committee and will also form part of the project steering committee. The communications strategy and web based platform with links to IW Learn will also mitigate risks. Project development is geared to ongoing strong involvement with scientists through INI and IOC/UNESCO and with governments through the GPA review	Low
Climate change risks The type of activities developed under this project are not expected to pose any project-related climate change risks. On the contrary, the project impact (i.e. implementation of nutrient reduction strategy) is intended to improve water quality and address degradation of ecosystems, thereby contributing to their ability (and coastal areas more generally) to address climate change.	The project pays specific attention to climate change risks by evaluating the potential effect on coastal ecosystems of climate change and, through the model approach developed under component B, the possible effects of future climate change on nutrient and carbon loads. Climate proofing will be applied to the policy toolbox.	Low

Lack of effective replication, up-scaling, mainstreaming, and sustainability To prompt transformational change the project will need to deliver tools and approaches of wide application, and which will be applied as a substantial part of country/sectoral planning	The design of the tool box is predicated on determining and determining best practices in conjunction with stakeholders, including key private sector sources of nutrients. The project promotes frameworks such as integrated water and coastal management to help embed best practice measures, and focuses on the need for assisting policy makers with a cross sectoral 'road map' approach to assist policy makers with investment and planning. Replication is a key outcome, reflecting testing in a carefully chosen and highly policy relevant (to other regions) demonstration region The GPNM and associated partnerships will continue after project completion to provide a platform for project results	Low
Environmental and Social Safeguard There is a risk that the project outcomes and activities will lead to harmful environmental and social impacts.	It is not anticipated that the project outcomes and activities will lead to harmful environmental and social impacts. On the contrary, the project aims to provide tools, measures and mechanisms to governments and other stakeholders, the application of which will lead to an improvement of the environment in which coastal communities in particular live. These improvements are in relation to water quality and strengthening of ecosystems and the services and livelihoods they provide, including fisheries. In addressing multiple nutrient over-enrichment sources and impacts and promoting cost-effective integrated management, including through frameworks such as integrated watershed and coastal management, the project embraces the potential for trade-offs (albeit also the potential synergies) to arise between longer term ecosystem well-being and perceived more immediate economic and social needs. Further, the site based applications in the area of the Manila Bay watershed and the supplementary area of Lake Chilika are designed to help conserve various important ecosystems, such as mangroves, wetlands, biodiversity etc as part of broader improved water quality improvements and for which environmental assessments are built into the planning and investment regimes by national and local agencies into which the project application is inserted. There is also a strong stakeholder engagement theme in project design, reflected in the arrangements for Manila	Low

	Bay watershed and Lake Chilika which will help assist efforts to bring major groups such as farmers and fishermen together around shared interests in environmental resource management. See also appendix 18.	

Project Management and Oversight

UNEP as an executing agency will have overall project management lead. The executing partners will carry out their responsibilities within the defined administrative arrangements in accordance to UNEP rules and procedures. UNEP will be responsible for final decisions about budgets, terms of reference and contracts proposed for the project's execution**.**

UNEP will ensure consistency with GEF and UNEP policies, and will provide guidance on linkages with UNEP and GEF funded activities as well as reviewing the quality of draft project outputs, provide feedback to project partners, and establish peer review procedures to ensure quality of scientific and technical outputs. The project task manager will develop a project supervision plan and that will be communicated to partners at the inception meeting.

Project Steering Committee (PSC)

The project steering committee established in advance will hold its first meeting after the project inception workshop. The PSC comprises with representatives of UNEP, the US and Dutch governments, FAO and UN Habitat, INI, IFA. However, invitation to participate in the PSC has also been extended to the Governments of the Philippines and India, UNDP, IAEA, China Agricultural University and IFDC. The GPNM International Steering Committee Chairperson will also act as a Chair of the PSC. The PSC will guide the overall project execution and approve key steps and outcomes as well as annual plans and budgets and technical reports. It will operate on the basis of consensus and make any necessary recommendations about project management and oversight to UNEP as overall project lead agency. The PSC will meet annually, taking advantage of the various stakeholder workshops and GPNM meetings to minimize costs, and receive progress reports from the project co-ordination unit (PCU) to prepare for meetings. The PCU will operate as the secretariat to the PSC.

Project Co-ordination Unit

A project co-ordination unit will be established for day to day project management. It will be led by the overall project manager – a post established under the project budget. The PCU would also coordinate with the main Component Coordinators as described below. These would entail UNEP/GPA, IOC/UNESCO, the Global Environment and Technology Foundation, PEMSEA (in relation to the Manila Bay watershed) and CDA (for Chilka Lake). The unit would be based in Nairobi at UNEP HQ. There would be monthly virtual meetings called by the PCU, as well as a minimum of one annual face to face meeting to coincide with PSC meetings. Periodic opportunities will be taken to facilitate additional meetings, linked to carrying out project outputs. The PCU will be responsible for coordinating the project oversight activities and for ensuring that all M&E requirements are implemented according to best practice. This means ensuring quality of products, outputs and deliverables; compiling and submitting progress, financial, and audit reports and budget revisions to the PSC; addressing problems raised by the PSC; and staff and consultant management.

Administration of Contract

UNEP will issue contract, in accordance to its financial rules and procedures, to all project partners for execution of activities as outlined in the project document and agreed by the stakeholders during the inception workshop and approved by the PSC. The modalities of contract may vary depending on the duration of activities and the budget.

Progress Monitoring and Reporting

The monitoring and evaluation plan comprises two elements (a) monitoring of progress (b) evaluation of performance and achievement. The project will follow standard UNEP monitoring, reporting, and evaluation processes and procedures. All substantive and financial project reporting requirements that are summarized in the project document (i.e., Appendix 8) will be used for this purpose. The project M&E plan is consistent with the GEF Monitoring and Evaluation policy and the he Project Results Framework presented above clearly defined SMART indicators for each expected output as well as mid-term and end-of-project targets. These indicators along with the key deliverables and benchmarks will be the main tools for assessing project implementation progress and whether project results are being achieved.

The M&E plan will be reviewed and revised as necessary during the project execution period to capture the process and help all project stakeholders to perform their roles and responsibilities. Day-to-day project monitoring is the responsibility of the PCU, though task managers for each component will have responsibilities to collect specific information to track the indicators.

The Project Steering Committee will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility of the UNEP Task Manager. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan and will communicate that to the project partners during the first six month of the start of the project execution after the inception workshop. The emphasis of the Task Manager supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring. Progress towards delivering the agreed project global environmental benefits will be assessed with the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and UNEP.

Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.

A mid-term management evaluation will take place as indicated in the project work plan (see Appendix6 of the project document). The review will include all parameters recommended by the GEF Evaluation Office for terminal evaluations and will verify information gathered through the GEF tracking tools, as relevant. The review will be carried out using a participatory approach whereby stakeholders will be consulted. The Project Steering Committee will participate in the mid-term review and develop a management response to the evaluation recommendations along with an implementation plan.

An independent terminal evaluation will take place at the end of project implementation. The Evaluation and Oversight Unit (EOU) of UNEP will manage the terminal evaluation process based on the standard terms of reference for the terminal evaluation as appended (Appendix 10) in the project document. The terms of reference will be adjusted to the special needs of the project as deemed necessary.

Overall Project Budget

The total project budget is USD 4,116,347 of which USD 1,718,182 is GEF grant and the remaining balance of USD 2,398,165 is provided by the partners as co-finance.

Breakdown of budget per Component and key cluster of activities are presented in the table below. Details budget against each activity and their spread over the years are provided in the Annex Table 1.

Project Components and Key activities(sub-projects)	**GEF Funding USD**	**Co-financing USD**	**Total Budget USD**
Component A (global partnership on nutrient management)	**281,000 activity (+35,000 TA[1]) = 316,000**	**311,000 activity (+139,500) = 450,500**	**766,500 (activity budget + TA)**
Partnership(s) establishment and stakeholder involvement; web based platform; and communication strategy	146,000	157,000	303,000
Global overview and synthesis report	60,000	65,000	125,000
Fully establishing the Community of Practice, including linkage with IW Learn, GEF projects, and access to best practices and lessons learnt	75,000	89,000	164,000
Component B (quantitative nutrient source-impact modeling/analysis)	**453,682 activity (+35,000 TA) = 488,682**	**564,665 activity (+139,500) = 704,165**	**1,192,847 (activity plus TA)**
Overview of existing tools for source-impact analysis of nutrients in LMEs and their target audiences	27,000	28,000	55,000
Global data base development on nutrient loading and occurrence of HABs, hypoxia, and effects on fish landings, abundance and populations	65,000	124,000	189,000
Nutrient impact modeling for global and local to regional nutrient source impact analysis	100,000	114,000	214,000
Development of regional models of nutrient source-impact modeling for the Manila Bay watershed demonstration area to help guide cost effective nutrient reduction planning for the watershed area	140,000	158,000	298,000
Contribution of component B modeling and analysis to policy tool development under Outcome C below	51,682	57,835	109,517
Regional and national scientists and policy experts, particularly from developing countries, trained in using nutrients source-impact modeling/analysis	40,000	39,000	79,000
Integrated eutrophication assessment and nutrient criteria development nutrient source-impact guidelines and user manuals	30,000	31,000	61,000

[1] . Technical Assistance (TA)

Component C (establishment of policy, technological etc options)	**294,500activity (+ $35,000 TA) = 329,500**	**302,000activity (+$139,500) = 441,500**	**771,000 (activity budget +TA)**
Global overview and inventory of nutrient reduction best practices	75,000	70,000	145,000
Case studies of selected technology and policy options for nutrient over-enrichment reduction	30,000	20,000	50,000
Overview and synthesis of policy, technological options, measures and regulations	27,500	22,000	49,500
Replication and up-scaling of best practice options, measures etc.	40,000	40,000	80,000
Integration of component Policy Tool Box with Component B source-impact modeling	67,000	80,000	147,000
Knowledge sharing and training in the Policy Tool Box and how it can be applied, including in relation to the source-impact analysis	55,000	70,000	125,000
Component D (development of nutrient reduction strategies in Manila Bay watershed)	**295,000activity (+35,000 TA) = 330,000**	**412,500activity (+139,500) = 562,000**	**882,000** (activity budget + TA)
Strengthened information and reporting in Manila Bay watershed on nutrient issues	45,000	102,000	147,000
Building the foundations for nutrient reduction strategies in Manila Bay through source-impact models and best practices	70,000	100,000	170,000
Development and finalization of nutrient reduction strategies	65,000	90,000	155,000
Application in Lake Chilika of an ecosystem health report card for nutrient over-enrichment and hypoxia in lakes, deltas and estuaries	45,000	50,000	95,000
Application of nutrient health report card to Laguna de Bay, Manila Bay watershed	40,000	50,000	90,000
Replication and up-scaling strategy	30,000	20,500	50,500
Component E (M & E)	**100,000**	**60,000**	**160,000**
MTE & TE	100,000	60,000	160,000
Component F (project management)	**154,000**	**190,000**	**344,000**
PCU management and co-ordination Project manager Travel for project manager	 134,000 20,000	 170,000 20,000	 304,000 40,000
TOTAL	**1,718,182**	**2,398,165**	**4,116,347**

Co-financing by various partners and its tracking for project performance reporting

Various governments, agencies and institutions joined the Global Partnership on Nutrient Management (GPNM) and further committed to contribute both in-cash and in-kind co-financing for the project "Global foundations for reducing nutrient enrichment and oxygen depletion from land based pollution, in support of Global Nutrient Cycle". The total cash and kind co-financing is expected to be USD 2,398,165.

A substantial co-financing by the project partners is expected to be derived mainly from the cost of the time and effort contributed by individual experts and institutions in executing the specific activities presented in the Nutrient Project Work Plan. The expected co-financing from the Partners are integral part of the project design and been reflected in the project budget and thus an important contributing factor to the overall success of the project.

The Partners will be required to prepare and submit a six-monthly co-financing report, which will an integral part of the project progress report. The reports will provide details on the specific co-financing by main activity within the framework of the each of the specific project components.

In the calculation of co-financing, the time and effort expended by the Partners need to be taken into considerations. This is based on the assumption that participating experts from the governments and other institutions will remain be fully employed by their governments and/or their institutions, therefore it is proposed to estimate the level of in-kind co-financing based on a representative coefficient derived from the remuneration of experts (salary and benefits), including operation costs for experts and institutions, in terms of office and laboratory spaces, supplies, transport expenses and cost of maintaining laboratory and field equipment.

Methodology for calculating in-kind co-financing

The UNEP-GEF "Global foundations for reducing nutrient enrichment and oxygen depletion from land based pollution, in support of Global Nutrient Cycle proposes a methodology that will be applied for determination of in-kind co-financing by the participating partners in the project. All time spent by partners during the preparation of the Inception phase (since the date of approval of the project by the GEF Sec) and implementation of the project activities will be duly accounted as in-kind co-financing. The approach proposes the use of following standard verifiable indices to estimate the in-kind co-financing as **"Standard cost coefficient of USD …….. per day inclusive of office support costs, salary, and benefits based upon the average pay structure of the national government and or partner institution for the designated person".**

The statement of cash and in-kind Co-financing will be submitted by each Partner to the Project manager for compilation and inclusion in the six-monthly progress report. The following Table 1 and 2 are proposed for uniform reporting on in-cash and in-kind co-financing by all partners.

Table 1: Statement on co-financing for the period:……to…….20…

Name of the partner:

Activity	Co-financing			Remark
	Cash contribution	Cost of travel (ticket, subsistence etc)	**Kind** Staff time in days and USD equivalent	

Based on the information provided by Partners, in the progress report the in-cash and in-kind co-financing will be expressed as a percentage of the total co-financing pledged by Partners.

Table 2: Comparison of the Commitment and Actual in-cash and in-kind co-financing by Partners.

Partners	Commitment		Actual as on …….	
	Cash	Kind	Cash	Kind

Annex Table 1

Project Activities by Components, Year and Estimated Budget (GEF and Co-finance)

Component/Activities	Budget in the Project Document			Implementation period and proposed allocation of budget						Total	
	GEF	Co-finance	Total	Year 1		Year 2		Year 3			
				GEF	Co-finance	GEF	Co-finance	GEF	Co-finance	GEF	Co-finance
Component A: Global Partnership on Nutrient Management addressing nutrient over-enrichment of coastal zones, its causes and resulting eutrophication and dead zones in LMEs	281,00 (+ 35,000 TA) = 316,000	311,000 (+139,500 TA) = 450,500	592,000 (+174,500 TA) = 766,500								
A-1: Global partnership of stakeholders actively engaged in addressing nutrient over-enrichment in coastal waters	146,000	157,000 **115,000**	303,000								
A-1/1: Engaging in international and regional fora to promote the GPNM and seek new members				5,000 (+5,000 from A2)	5,000	5,000 (+10,000 from A2)	5,000	5,000 (+5,000 from A2)	5,000	15,000 (+20,000 from A2)	15,000
A-1/2: Developing a communication and outreach strategy – in combination with project partners				20,000	10,000					20,000	10,000
A-1/3: Publishing and disseminating an advocacy manual on 'Effective Nutrient Management'				0	0	15,000 (+5,000 from A2)	10,000	0	0	15,000 (+5,000 from A2)	10,000
A-1/4: Holding of GPNM global meetings				35,000	15,000			40,000	20,000	75,000	35,000
Holding of GPNM regional meetings						40,000 from A2	10,000			40,000	10,000

A-1/5: Engaging with other GEF LME projects e.g., BOBLME				0	5,000	0	5,000	0	5,000	0	15,000
A-1/6: Developing and maintaining a separate partnership and project web based platform to present and project outcomes				13,000 (+7,000 from A2)	10,000	4,000 (+4,000 from A2)	5,000	4,000 (+4,000 from A2)	5,000	21,000 (+15,000 from A2)	20,000
A-2: Informing GEF projects, countries and stakeholders about the importance of nutrient over-enrichment and hypoxia, including economic and environmental costs	60,000	65,000	125,000								
A-2/1: Global overview of nutrient over-enrichment; synthesis report				0	151,500					0	151,500
A-3: Ensuring access to continued guidance and support for the development of nutrient reduction strategies (this will be implemented with inputs from Component B & C)	75,000	89,000	164,000							75,000	89,000
A-3/1: Holding of training workshops with the participation of IW Learn and GEF projects.				10,000	15,000	5,000	10,000	10,000	10,000	25,000	35,000
A-3/2: Establishment of a Community of Practice based on eXtension agricultural services,				10,000	10,000	20,000	20,000	20,000	24,000	50,000	54,000

Component/Activities	Budget in the Project Document			Implementation period and proposed allocation of budget						Total	
	GEF	Co-finance	Total	Year 1		Year 2		Year 3			
				GEF	Co-finance	GEF	Co-finance	GEF	Co-finance	GEF	Co-finance
Component B: Quantitative analysis of relationship between nutrient sources and impacts to guide decision making on policy and technological options	453,682 + (35,000 TA) = 488,682	564,665 + (139,000 TA) = 704,165	1,018,347 + (174,500 TA) = 1,192,847								
B-1: Overview of existing tools for source-impact analysis of nutrients in LMEs and their target audiences	27,000	28,000	55,000	27,0001	28,000	0	0	0	0	27,000	28,000
B-2: Global database development with documentation of data on nutrient loading and occurrence of harmful algal blooms, hypoxia, and effects on fish landings, fish abundance, and composition of fish populations.	65,000	124,000	189,000	21620	41334	21690	41333	21690	41333	64,000	124,00
B-2/1: Data Base: Global-NEWS data for river nutrient export **Adapting the global model to answer/respond to the local needs DHI MIKE model**	6500	12400	18900	2161	4133	2169	4133	2170	4134	6500	12400
B-2/2: Data base: Nutrient release from aquaculture	6500	12400	18900	2161	4133	2169	4133	2170	4134	6500	12400
B-2/3: Global database development with data on coastal conditions, non-land based nutrient sources, as well as coastal effects collected from	19500	37200	56700	6485	12400	6507	12400	6508	12400	19500	37200

existing sources.											
B-2/4: Synthesis report and maps on occurrences of hypoxia and harmful algal blooms based on work of Diaz and Rosenberg's work on hypoxia, the SCOR-LOICZ work group for harmful algal blooms, and additional IOC databases, such as HAEDAT	6500	12400	18900	2162	4133	2169	4133	2169	4134	6500	12400
B-2/5: Synthesis report "impacts on fisheries" based on data and model output from regions where Ecopath and EcoSim models have been run to develop relationships between fishery production and potential controlling variables such as nutrient inputs and hypoxia	26000	49600	75600	8650	16533	8675	16533	8675	16534	26000	49600
B-3: Nutrient impact modeling for global and local to regional nutrient source impact analysis	100,000	114,000	214,000	32650	38000	33350	38000	34000	38000	100000	114000
B-3/1**:** Enhanced predictive capability of models with respect to nutrient sources, loads, and coastal impacts	30435	34696	65131	9940	11565	10150	11565	10345	11566	30435	34696
B-3/2: Assessment of effects of nutrient loading in coastal marine ecosystems	34783	39652	74435	11360	13217	11600	13217	11823	13218	34783	39652
B-3/3: Analysis and maps of past, current and future contributions of different nutrient sources, forms and ratios in watersheds to coastal effects	34782	39652	74434	11360	13217	11600	13217	11822	13218	34783	39652
B-4: Development of	140,000	158,000	298,000	47824	52750	45563	52590	46613	52665	140000	158000

regional models for the Manila Bay watershed of coastal effects											
B-4/1: Data assembly for the Manila Bay watershed	17193	19404	36596	5874	6477	5595	6460	5724	6467	17193	19404
B-4/2: High resolution river export model for Manila Bay rivers.	41754	47123	88877	14270	15732	13580	15684	13904	15707	41754	47123
B-4/3: Ecosystem model for Manila Bay	39298	44351	83649	13423	14807	12790	14761	13085	14783	39298	44351
B-4/4: Validation of models and development of a summary model for Manila Bay	41754	47123	88877	14263	15732	13588	15685	13903	15706	41754	47123
B-5: Contribution of component B modeling and analysis outcomes to cost effective policy tool development under component C	51,682	57,835	109,517	18300	19445	16200	19130	17182	19260	51682	57,835
B- 6: Regional and national scientists and policy experts, particularly from developing countries, trained in using nutrient source-impact modeling, including in its use to analyze a range of nutrient reduction policies.	40,000	39,000	79,000	6280	7965	4875	6945	28845	24090	40,000	39,000
B-7: Nutrient source-impact guidelines and user manuals for integrated eutrophication assessment and nutrient criteria development	30,000	31,000	61,000	10660	10911	9370	9782	9970	10307	30,000	31,000

Component/Activities	Budget in the Project Document			Implementation period and proposed allocation of budget						Total	
	GEF	Co-finance	Total	Year 1		Year 2		Year 3			
				GEF	Co-finance	GEF	Co-finance	GEF	Co-finance	GEF	Co-finance
Component C: Establishment of scientific, technological and policy options to improve coastal water quality policies in LMEs and national strategy development	294,500 + (35,000 TA) = 329,500	302,000 + (139,500 TA) = 441,500	596,500 + (174,500 TA) = 771,000								
C-1: Global overview and inventory of nutrient reduction best practices	75,000	70,000	145,000	80,000	70,000						
C-2: Case studies of what works	30,000	20,000	50,000	To be covered under C-1	10000						
C-3: Overview and synthesis of policy, technological, options etc. To be undertaken in conjunction with sub-project C1 and C2 above to maximize cost effectiveness. **(C1-3: Geographic distribution, source category including detergent and types of interventions) around 25-30. Detailed study design to be shared with PSC**	27,500	22,000	49,500	To be covered mainly under C-1	10000	Some additional resources may be needed to update	15,000				
C- 4: Replication and scaling up through training workshops (**Only in demo site + others interested) Chuck to write a concept note for discussion with other component leaders on the expectations before**	40,000	40,000	80,000		5000	20,000	20,000	20,000	20,000	40,000	40,000

staring the activity											
C-5&6: Consolidated Policy Tool Box and integration of Policy Tool Box with Component B source-impact modelling **Toolbox for policy makers and practitioners**	67,000	80,000	147,000	10,000	5000	0	0	57,000	80,000		
C-7: Engagement and capacity building training of at least 30 experts from key countries on the use/application of the Policy Tool Box, including in relation to the source-impact analysis (linked with B-6) **1st quarter of year 3**	55,000	70,000	125,000		5000			55,000	70,000		

Component/Activities	Budget in the Project Document			Implementation period and proposed allocation of budget						Total	
	GEF	Co-finance	Total	Year 1		Year 2		Year 3			
				GEF	Co-finance	GEF	Co-finance	GEF	Co-finance	GEF	Co-finance
COMPONENT D Development of nutrient reduction strategies through the application of nutrient source-impact modeling and analysis and best practice measures and options in the Manila Bay watershed.	295,000 + (35,000 TA) = 330,000	412,500 + (139,500 TA) = 552,000	717,500 + (174,500 TA) = 882,000								
D- 1:Strengthening the decision support system for Manila Bay watershed through improved nutrient data and information	45,000	102,000	147,000	45,000	94,500					45,000	94,500
D – 2: Building the Foundations and Agreement with government agencies and stakeholders on nutrient reduction strategies to be implemented in the Manila Bay watershed, including their integration into regional water quality aims	135,000	190,000	325,000	77,000	110,000	33,000	45,000	25,000	38,000	135,000	193,000
D-2/1: Building the foundations for the nutrient reduction strategies: application of first version source-impact models and best practices				75,000	107,000						
D-2/2: Development and application of the final						33,000	45,000				

source-impact models for Manila Bay in developing nutrient reduction strategies **Data gathering will focus into two major rivers Laguna and Pasig in cooperation with DENR. This will be in the light of IIMS presented plus needs of the Modellers** **Year 2 strategy development with support from ETH Zurich specially to address socio economic issues**											
D-2/3: Presentation and adoption of final nutrient reduction strategies integrated with broader water quality objectives for region								25,000	38,000 + 10,000 from Com C		
D- 3: Development and application of an ecosystem health report card on nutrients in Chilika Lake and Laguna de Bay	85,000	100,000	185,000	60,000	80,000	25,000	20,000	0	0	85,000	100,000
D-3/1: Development and application of an ecosystem health report card on nutrients in Chilika Lake				60,000	80,000						
D-3/2:Application of an ecosystem health report card on nutrients in Laguna de Bay						25,000	20,000				
D-4: Consolidation of	30,000	20,500						30,000	20,500 +	30,000	25,500

lessons learned for replication, holding of workshop for dissemination and up-scaling.									5,000 from Com C		

Component/Activities	Budget in the Project Document			Implementation period and proposed allocation of budget						Total	
	GEF	Co-finance	Total	Year 1		Year 2		Year 3			
				GEF	Co-finance	GEF	Co-finance	GEF	Co-finance	GEF	Co-finance
Component E: Monitoring and Evaluation	100,000	60,000	160,000								
E-1: Monitoring of progress by PCU				10,000	5,000	10,000	5,000	10,000	5,000		
E-2: Evaluation of performance and achievements						30,000	20,000	40,000	25,000		
Component/Activities	Budget in the Project Document			Implementation period and proposed allocation of budget						Total	
	GEF	Co-finance	Total	Year 1		Year 2		Year 3			
				GEF	Co-finance	GEF	Co-finance	GEF	Co-finance	GEF	Co-finance
Component F: Project Management and Oversight	154,000	190,000	344,000								
F-1: Project management through PCU				15,000	50,000	20,000	50,000	14,000	45,000	49,000	145,000
F-2: Project guidance through PSC				35,000	10,000	35,000	10,000	35,000	10,000	105,000	30,000
F-3: Overall project supervision by UNEP				-	5,000	-	5,000	-	5,000	-	15,000