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Report No: 36936-PH

PROJECT DOCUMENT

ON A

PROPOSED GRANT FROM THE
GLOBAL ENVIRONMENT FACILITY TRUST FUND

IN THE AMOUNT OF US$5 MILLION

TO THE

REPUBLIC OF THE PHILIPPINES

FOR A

GEF – MANILA THIRD SEWERAGE PROJECT

May 2, 2007

Urban Development Sector Unit
East Asia and Pacific Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective November 28, 2006)

Currency Unit	=	Philippine Peso
Peso 51.00	=	US$1.00
US$1.00	=	SDRxxx

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
BAC	Bid and Awards Committee
BOO	Build Own Operate
BOT	Build Operate Transfer
CAS	Country Assistance Strategy
CO	Corporate Office
CWA	Clean Water Act
DAO	DENR Administrative Order
DBL	Design Build Lease
DENR	Department of Environment and Natural Resources
DOH	Department of Health
EBRD	European Bank for Reconstruction and Development
ECC	Environmental Compliance Certificates
EIA	Environmental Impact Assessment
EMB	Environmental Management Bureau
ESAF	Environmental and Social Assessment Framework
EUF	Environmental User Fees
FAO	Food and Agriculture Organization of the United Nations
FASPO	Foreign Assisted and Special Projects Office
FM	Financial Management
GEF	Global Environmental Facility
GOP	Government of the Republic of Philippines
IDB	Inter-American Development Bank
IEC	Information Education Communication
IEE	Initial Environmental Examination
IFAD	International Fund for Agricultural Development
IRR	Implementing Rules and Regulations
JICA	Japan International Cooperation Agency
LGU	Local Government Unit
LLDA	Laguna Lake Development Authority
M&E	Monitoring and Evaluation
MBEMP	Manila Bay Environmental Management Project
MMDA	Metropolitan Manila Development Authority
MOU	Memorandum of Understanding

MSSP	Manila Second Sewerage Project
MTPDP	Medium-Term Philippine Development Plan
MTSP	Manila Third Sewerage Project
MWCI	Manila Water Company Inc.
MWSI	Maynilad Water Services Inc.
MWSS	Metropolitan Waterworks and Sewerage System
NCR	National Capital Region
OSEC	Office of the Secretary
PAMSD	Program Accounts Management & Support Division
PAREMAR	Pasig River Environmental Management & Rehabilitation
PAS	Procurement Accredited Staff
PAWS	Public Assessment of Water Services
PCC	Project Coordinating Committee
PDO	Project Development Objective
PDS	Project Development Service
PEMSEA	Partnerships in Environmental Management for the Seas of East Asia
PHRD	Japan Policy and Human Resources Development
PMCS	Project Management and Coordination Service
PMD	Project Management Division
PMED	Program Monitoring & Evaluation Division
PMO	Project Management Office
POMS	Project Operations and Management Service
PRRC	Pasig River Rehabilitation Commission
RAP	Resettlement Action Plan
RO	Regulatory Office
RPA	Regional Procurement Advisor
SDP	Sector Development Program
SpTP	Septage Treatment Plant
STP	Sewage Treatment Plant
TA	Technical Assistance
TAT	Technical Assistance Team
UNDP	United Nations Development Program
UNEP	United Nations Environmental Program
UNIDO	United Nations Industrial Development Organization
WTP	Willingness To Pay

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PHILIPPINES

GEF-MANILA THIRD SEWERAGE PROJECT

PROJECT APPRAISAL DOCUMENT

EAST ASIA AND PACIFIC

EASUR

Date: May 8, 2007	Team Leader: Luiz Claudio Martins Tavares
Country Director: Joachim von Amsberg	Sectors: Sanitation (50%), Sewerage (50%)
Sector Manager/Director: Keshav Varma	protection sector (100%)
Project ID: P089082	Themes: Environmental Policies &
Focal Area: International Waters	Institutions and Pollution Mgmt.
Lending Instrument: GEF Grant	resources management (P)
	Environmental screening category: B

Project Financing Data

[ ] Loan [ ] Credit [X] Grant [ ] Guarantee [ ] Other:

For Loans/Credits/Others:
Total Bank financing (US$m.): 5.00
Proposed terms: Grant

Financing Plan (US$m)

Source	Local	Foreign	Total
BORROWER/RECIPIENT (MWSI)	3.35	0.00	3.35
GLOBAL ENVIRONMENT FACILITY	1.50	3.50	5.00
Total:	4.85	3.50	8.35
Associated Bank Financing (US$m) Source	**Local**	**Foreign**	**Total**
BORROWER	9.90	10.56	20.46
IBRD	31.10	32.90	64.00
Total:	41.00	43.46	84.46

A. STRATEGIC CONTEXT AND RATIONALE

1. Country and sector issues

1. **Background.** Water quality throughout the Philippines is deteriorating due to high population growth, rapid urbanization and industrialization. The annual economic loss caused by water pollution is estimated at PhP 67 billion (US$ 1.3 billion), and encompasses health, fisheries production, and tourism. Metropolitan Manila (MM) is the capital of the Philippines with a population of about 12 million in an area of 640 km^2. MM is located in the hydraulically complex Pasig River – Laguna de Bay – Manila Bay watershed, which includes more than thirty tributaries within the city. Manila Bay is a pollution hotspot in the southern East Asia Seas region. However, it is also an important economic zone, producing 35-40% of the national GDP. All MM waterways are heavily polluted, with the key watercourses, the Marikina and Pasig Rivers, biologically dead. Up to 75% of pollution is caused by residential sewage, with the rest originating from industries. Water is supplied to 90% of the population of MM, but less than 15% of residents are connected to a sewerage system, and only about half of the effluent collected is adequately treated. Roughly 85% of the city's households have septic tanks, but the vast majority are not regularly desludged. Most residents rely on open sewers to drain effluent from their septic tanks.

2. To guard against the environmental impacts of water pollution, the Philippines has many water-related laws, but enforcement has been weak and beset with problems that include inadequate resources and implementation rules, poor information, institutional fragmentation, and inadequate cooperation among government agencies and local government units (LGUs).

3. **Overall Government strategy.** Given the poor baseline conditions in MM, the Medium-Term Philippine Development Plan (2004-10) underscores the need to protect the environment in order to improve quality of life for present and future generations. In creating a healthier environment for the population and in providing better protection to vulnerable and ecologically fragile areas, the Development Plan focuses on the protection of watersheds through the adoption of an integrated water resource management system. In accordance with that strategy, in 2004 the Government of the Philippines (GOP) enacted the *Clean Water Act (CWA-2004)*, which is an integrated, holistic, decentralized and participatory approach to abating, preventing, and controlling water pollution.

4. **Institutional fragmentation and the need for partnerships**. Currently, the water pollution control sector in the Pasig River – Laguna de Bay – Manila Bay watershed is complex and fragmented. Many government agencies are involved in the sector through their legally mandated responsibilities for policy and planning, standard setting, regulation and enforcement, adjudication of disputes, and development of water pollution control projects. The key agencies include: Department of Environment and Natural Resources (DENR), Metropolitan Waterworks and Sewerage System (MWSS), Department of Health (DOH), Laguna Lake Development Authority (LLDA), Pasig River Rehabilitation Commission (PRRC), and local government units (LGUs).

5. The main sewerage and sanitation service provider in MM is MWSS, a government corporation with authority granted by respective local governments to provide water supply,

sewerage, and sanitation services to MM. MWSS fulfils this mandate through its two concessionaires, Manila Water Company Inc. (MWCI) and Maynilad Water Services Inc. (MWSI). As the main investors in sewerage and sanitation in MM, MWSS and the two concessionaires play an important role in ensuring that government priorities are reflected in physical investments within MM. However, MWSS does not have complete service coverage over the Pasig River – Laguna de Bay – Manila Bay watershed. Outside the MWSS area, LGUs, supported by other agencies such as LLDA and PRRC, are responsible for providing pollution control services.

6. Given the overlap in mandates of the various agencies and units, the individual efforts by these organizations to reduce water pollution in MM have not resulted in efficient environmental improvements. The agencies recognize that greater efficiency and environmental benefit would be gained by cooperating through a partnership mechanism to create a coordinated approach to defining pollution priorities, establishing investment plans to address those priorities, sourcing suitable financing, and monitoring and evaluating project results. A foundation for cooperation has been established through the implementation of the Manila Bay Environmental Management Project, which was supported by the Global Environment Facility (GEF), through the Partnerships in Environmental Management in the Seas of East Asia (PEMSEA). However, despite the priority accorded this issue by all key agencies, building a fully functioning partnership between the agencies to focus on resolving critical sectoral constraints requires further time and external support, which would be provided through this project.

7. **Critical Barriers**. Under the leadership of DENR, the government has identified the following critical barriers to scaling up investment in pollution control in MM: a) the public has little awareness of the benefits that proper sewerage and sanitation bring to society; b) the public's willingness to pay for sewerage and sanitation is minimal and the current tariff structure provides insufficient incentives for the public to make dedicated connections to separate sewerage systems; c) in the past DENR has not provided clear guidance to other agencies on the prioritization of sewerage and sanitation service provision in Metro Manila; d) MWSS' concession agreements and subsequent re-negotiations with the concessionaires through a rate rebasing mechanism have been based on outdated plans, the targets of which do not maximize environmental benefits; and, e) the current, strict end-date of the concession agreements set at 2022 limits the borrowing period of any new loans taken by the concessionaires, thereby raising the cost of investment capital in the sector in coming years. When further considering the expanded area of the Pasig River – Laguna de Bay – Manila Bay watershed, an additional barrier is the lack of viable financial models for private sector investment in sewerage and sanitation in LGU-controlled areas.

8. The Government has recognized that the most effective way to ensure that water quality in the Pasig River – Laguna de Bay – Manila Bay watershed and in the East Asia Seas improves is through a strategy that scales up investments in sewerage and sanitation and ensures that investments are directed in an economically efficient manner based on environmental criteria. The GOP is committed to addressing the barriers listed above in order to achieve this goal. Thus, GOP has developed the sector strategy and service provision master-plans, provided a legal background and initiated investment projects in sewerage and sanitation services. Among the GOP's major investments are the Manila First, Second and Third Sewerage Projects implemented by MWSS and its concessionaires, supported by the Bank. In addition, the Pasig

River Environmental Management and Rehabilitation Sector Development Program has been implemented by the Pasig River Rehabilitation Commission with support from ADB. These actions have positively contributed to service improvements and operating performance of wastewater facilities, have demonstrated effective wastewater management techniques such as combined sewerage, and gradually contributed to reducing the enormous scale of the service deficiency and pollution problem. The current project is designed to enhance these previous activities through resolution of several key institutional, legal, financial and technical barriers in order to enable an investment environment that would support future scaling up of more efficient investments in the pollution control sector. This includes the physical demonstration of a key technique for joint sewage and septage management, which is expected to be highly replicable within Metro Manila as it is a cost-effective and efficient form of treatment.

2. Rationale for Bank involvement

9. Land-based pollution reduction is a key priority of the Bank in its investment, policy and capacity building activities in the East Asia and Pacific Region. The objectives of the proposed GEF project reflect this priority, and are consistent with the World Bank's corporate and regional environment strategies.[1] Moreover, the GEF and World Bank have established a Strategic Partnership Investment Fund for Pollution Reduction in the Large Marine Ecosystems of East Asia (the Fund), under the GEF's Contaminant-Based Operational Program N° 10 (OP10). The objective of the Fund is to reduce land-based pollution discharges that have an impact on the seas of East Asia by leveraging investments in pollution reduction through the removal of technical, institutional, and financial barriers. In particular, the Fund will finance activities related to World Bank pollution reduction investment projects that are innovative and can be replicated in other areas. Expected outcomes of the Fund would be increased investment in activities that reduce land-based pollution and the replication of cost-effective pollution reduction technologies and techniques demonstrated by the Fund. A Brief on the Fund (Tranche 1 of 3 Tranches) in the amount of US$25 million was approved by the GEF Council in November 2005. This project is consistent with the goals and objectives of the Fund and would be financed under it.

10. As the provider of significant past and ongoing support for the sewerage and sanitation sectors in MM, primarily through a series of investment projects under the leadership of MWSS, there is sound rationale for the Bank to continue to support the GOP as it builds an inter-agency partnership that will address the remaining sectoral barriers. The Bank is in a strong position to provide necessary support, especially in the key areas of financial innovation, policy and planning development, information management and institutional strengthening. Furthermore, it is intended that the results of this project would be scaled up and replicated through future investment projects, some of which are likely to be financed by the Bank.

11. Through this project, the GEF would support the implementation of the CWA, and the Medium-Term Philippine Development Plan. The Plan gives due prominence to the protection of watersheds and coastal zones through integrated watershed and coastal area management, as well as the attainment of the country's Millennium Development Goals. The GEF with its aim

[1] World Bank, 2001. *Making Sustainable Commitments. An Environment Strategy for the World Bank.* World Bank, Washington D.C.; World Bank, 2005, *Environment Strategy for the World Bank in the East Asia and Pacific Region,* World Bank: Washington D.C

of removing barriers to pollution reduction under OP10, therefore fits within, and will help promote, the national plans.

12. As a member of the ASEAN, the country has committed to reach by 2010, the ASEAN Harmonized Environmental Quality Standards[2] for river water quality, with the highest priority to be accorded to urban and industrial pollutants. The marine water quality criteria for the ASEAN region that sets parameters and values for the protection of aquatic and human life is similarly recognized by the Philippines. The GEF project, with the aim of reducing land-based marine pollution, therefore also supports these standards.

13. Finally, the country is one of the coastal states[3] in the East Asian region to have signed the *Putrajaya Declaration of Regional Cooperation for the Sustainable Development of the Seas of East Asia* (2003), thereby committing to regional cooperation to address trans-boundary issues of common concern, which include land-based pollution. The Manila Bay is a pollution hotspot in the South China Sea, and the GEF project would promote innovative best practices in pollution reduction, and the dissemination of lessons learned, through the *Partnerships in Environmental Management for the Seas of East Asia* (PEMSEA).

3. Country Eligibility

14. Philippines are eligible for GEF assistance under the International Waters Focal Area through the World Bank. The GEF project is eligible for financing under the Fund as it fulfills all seven necessary conditions as stipulated in the approved Fund Brief, i.e. it:

a. is located within the coastal watersheds of one of the six East Asian large marine ecosystems;
b. demonstrates an innovative technical mechanism to combat land-based water pollution;
c. has high likelihood of replication in Philippines and more widely in East Asia;
d. is unlikely to proceed without grant financing from GEF;
e. has necessary co-financing available;
f. has been endorsed by Philippines' GEF Focal Point; and
g. meets all relevant World Bank Appraisal criteria.

4. Higher level objectives to which the project contributes

15. The project supports the identification and removal of institutional, economic, financial and technical barriers limiting investments to reduce pollution that reaches the South China Sea via Manila Bay. The South China Sea is a part of the international waters environment and the project is therefore consistent with GEF Strategic Priorities in the International Waters Focal Area. By aiming to reduce land-based pollution discharges that have an impact on the seas of East Asia, the project is aligned with the GEF Contaminant-Based Operational Program. Moreover, in accordance with the Philippines Clean Water Act, it focuses on mitigating the

[2] In September 1997 ASEAN adopted a Framework to achieve long-term environmental goals for ambient air and river water quality, as defined according to ASEAN Harmonized Environmental Quality Standards (http://www.aseansec.org/secgen/articles/ann_3.gif).

[3] The original twelve countries included Brunei Darussalam, Cambodia, China, Indonesia, Japan, DPR Korea, RO Korea, Malaysia, Philippines, Singapore, Thailand and Vietnam. Two additional countries have subsequently joined (Lao PDR and Timor-Leste) making a current total of 14.

negative environmental impacts of water pollution in MM. Finally, the project supports two main CAS pillars of Governance and Growth by promoting regulatory independence and enforcement of environmental standards, improving management of waste in Metro Manila, and strengthening the protection of ecologically fragile areas, especially watersheds. In the latter two items, the CAS particularly recognizes the importance of the Laguna Lake area and Metro Manila, areas that are the primary focus of this project.

B. PROJECT DESCRIPTION

1. Lending instrument

16. The financing instrument is a US$5 million grant provided from the WB/GEF Partnership Investment Fund for Pollution Reduction in Large Marine Ecosystems in East Asia. While it is developed jointly with the Manila Third Sewerage Project supported by an IBRD loan of US$64 million (approved by the Board in 2005), the grant is processed as a partially blended project. The grant will be complemented by counterpart funding provided by the GOP and MWSI.

2. Global environmental objective (GEO)

17. Under the Fund, the objective of this project is to mobilize international and domestic financial resources to support the GOP as it builds a fully-functioning partnership between key agencies responsible for environmental management and pollution control, such that they can work together to remove the institutional, financial and technical barriers that limit investment in pollution control in MM, thereby promoting new, efficient investments in facilities that reduce land-based pollution of the East Asia Seas.

3. Project development objectives and key indicators

18. The GEF project development objectives are to assist the GOP in the Project Areas in: (a) identifying essential adjustments to administrative, institutional, and regulatory practices and existing legislations in order to attract private investments in the Recipient's wastewater sector; (b) increasing the effectiveness of the agencies responsible for water pollution control through improved coordination; and (c) promoting innovative, simple and effective wastewater treatment techniques.

19. The key indicators are the increased coverage of sewerage and sanitation as a percentage of total coverage and the reduction of pollution load of the Manila Bay (Annex 3).

4. Project description

20. The project is a companion to the on-going Manila Third Sewerage Project approved by the Bank in 2005. The GEF project components 1 through 4 aim at identification of impediments to cooperation among sector agencies, and to non-conventional investments in sewerage and sanitation. Components 5 and 6 would assist MWSS in pursuing higher investments in sewerage and sanitation by its concessionaires and in piloting suitable technology for septage disposal. Component 7 provides technical assistance to help with project

management, monitoring, evaluation and dissemination. A detailed project description is in Annex 4. The summary follows.

Component 1: Partnership strengthening (US$1.00 million)

21. The component would: (a) strengthen partnerships among the Recipient's agencies responsible for water pollution control to improve coordination and effectiveness, through carrying out studies of successful pollution control and wastewater management partnership models worldwide, and identifying and carrying out measures for improving existing administrative, institutional, and regulatory practices; (b) establish an integrated partnership information center in DENR to consolidate existing data concerning the wastewater sector which would then be disseminated to stakeholders in said sector; (c) integrate water quality monitoring systems of the Recipient's agencies responsible for water pollution control; and (d) expand the public assessment of water services to include sewerage and sanitation services.

Component 2: Planning and Policy Development (US$0.50 million)

22. This component would (a) update the sewerage and sanitation master plans and applicable standards for MWSS' jurisdiction areas to be used in the rate basing 2013; (b) refine policies and procedures including guidelines for regulating the providers of septic tank desludging; and (c) develop procedures and standards for implementing the Recipient's Clean Water Act and the Sanitation Code.

Component 3: Innovative financing (US$0.50 million)

23. his component would help the government in developing and testing innovative financing arrangements for the sewerage and sanitation sector to attract private sector investment in the sewerage and sanitation sector, including provision for technical assistance.

Component 4: Use of market-based incentives (US$0.10 million)

24. This component would assist the LLDA in improving its environmental user fees systems and implementing market-based incentives in such systems through provision of technical assistance.

Component 5: Rate rebasing (US$0.60 million)

25. The component would provide technical assistance and training to MWSS and the Recipient's relevant government agencies for the preparation and negotiations of 2007/08 rate rebasing in the water and wastewater sector.

Component 6: Joint sewage and septage treatment plant (US$4.65 million)

26. This pilot would upgrade a selected sewage treatment plant in Quezon City to a combined septage and sewage treatment plant, including the first year trial operation of the combined septage and sewage treatment plant.

Component 7: Project management (US$1.00 million)

27. This component would provide technical assistance and operating support to assist DENR in implementing, coordinating, monitoring, evaluating, and supervising the Project and disseminating the Project's results and outcomes.

5. Lessons learned and reflected in the project design

28. Given the overlap in mandates of the various agencies and units involved in pollution control, individual efforts by these organizations had not been effective and greater efficiency would be gained by building partnerships for defining pollution priorities, establishing investment plans, sourcing suitable finance, and monitoring and evaluating project results. The project therefore builds on the foundation established through the Manila Bay Environmental Management Project's inter-agency collaboration started in 2000, which has been used as a stepping off point for developing the partnership between the relevant agencies responsible for environmental and coastal issues. It was envisaged that such a partnership, which would be established under this project, would help enable scaling up investments in the sector.

29. Furthermore, the GEF project design reflects lessons learned through previous Bank operations for which environmental targets of the concession agreements did not fully reflect GOP objectives. This occurred because the government had insufficient information during the rate rebasing exercise of 2002-03 to prioritize environmental issues during its negotiations with the concessionaires. Expert assistance during GOPs preparation and negotiations for the 2007-08 rate rebasing will help ensure that GOP priorities are properly defined and negotiated.

6. Alternatives considered and reasons for rejection

30. The preparation process involved extensive discussions with concerned institutions which led to a broadened project scope, rather than a narrower one, and included several alternatives, like information-education-communication, technical and technological innovation, financial instruments, and institutional mechanisms such as partnerships.

31. Furthermore, during preparation, a project design in which only technical assistance activities would be included was considered. However, it was determined that the demonstration of the physical infrastructure investment in joint sewage and septage treatment was urgent in Metro Manila because of its high replicability by the two concessionaires. For this reason, a mixed project including both technical assistance and physical investment was designed.

C. IMPLEMENTATION

1. Partnership arrangements

32. The GEF project would be financed from the GEF Trust Fund managed by the Bank and forms an integral part of the MTSP financed by a Bank loan. Both the GEF project and MTSP would be appropriately coordinated and sequenced to ensure optimum results. Through the mutual relationship between GEF, UNDP, UNEP and the Bank, the project is institutionally

linked to the *Strategic Partnership for Sustainable Development of the LMEs of East Asia*, its financing arm *the Strategic Partnership Investment Fund for Pollution Reduction of the LMEs of East Asia*, and its regional agency, *the Partnership in Environmental Management for the Seas of East Asia* (PEMSEA). The partnership arrangements are described in Annex 17.

2. Institutional and implementation arrangements

33. The GEF project would be implemented by several agencies with DENR providing the leadership. Coordination of these agencies and day-to-day management of the project would be carried out by the Project Management Office (PMO) within DENR. General administration, including procurement, financial management, and consolidation of regular progress reports and the implementation completion report for the Bank/GEF, would be provided by the Foreign Assisted and Special Projects Office (FASPO), also within DENR. Both of these organizational units within DENR have adequate capacity and experience with foreign financed projects. In addition, they would be supported by consulting services provided under the project.

34. The project implementing agencies are DENR's Environmental Management Bureau (EMB), the Metropolitan Waterworks and Sewerage System, the Pasig River Rehabilitation Commission, and the Laguna Lake Development Authority. Each of these agencies has appointed a coordinator who would be responsible for implementing a respective component of the project in close cooperation with the PMO and FASPO.

35. *Implementation arrangements*. With PMO coordination, the participating agencies would each implement their respective component. This would include responsibility for (a) drafting the request for proposal (RfP) including the TOR for consulting services; (b) preparing a shortlist of proposed consulting firms, specialized agencies, universities, and individual consultants; (c) provision of counterpart funds, offices and facilities; (d) selection of staff for training; (e) preparation of bidding documents comprising designs, specifications, bill-of-quantities and conditions of contract for proposed procurement of works and goods, and (f) regular reporting on the component status and progress.

36. For this undertaking, the PMO would be aided by a separate technical assistance team (TAT) composed of professionals from various government agencies and created as a task force for the duration of the project. Implementation procedures, responsibilities and duties of participants, tentative schedules, and reporting requirements, etc. would be detailed in the Project Implementation Manual, prepared by the PMO and acceptable to the Bank.

37. Procurement of works, goods and services would be carried out by FASPO including evaluation of proposals received or bids and awards of contracts. FASPO would also be responsible for overall monitoring and evaluation of the GEF project achievements in catalyzing additional finance for expansion of sewerage and sanitation in MM, and feasibility and benefits of joint sewage-septage treatment in the wastewater treatment plant, and dissemination of the achievements through the PEMSEA partnership.

38. *Flow of funds*. The GEF grant would be made to the Republic of Philippines represented by the Department of Finance and passed with no mark-up to DENR which would disburse the

respective portions of the grant for all project activities as requested by the participating agencies. To expedite project execution, a special account in US dollars would be opened in the Land Bank of the Philippines. Withdrawal applications would be documented, and supporting documents for the SOEs would be retained by FASPO and made available for examination by World Bank staff during supervision missions and for review by external auditors.

3. Monitoring and evaluation of outcomes/results

39. Annex 3 lists the main outcome indicators for the project, as well as the intermediate result indicators for each component. The PMO would regularly collect data from the participating agencies as required for monitoring project implementation progress and evaluation of project outcomes/results and include these in each component's semi-annual progress report. These include coverage of sewerage, coverage of sanitation, and reduction of pollution attributable to the project (BOD, N and P). On the basis of the progress reports, DENR would: (a) review the results; (b) take appropriate corrective actions, when and where necessary; and (c) FASPO would consolidate component reports into semi-annual progress reports for the Bank.

40. The Bank would monitor implementation progress through semi-annual progress reports (Annex 6), separate quarterly financial monitoring reports (Annex 7), environmental management monitoring reports (Annex 10) and regular supervision missions. All outcome and result indicators of the project would be monitored in detail and evaluated in accordance with Bank guidelines and results would be included in semi-annual progress reports.

4. Sustainability and Replicability

41. The project has been designed to ensure that all activities are carried out within an implementation framework that will develop into a long-term partnership between key agencies and will build human capacity within these agencies. This "learning by doing" approach to partnership development, which will encourage agencies to work together towards specific, achievable project outcomes, will also ensure that the partnership framework developed under the project is sustainable beyond the project's implementation period. Furthermore, as the project outcomes include enhancements to inter-agency consultation and decision-making processes, improved policies, regulations and plans, the project as a whole would increase sustainability of pollution reduction activities by changing the institutional and investment environment in MM.

42. It is expected that replication of the project outcomes would occur in four ways. First, it is expected that there would be increased lending from the World Bank in this sector in MM. Already, the Bank has received a request from MWSS and MWSI to finance the replication of the results of the pilot septage/sewage treatment plant (Component 6) at approximately twenty sites within the MWSI western concession area. This proposal has been included as a component in the proposed Development Support for the MWSS Financial Rehabilitation Project, for which the Project Concept Note was approved by Bank Management in June 2006.. Furthermore, the Bank has recently commenced discussions with the GOP on the possibility of expanding Bank support for sewerage and sanitation in areas along the Pasig River.

43. Secondly, it is expected that the innovative financial mechanisms that are intended to attract external private investment to the concession areas, would be replicated within the MWCI and MWSI concession areas, causing an expansion of sewerage and sanitation services within MM. Both concessionaires have expressed interest in utilizing such approaches to scale up services in their concession areas. It is also expected that replication of these financial mechanisms within the LGU areas outside the concession areas would be replicated through LLDA's participation in the project and subsequent dissemination of project results to LGUs and potential investors in the Laguna Lake area.

44. Thirdly, the partnership formed under the project, and the various project outputs have a high degree of replicability within the Philippines. Similar institutional, technical and financial barriers exist that limit investment in pollution control are evident in other cities and towns in the Philippines. Through the participation of the various national agencies (DENR, DOH, etc.) in this project, the results can be disseminated and replicated in other regions of the country.

45. Finally, the outcomes of this project have a high degree of replicability in other countries of the region, where similar barriers exist and many of the the project results could be applied. Partnerships that help to resolve pollution control issues are necessary in all countries, while sound planning and policy development forms the basis of all efficient environmental investments. Innovative financial mechanisms that lead to private sector investment are necessary and possible in most countries, especially Vietnam, Thailand and Indonesia. Replication of sound septage management is also likely in other countries of the region as this is a practical approach to pollution control that reflects the level of development of the countries of East Asia. Already, this project has initiated one replication effort in Yantai City in the province of Shandong - China, where a project in septage management has been proposed for GEF support.

46. The project has prepared a comprehensive dissemination and replication plan.[4] Strategies including advocacy, networking, and social marketing are included in this plan. The agencies participating in the project would take the lead in disseminating information throughout MM and more widely throughout the Philippines. In order to disseminate material throughout the East Asia region, partnership activities and networking will be pursued with the academe, as well as with local and international organizations. The existing strong relationship between PEMSEA and DENR will provide crucial support for this effort with PEMSEA taking the lead in disseminating the knowledge from the Manila experience through its information network and workshops.

5. Critical risks and possible controversial aspects

47. The project's main risks are institutional and related to: (a) the difficulties in reaching efficient working partnerships among the major agencies active in the watershed; and (b) potential administrative bottlenecks, as the project tasks are the responsibility of numerous participating agencies, some with limited experience in foreign-financed projects. Delays in

[4] A full Dissemination and Replication Strategy is available in the Project Document "GEF Manila Third Sewerage Project (GEF-MTSP)" available in the project file under TF055659 - GEF PDF B-PHILIPPINES: MANILA THIRD SEWERAGE PROJECT (MTSP) : Reports and Studies

processing employment of consultants to carry out various studies and designs of joint sewage/septage treatment plant, and in completion the treatment plant and postponement of experimental testing, financial problems of concessionaires, and absence of candidates for innovative financial mechanism are all additional risks.

48. These risks are being addressed in the project by measures to promote and strengthen partnerships among institutions and agencies involved in the project and by provision of substantial technical assistance, strong support for project management and advanced recruitment of supporting consultants.

Risks	Risk Mitigation Measures	Risk Rating with Mitigation
Administrative difficulties, as the project tasks are the responsibility of implementing agencies with limited experience in processing foreign-financed projects	Substantial TA and the financing of specific short-term expertise to improve technical capability of agencies	Modest
Limited capacity to handle project procurement, in terms of available manpower and competency of existing staff in FASPO	Capacity building of at least two FASPO staff and development of FASPO Procurement Manual	Low
Delays in employment of consultants, completion of treatment facilities and experimental testing	Advance drafting TOR, preparation of lists of proposed consulting firms in mid-2006	Modest
Low impact on water quality resulting from low investment from the concessionaires	TA and financing short-term expertise to explore innovative financing mechanisms	Modest
Preparation studies start too late for inclusion in rate rebasing negotiations	Advance procurement for Component 5 and retroactive finance initiated in mid-2006	Substantial
Difficulties in reaching efficient working partnerships among the major agencies	Measures to promote and strengthen partnerships among institutions and agencies; operational memorandum of understanding drafted and signed by DENR and MWSS.	Modest
Overall risk rating		Modest

6. Grant conditions and covenants

49. Conditions of Negotiations

- Completion of TOR for the rate rebasing component;
- IEE and EMP filed with DENR;
- Completion of draft Procurement Manual;
- Confirmation by DENR on expansion of duties of PMO and FASPO by GEF project;

- Completion of a draft MOA acceptable to the Bank prepared between the MWSS and DENR; and
- Completion of a draft MOA acceptable to the Bank prepared between the MWSS and MWSI.

50. Conditions of Effectiveness

- Rate rebasing study consultants selected (Component 5) in adequate numbers and with experience, qualifications and terms of reference, satisfactory to the World Bank;
- Procurement manual including the Anti-corruption Measures acceptable to the Bank adopted by DENR;
- Training of FASPO procurement staff completed;
- An MOA, acceptable to the Bank, signed between the MWSS and DENR;
- MWSS has obtained from DENR environmental certification for carrying out Component 6 of the Project; and
- An MOA, acceptable to the Bank, signed between the MWSS and MWSI;

51. Conditions of Implementation

- Maintain the PMO, TAT and FASPO within DENR through Project completion;
- Carry out the Project in accordance with the Procurement Manual including Anti-corruption Measures acceptable to the Bank; and
- Cause MWSS to implement Component 6 of the Project in accordance with the EMP of March 17, 2006.

D. APPRAISAL SUMMARY

1. Economic and financial analyses

52. ***Economic Analysis:*** An incremental cost analysis was completed for the GEF project. Under the baseline scenario, an investment in sewerage and septage management of US$104 million would take place over the period 2005 - 2025. This would include construction of infrastructure, institutional strengthening, and capacity building.

53. Under the GEF scenario, an additional investment of US$ 8.35 million would catalyze significantly higher additional investment during the period 2005 – 2025 through replication of the technology demonstrated under the project, in the first instance through a follow-on Bank project and later through additional investment by the concessionaires and infusion of new investment in pollution control from private sector investors using the project's financial innovations. The mechanism for ensuring the scaling up of investment will be through the 2008 and 2013 rate rebasing exercises. Moreover, in addition to an expected increase in investment in the sector, the project's outcomes would ensure that the environmental efficiency of the investments improve through better targeting of environmental hotspots.

54. ***Financial Analysis***: A detailed financial analysis was completed during project preparation including the implication of the Restructuring Agreement of MWSI that covers the period to 2013. The equity required for this project is $3.35 million, considered very small compared with the projected indicators of MWSI. The financial projection shows that MWSI

will have a tariff driven revenue of around $1,931 million and CAPEX of around $331 million. So, the required equity represents around 0.1 % of the revenue and less than 1% of the CAPEX. No further analysis is considered necessary.

2. Technical

55. The suitability and technical viability of the project has been confirmed by the Bank task team. The proposed infrastructure component (joint sewage/septage treatment) has taken into account transport cost, area available, and resettlement issues, and for experimental reasons, different septage loading options.

3. Fiduciary

56. ***Financial management.*** The adequacy of the project financial management system was assessed based on guidelines issued by the Financial Management Sector Board on November 3, 2005. The assessment concluded that the project meets minimum Bank financial management requirements as stipulated in BP/OP 10.02. It found that the project will have in place an adequate financial management system that can provide with reasonable assurance, accurate and timely information on the status of the project in the reporting format agreed with the Bank (see Annex 7). The Financial Management Assessment is available in the Project File (Annex 12).

57. ***Procurement assessment.*** The procurement capacity assessment concluded that the procurement risk is considered average. There will be a need to enhance the procurement capacity of FASPO, through training, advisory support from the Bank office in Manila, and guidance from supervision missions. For further details on procurement, see Annex 8. The Procurement Capacity Assessment is available in the Project File (Annex 12).

4. Social

58. There are no resettlement or any other social issues associated with this project.

5. Environment

59. The project largely comprises technical assistance. Only one component includes an upgrading of a sewage treatment plant to a combined septage and sewage treatment plant. The treatment plant selected for the pilot joint treatment is in the area covered by the Regional Environmental Assessment for Metro Manila prepared for the IBRD- Manila Third Sewerage Project. Because of associated environmental issues, this GEF project component triggers the Environmental Assessment policy. The resettlement and IP policies are not triggered as there is no acquisition of land or economic resettlement and the area does not contain indigenous groups. No additional environment document will be required for this project.

6. Safeguard policies

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)	[X]	[ ]
Natural Habitats (OP/BP 4.04)	[ ]	[X]
Pest Management (OP 4.09)	[ ]	[X]
Cultural Property (OP 4.11)	[ ]	[X]
Involuntary Resettlement (OP/BP 4.12)	[ ]	[X]
Indigenous Peoples (OP/BP 4.10)	[ ]	[X]
Forests (OP/BP 4.36)	[ ]	[X]
Safety of Dams (OP/BP 4.37)	[ ]	[X]
Projects in Disputed Areas (OP/BP 7.60)*	[ ]	[X]
Projects on International Waterways (OP/BP 7.50)	[ ]	[X]

a. *What is the safeguard screening category of the project? (S1, S2, S3, SF)*: S2

b. *What is the environmental screening category of the project? (A, B, C, FI)*: B

c. *If applicable, what are the key safeguard policy issues raised by the project?* N/A

d. *If applicable, what are the main results of any safeguard policy related studies, and how have they been incorporated into the project?*

This project is linked to the baseline MTSP, whose negative environmental impacts are minor, and are mainly construction-related. The risks are linked to the disposal of septage and sludge, for which satisfactory mitigation measures have been planned, and have been integrated into the environmental management plan (EMP).

e. *What is the borrower's capacity to implement the safeguard policies recommendations, and, if the capacity is insufficient, how will this capacity be brought to the required level?*

Both DENR and MWSS have extensive experience in the preparation and implementation of Bank-supported projects. Since 2004, the Bank has actively engaged DENR, among other stakeholders, in natural resource management projects in the Philippines. In addition, the Bank routinely works with DENR in producing the Philippines Environment Monitor, which highlights issues and concerns related to coastal and marine resource management, solid waste, air and water pollution. Finally, since 1992, GEF, through the WB and other implementing agencies, has invested US $118.7 million for environmental management in the Philippines. DENR therefore has extensive experience in working with the Bank, including knowledge of its safeguards requirements.

* *By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas*

The Bank has supported MWSS with four loans for water supply and one for sewerage and sanitation.[5] Experience gained by MWSS with these projects, particularly MSSP (completed in June 2005), has given MWSS extensive experience with WB safeguards procedures.

f. *What type of consultations has been conducted related to safeguard issues? How did these consultations influence project design?*

Surveys/interviews, public consultations for concerned barangays and communities, and focus group discussions with local government officials (barangay and municipal level) were carried out

g. *When were the safeguard studies made available at the InfoShop?*

The ISDS for the baseline MTSP (under which the GEF-MTSP is covered) was sent to the InfoShop on 1/16/05. The ISDS was re-disclosed in InfoShop on 9/22/05 under the GEF MTSP. The environmental documents for GEF MTSP, including EMP, were publicly disclosed on 3/17/06 at the InfoShop in Washington and in the Knowledge Development Center of the World Bank Manila Office.

h. *When and where were safeguard studies made available in the cooperating country?*

On February 14, 2005 one set of reports for the baseline MTSP, under which the GEF-MTSP is covered, was sent to every city in the MWCI concession zone, and to concerned municipalities in the lahar areas with a request to make the set available to the public in the library, with notices posted in prominent places. Copies were also made available in the libraries of DENR, MWSS, LBP, and MWCI. The documents were posted in LBP and in MWCI public library; advertisement was posted in the newspaper on February 16, 2005, regarding the availability of the documents for public consultation. LBP also posted a copy of the newspaper advertisement in the public board of its branches in the project area for wider disclosure.

7. Policy Exceptions and Readiness

a. Does the project require any exceptions from the Bank policies? If so, what are they and how are they justified? No
b. Have these been approved by Bank management? N/A
c. Is approval for any policy exception sought from the Board? No
d. Does the project meet the Regional criteria for readiness for implementation? If not, in what ways? Yes

Readiness Criteria:

1. Fiduciary (financial management and procurement) arrangements in place: Yes.
2. Project staff and consultants mobilized: The project will be mainstreamed in DENR, the implementation lead agency. No special arrangements for mobilization are required.

[5] Manila Metropolitan Water Supply Project, Ln 386-PH (1964); Manila Water Supply II, Ln 1615-PH (1978); Manila Sewerage and Sanitation Project, Ln 1814-PH (1980); Metropolitan Manila Water Distribution Project, Ln 2676-PH (1986); Angat Water Supply Optimization Project, Ln 3124-PH (1989).

3. Counterpart funds budgeted/released: GOP, MWSS, and MWSI has allocated adequate counterpart funds.
4. Tender documents for first year procurement have been prepared: Yes.
5. Disclosure requirements met: Yes.
6. Results assessment arrangements completed: Yes. Institutional responsibility for monitoring and evaluation agreed and in place, indicators specified and baseline data collected.
7. Co-financing arrangements signed: N/A.
8. Land acquisition plans ready: N/A.

Annex 1: Country and Sector or Program Background
GEF-MANILA THIRD SEWERAGE PROJECT

1. Metro Manila's impact on national water quality is significant (almost 20% of all domestic wastewater in the Philippines is generated by approximately 12 million Metro Manila residents). Metro Manila is located in the hydraulically complex Pasig River – Laguna de Bay – Manila Bay watershed which includes more than thirty tributaries within the city. Manila Bay is a pollution hotspot in the southern East Asia Seas region. To guard against the environmental impacts of water pollution, the Philippines has many water-related laws, but enforcement is weak and beset with problems.

2. The Clean Water Act (RA 9275) [CWA] passed by Congress in 2004 and the Act's Implementing Rules and Regulations (IRR) enacted in 2005, include an integrated, holistic, decentralized and participatory approach to abating, preventing and controlling water pollution in the country. The enactment of CWA represents a serious attempt by Government to consolidate different fragmented laws and provide a unified direction and focus for fighting water pollution in the Philippines. However, in order to achieve improved environmental conditions, implementation of this Act would require substantially more investment in the sewerage and sanitation sectors and capacity within agencies and cooperation between them, than exists today.

Institutional arrangements for water pollution control in Metro Manila

3. The water pollution control sector in the Pasig River – Laguna de Bay – Manila Bay watershed is complex and fragmented. Many government agencies are involved in the sector through their legally mandated responsibilities. The key agencies are described below.

(a) The Department of Environment and Natural Resources (DENR) is the Government agency primarily responsible for the conservation, management, development, and proper use of the country's environment and natural resources.

(b) The Metropolitan Waterworks and Sewerage System (MWSS) is mandated by law to provide water supply, sewerage and sanitation services in Metro Manila, which it does through its two concessionaires, Manila Water Company Inc. (MWCI) and Maynilad Water Services Inc. (MWSI).

(c) The Department of Health (DOH) is responsible for formulation, planning, implementing, and coordinating health policies, standards, and programs including sewage management.

(d) The Laguna Lake Development Authority (LLDA) has broad policy, planning, regulatory, and development functions to promote the development of the Laguna de Bay region, while providing for environmental management and control.

(e) The Pasig River Rehabilitation Commission (PRRC) was established to oversee the rehabilitation of the Pasig River. Its programs include sanitation improvement especially within the easement areas along the river.

4. With respect to sewerage and sanitation service provision, the Local Government Code which established the national policy of devolution of certain national governmental powers to Local Government Units (LGUs) placed LGUs in a position of conflict, by mandating them as enforcers of pollution control and providers of sewerage service within their local jurisdiction. This regulatory conflict of interest and no clear accountability has contributed to the very low amount of investment by LGUs in the sewerage and sanitation sectors.

5. Given the overlap in mandates of the various agencies and units, the individual efforts by these organizations to reduce water pollution in the Pasig River – Laguna de Bay – Manila Bay watershed have been inefficient. A foundation for cooperation has been established through the implementation of the Manila Bay Environmental Management Project, which was supported by the Global Environment Facility (GEF), through the Partnerships in Environmental Management in the Seas of East Asia (PEMSEA). The Project Coordinating Committee of this project would be used as a starting point for collaboration between the relevant agencies on this project.

State of Investments in Sewerage and Sanitation in Metro Manila

6. In the last several decades, investments in sewerage and sanitation in the Pasig River – Laguna de Bay – Manila Bay watershed have been limited which has resulted in a serious under-provision of these services today. The majority of investment in domestic sewerage and sanitation in MWSS' area of responsibility has been supported by Bank financing through a series of sewerage and sanitation projects spanning more than twenty years, most recently, the Manila Third Sewerage Project (MTSP), of which this project forms a conceptual part. Moreover, the Bank has supported the Laguna de Bay Institutional Strengthening and Community Participation Project (LISCOP), which is intended to improve the environmental quality of the lake and its watershed.

7. Other recent investments by MWSS and the concessionaires in the sector have been supported by the Asian Development Bank (ADB) through the Water Sanitation Project under the Urban renewal Area component of the ADB assisted Pasig River Environmental Management & Rehabilitation Sector Development Program (PAREMAR STP). In addition to investments made by MWSS and the concessionaires, some sewerage and sanitation services are provided in Metro Manila by other private investors.

Providing incentives to scale up priority investment in sewerage and sanitation

8. The Government has recognized that the most effective way to ensure that water pollution in the watershed is controlled and water quality in the seas of East Asia improves is through a strategy of scaled up sewerage and sanitation investments that are directed in an economically efficient manner based on environmental criteria.

9. The experience gained in Metro Manila has shown that there are five key sets of barriers limiting the efficient implementation of environmentally optimum sewerage and sanitation projects in Metro Manila by the concessionaires, as follows.

Barriers created by lack of regulatory leadership

10. With a very broad mandate and limited resources dedicated to EMB (its leading department in the brown agenda), DENR has previously provided insufficient leadership or regulatory force to the sewerage and sanitation sectors in the watershed. To a great extent, MWSS, PRRC and LLDA have been left to develop their own priorities, strategies and investment programs in the sector. The Government has recognized that this has led to inefficient investment in the sector, and, through the enactment of the CWA in 2004, has charged DENR with greater responsibilities and authority than ever before to enforce the nation's water quality regulations.

11. The CWA created a regulatory mechanism called "Non-Attainment Areas" which will strengthen DENR's enforcement of water pollution control in priority areas through a combination of "command and control" and "incentive-based" regulation.

Barriers created by the current concession targets

12. In general, concessions bring opportunities and challenges. While creating strong incentives for the concessionaire to efficiently meet its contractual obligations, a concession arrangement also constrains the responsiveness of a sector to changing conditions and regulations. Unlike in a publicly managed sector which can usually amend investment priorities simply through planning updates, the investment priorities under a concession system can only be amended through formal, legal renegotiation of the concession agreements normally done through the rate rebasing mechanism.

13. Fortunately, the concession agreements in Metro Manila, originally signed in 1997, include provision for renegotiation of both rates and service targets during rate rebasing which is carried out once every five years. Rate rebasing provides the Government an opportunity to re-evaluate its objectives for the sector and negotiate modifications to the concession agreements if necessary in order to meet those new objectives. The first rate rebasing occurred in 2003, with the second due to be negotiated in 2007, for implementation in 2008. The third rate rebasing will be negotiated in 2012, for implementation in 2013.

14. Because of a lack of environmental information available to the Government, the concessionaires, not the Government, drove the 2003 rate rebasing exercise. Therefore, the targets agreed on at that time focused on increasing service levels evenly around the consumer base to minimize the tariff impact in any particular municipality. However, these same targets did not consider where the maximum environmental benefit would be achieved from the limited available investment.

15. A strong focus of this project is therefore to equip the Government with the information and expertise necessary to set priorities during the 2008 and 2013 rate rebasing negotiations. The project would allow DENR, through the Partnership, to coordinate with other relevant agencies in the definition of "non-attainment areas" in Metro Manila, which, under the rules of CWA, would require priority to be placed on investments in these areas by the concessionaires, and would therefore promote prioritization of these investments during the rate rebasing negotiation process.

Barriers created by low public awareness

16. Experience has shown that low public awareness of the health and environmental benefits of sewerage and sanitation, weak political support for sewerage services, and the limited experience of the concessionaires in this sector, constrain implementation of sewerage and sanitation projects in MM.

17. A series of technical assistance activities under both MTSP and this project support increasing public and local government awareness of the importance of sewerage and sanitation. These include, first and foremost, the inclusion of LGUs in the Partnership that is to be created under the project. This will provide a vital forum for discussion between national government agencies and the LGUs. This will be further supported by a public awareness campaign using the mass media financed under MTSP, implementation of the project's Stakeholder Consultation Plan, and the expansion of the MWSS-RO's Public Assessment in Water Services (PAWS) program to include sewerage and sanitation.

Barrier created by limited willingness to pay

18. Another barrier to effective implementation of sewerage and sanitation projects has been the public's limited willingness to pay for service, exacerbated through the design of the tariff within the concession agreements renegotiated during the 2003 rate rebasing. A sewerage charge of 50% is levied when a household connects to a separate sewerage system. However, unwillingness to pay for this additional 50% charge has caused the concessionaires to fail to meet their connection targets.

19. The 2003 rate rebasing took the first step towards addressing this problem by acknowledging that combined sewerage systems could be piloted in Metro Manila, and that the 50% sewerage charge could be levied by the concessionaires on the beneficiaries of these projects, even when a dedicated sewerage connection was not made. MTSP is testing this approach with the provision of several combined sewerage systems.

20. However, even with positive demonstration effects from MTSP, the barriers created by the current tariff structure are not expected to be fully overcome unless a significant adjustment to the tariff structure is made during the 2008 rate rebasing. Therefore, the MWSS RO plans to consider an amendment to the tariff structure in 2008 and has expressed support for the abolition of the 50% sewerage charge, with a concomitant increase in the mandatory environmental charge levied on all customers. The project will support the MWSS-RO's intended restructuring of the tariff system during the 2008 rate rebasing.

Barriers to scaling up investment

21. Significant barriers limit private sector financing available for the sewerage and sanitation sectors in Metro Manila and in other areas of the Pasig River – Laguna de Bay – Manila Bay watershed. In Metro Manila, the problem is caused by the short remaining lifespan of the concession agreements (due to expire in 2022) which limits investment in the sector because of cost recovery restrictions. Already, the concessionaires are being forced to borrow

money at sub-optimal conditions. Two alternatives exist to solve this problem – either extending the concession agreements (a proposal currently under consideration by the MWSS-RO), and/or finding suitable sources of guarantees that could extend the concessionaires' borrowing past the end date of their concession. The financial mechanism component of this project is designed to pilot such a scheme within one of the concession areas as a demonstration of how the concessionaires could scale up investment outside of their concession agreement requirements.

22. In addition to testing financial mechanisms that promote additional investments by the concessionaires, the project will also test similar guarantee mechanisms that would attract other private investment in the sector in areas outside the MWSS area of responsibility. One such mechanism will be tested in an LGU within the LLDA area, and the Replication Strategy for the project will show how promotion of this model will be conducted throughout the rest of the Pasig River – Laguna de Bay – Manila Bay watershed.

Annex 2: Major Related Projects Financed by the Bank and/or other Agencies

GEF-MANILA THIRD SEWERAGE PROJECT

Project	Targeted Sector Issues	Performance Rating
Bank Financed Projects		
Manila Sanitation and Sewerage Project (Ln. 18140-PH - 1980).	Urban environment, sanitation and sewerage; access to urban services for the poor, environmental health	Implementation Progress: S Development Objective: S
Manila Second Sewerage Project (Ln. 40190 – 1996)	Urban environment, sanitation and sewerage; access to urban services for the poor, environmental health	Implementation Progress: S Development Objective: S
Water District Development Project (Ln. 42270 – 1997)	Urban environment, sanitation and sewerage in LGU and water districts	Implementation Progress: S Development Objective: S
LGU Urban Water and Sanitation Project (Ln. 44220 – 1998)	Water supply, sanitation and sewerage in small towns	Implementation Progress: U Development Objective: U
LGU Urban Water and Sanitation Project, Phase 2 (Ln. 70800–2001)	Water supply, sanitation and sewerage in small towns	Implementation Progress: U Development Objective: S
Other Development Agencies		
ADB: Pasig River Environmental Management and Rehabilitation Sector Development Program	Urban upgrading including sanitation	Implementation reported to be slower than expected.
Japanese Bank for International Cooperation: MWSS Masterplan	Urban sewerage and sanitation services master plans	Performance satisfactory.
GEF- Manila Bay Environmental Management Project	1) Environmental Risk Assessment; 2) Environmental Investments ; 3) Integrated Environmental Monitoring Program; 4) Manila Bay Coastal Strategy; 5) Civil Society Participation; 6) Operational Plan for Manila Bay Coastal Strategy; 7) Integrated Information Management System; 8) Manila Bay Information Network 9) Coastal Land and Sea Use Zone Plan; 10) Manila Bay Oil Spill Contingency Planning; 11) Environmental and Resource Valuation for Manila Bay Area; and 12) Institutional Studies.	Implementation reported to be slower than expected.

Annex 3: Results Framework and Monitoring

GEF-MANILA THIRD SEWERAGE PROJECT

Results Framework

PDO / Global Environmental Objective	Outcome Indicator	Use of Results Information
Identification of essential adjustments to administrative, institutional, and regulatory practices and existing legislations in order to attract private investments in the GOP's wastewater sector; Promotion of innovative, simple and effective wastewater treatment techniques; and Increased effectiveness of the agencies responsible for water pollution control through improved coordination.	-Increase in sewerage-sanitation service coverage resulting from expanded investments; - Reduction of pollution reaching Manila Bay; -Improved effectiveness of sector agencies resulting from functioning coordination; -Replication of the project successes in the Philippines	To monitor progress on sewerage and sanitation improvement in hotspots
Intermediate Results	**Results Indicators for Each Component**	**Use of Outcome Monitoring**
Component 1: Partnership strengthening	**Partnership strengthening**	**Partnership strengthening**
1-A: *Partnership development* Establishment of comprehensive partnership that meets on regular basis and completes joint activities that result in policy outcomes	- Stakeholders signing MOU - Partnership meetings annually - Numbers of policy advice on sewerage and sanitation related matters issued by national authorities	To build cooperation among agencies in sewerage and sanitation management.
1-B: *Information center* Setting up information sharing system and information center, which regularly publishes water quality data	Publication of annual NCR Water Quality Monitor	Mutual sharing and availability of complete information on water quality
1-C: *Public assessment on water services* (PAWS) Expansion of existing PAWS to include sewerage and sanitation services	Test PAWS with sewerage and sanitation parameters	MWSS regulatory office will have feedback on quality of sewerage and sanitation services provided by concessionaires

Results Framework (Page 2)

Intermediate Results	Results Indicators for Each Component	Use of Outcome Monitoring
Component 2: Master planning and policy development *Master planning* Updating sewerage and sanitation master plans	**Master planning and policy development** - Sewerage and sanitation master plans with new criteria updated	**Master planning and policy development** Better data for expanded investment and decisions during rate rebasing in 2012
Component 3: Innovative financial mechanisms Identification of measures that encourage private investment in sewerage and sanitation	**Innovative financial mechanisms** - Signing of a contract using innovative financing mechanism for sewerage/sanitation in MM	**Innovative financial mechanisms** To broaden the spectrum of available finance for pollution reduction
Component 4: Use of market-based incentives Study of upgrading LLDA's environment user fees and implementation of approved modified fees	**Use of market-based incentives** - Increased LLDA revenues from implemented environment user fee	**Use of market-based incentives** Dissemination of successful environment user fee in the Philippines
Component 5: Technical Assistance for Rate Rebasing Successful completion of 2008 Rate Rebasing negotiation	**Technical Assistance for Rate Rebasing** - Rate of sewerage and sanitation service increased in negotiated contract	**Technical Assistance for Rate Rebasing** To align concession targets to MM residents/Government environmental goals
Component 6: Joint treatment plant Rehabilitation/upgrading and one year of test operation of combined sewage/septage treatment plant	**Joint treatment plant** - Reduction of costs per m3 of septage using joint treatment as compared to separate septage treatment[6]	**Joint treatment plant** To demonstrate economy and viability of this technology in Metro Manila

[6] Including septage collection and final disposal of sludge

Arrangements for results monitoring

Project Outcome Indicators	Baseline	Target Values: Mid-Term Review 2009	Target Values: Implem. Complet. 2013	Data Collection and Reporting: Frequency and Reports	Data Collection and Reporting: Data Collection Instruments	Data Collection and Reporting: Responsibility for Data Collection
-Coverage of sewerage service in MWSS jurisdiction (% of population);	12	17	20	Consolidated semiannual progress reports	Participating agencies monitoring reports, supervision reports	DENR, EMB FASPO, MWSS
-Coverage of sanitation service in MWSS jurisdiction (% of population);	24	45	57			
-Reduction of pollution (1,000 metric tonnes of BOD_5/year);	0	2.0	9.0			
Project Results Indicators for Each Component						
Component 1: Partnership strengthening				Consolidated semiannual progress reports	Participating agencies monitoring reports, supervision reports	DENR, FASPO
1-A: *Partnership Strengthening*						
- Agencies responsible for water pollution control signing a Memorandum of Understanding (MOU) (cumulative #)	0	7	7			
- Other stakeholders signing on to this MOU (cumulative #)	0	7	17			
- Bi-annual Partnership meetings (cumulative #)	0	6	10			
- Numbers of policy issuance (administrative orders) on sewerage and sanitation related matters issued by national authorities	0	3	8			
1-B: *Information center*						
- Publication of annual Metropolitan Manila (MM) Water Quality Monitor (cumulative #)	0	1	3			
1-D: *Public assessment on water services*	0	500	1000			
- Testing of Public Assessment of Water Services with sewerage and sanitation parameters (cumulative # of barangays – 20 hh/barangay)						

Arrangements for results monitoring – Page 2

Project Results Indicators for Each Component	Baseline	Target Values: Mid-Term Review 2009	Target Values: Implem. Completion 2013	Data Collection and Reporting: Frequency and Reports	Data Collection and Reporting: Data Collection Instruments	Data Collection and Reporting: Responsibility for Data Collection
Component 2: Master planning and policy development **2-A**: *Master planning* -Sewerage and sanitation master plan with new criteria updated	0	0	1	Consolidated semiannual progress reports	Participating agencies monitoring reports, supervision reports	DENR, FASPO, MWSS
Component 3: Innovative financing mechanisms -Contract using innovative financing mechanism for sewerage and sanitation in Metropolitan Manila (# of contracts)	0	0	2	Consolidated semiannual progress reports	Participating agencies monitoring reports, supervision reports	DENR, FASPO, EMB
Component 4: Use of market-based incentives - Number of establishments covered by the environment user fee (cumulative #) - Parameters covered by the environment user fee (cumulative #) - Biochemical Oxygen Demand (BOD) discharged from all regulated sources (metric tonnes per year)	1000 1 1500	1400 2 1350	1800 3 1215	Consolidated semiannual progress reports	LLDA monitoring reports, supervision reports	LLDA, DENR, FASPO
Component 5: Technical Assistance for Rate Rebasing - Coverage of sewerage service in Manila Water Company, Incorporated (MWCI) concession area as result of 2008 rate rebasing adjustment (as % of water connections) - Coverage of sanitation service in MWCI concession area as result of 2008 rate rebasing adjustment (as % of water connections)	10 5	25 75	30 70	Consolidated semiannual progress reports	MWSS-RO monitoring reports, supervision reports	MWSS-RO, DENR, FASPO
Component 6: Joint treatment plant - Reduction of costs per m^3 of septage collection, treatment and disposal using joint treatment as compared to separate septage treatment[7] (%)	0	0	20	Consolidated semiannual progress reports	Participating agencies monitoring reports, supervision reports	MWSS-CO, MWSI, DENR, FASPO

[7] Including septage collection and final disposal of sludge

Annex 4: Detailed Project Description

GEF-MANILA THIRD SEWERAGE PROJECT

Project Development Objective

The development objective of the GEF MTSP are to assist the GOP in the Project Areas in: (a) identifying essential adjustments to administrative, institutional, and regulatory practices and existing legislations in order to attract private investments in the Recipient's wastewater sector; (b) increasing the effectiveness of the agencies responsible for water pollution control through improved coordination; and (c) promoting innovative, simple and effective wastewater treatment techniques.

GEF MTSP Components

Component 1. Partnership Strengthening.

Component 1.A. Partnership Development - Strengthening partnerships among the GOP's agencies responsible for water pollution control to improve coordination and effectiveness, through carrying out studies of successful pollution control and wastewater management partnership models worldwide, and identifying and carrying out measures for improving existing administrative, institutional, and regulatory practices.

As input to preparation and negotiation, the MOU will define precisely which party within the government would receive advisory support. The MOU would be a sub-component of the existing Manila Bay Environment Management Project (MBEMP), of Jan 08 2001, signed by DENR, PEMSEA, and MBEMP.

Component 1.B. Partnership Information Center - Establishing an integrated partnership information center in DENR to consolidate existing data concerning the wastewater sector and disseminating such information to stakeholders in said sector.

The project will inventory existing data, and strengthen and consolidate specific data in an integrated information center; prepare publications (NCR Water Quality Monitor), and make available relevant information of all major stakeholders (DENR, DOH, MWSS, LLDA, MMDA, LGUs, PRRC). The information center will serve as a premier aid to disseminating information to stakeholders, particularly citizens, in the status and progress of water quality, and progress achieved by the partnership through publications e.g. NCR Water Quality Monitor website. The Partnership will look for financing to integrate the water quality modeling in NCR, estimated at US$ 2 - 3 m. Feasibility study and ToRs will be prepared for additional funding sought.

Component 1.C. Monitoring - Integrating water quality monitoring systems of the GOP's agencies responsible for water pollution control. The project will facilitate the collection and standardization of data from all information sources, including water

quality monitoring data from LLDA, DENR, PRRC, MWSS and the two concessionaires, and create a comprehensive and integrated data management system, with the aim of disseminating, and making available to the public, key information. The component will ensure public access to information, including raw data.

Component 1.D. Public Assessment on Water Services (PAWS) - expansion of existing PAWS to include sewerage and sanitation services.

Component 2. Planning and Policy Development

Component 2.A. Updating the sewerage and sanitation master plans and applicable standards for the MWSS's jurisdiction areas based on environmental and economic criteria, and incorporating lessons learned from this project in anticipation of the rate rebasing in 2013 and the provisions of the CWA.

Component 2.B. Refining policies, procedures and guidelines for regulating the providers of septic tank desludging services.

Component 2.C. Developing procedures and standards for implementing the Recipient's Clean Water Act and the Sanitation Code

Component 3. Innovative Financing - The project would provide technical assistance and facilitation to government in developing and testing innovative financing arrangements for the sewerage and sanitation sector to attract private sector investment in the sewerage and sanitation sector.

Component 4. Use of market-based incentives - This component would assist LLDA in improving its environmental user fees systems and implementing market-based incentives in such systems through provision of technical assistance.

Component 5. Technical Assistance for Rate Rebasing – Providing technical assistance and training to MWSS and the Recipient's relevant government agencies for the preparation and negotiations of 2007/2008 rate rebasing in the water and wastewater sector, including the review of: (a) the water and sewerage tariff structure which supports scaling up investment in sewerage and sanitation and (b) requirements for investment in government's defined hotspots. The consultant will help define the term "hotspot", in consultation with DENR, LLDA, EMB and others, in relation to the Clean Water Act's Non-Attainment Areas.

Component 6. Joint Sewage and Septage Treatment Plant - Upgrading a selected sewage treatment plant in Quezon City (named Project Seven STP / SpTP) to a combined septage and sewage treatment plant, including the first year trial operation of the combined septage and sewage treatment plant to demonstrate technical, financial, social and economic viability of this approach in Metro Manila..

Component 7. Project Management and Monitoring - Providing technical assistance and operating support to assist DENR in implementing, coordinating, monitoring, evaluating, and supervising the Project and disseminating the Project's results and outcomes.

Annex 5: Project Costs

GEF-MANILA THIRD SEWERAGE PROJECT

Project Cost By Component and/or Activity	US $ Million
1. Partnership strengthening	1.00
2. Master planning and policy development	0.50
3. Innovative financial mechanism	0.50
4. Use of market-based incentives	0.10
5. Technical assistance for rate rebasing	0.60
6. Joint sewage-septage treatment plant	4.65
7. Project management and monitoring	1.00
Total Project Costs	8.35

Project Financing Plan	US $ Million
Global Environmental Facility	5.00
Maynilad Water Services Inc. (MWSI)	3.35
Total	8.35

Project Financing by Expenditures Category	US $ Million
Works	3.35
Goods	1.50
Consulting Services, Training and Dissemination	3.20
Incremental Operating Costs	0.30
Total	8.35

Allocation of GEF Financing by Expenditures Category	US $ Million
Works	0.00
Goods	1.50
Consulting Services, Training and Dissemination	3.20
Incremental Operating Costs	0.30
Total	5.00

Annex 6: Implementation Arrangements

GEF-MANILA THIRD SEWERAGE PROJECT

General: The GEF project would be implemented by the participating agencies under DENR leadership. It would use the existing administrative structures in each agency, and for coordination among the participants it would utilize the existing inter-agency mechanisms. The units within the existing administrative structures with allocated new responsibilities for the GEF project, would be clearly identified, appropriately strengthened, and their staff would receive respective training. The project would not create new structures or organizations for its implementation.

The participating agencies are DENR's Environmental Management Bureau (EMB), the Corporate Office (CO) and the Regulatory Office (RO) of the Metropolitan Waterworks and Sewerage System (MWSS), the Pasig River Rehabilitation Commission (PRRC), and the Laguna Lake Development Authority LLDA). The associate partners are National Economic Development Authority (NEDA), Department of Health (DOH), Local Governments (LGUs), Department of Finance (DOF), and Metro Manila Development Agency (MMDA).

The lead agency, DENR, would manage the technical aspects of the project through the Project Management Office (PMO), which exists in its EMB, and the financial aspects through its Foreign Assisted and Special Projects Office (FASPO). Each participating agency would carry on the implementation through in-house organizations and would appoint a GEF project coordinator responsible for day-to-day administrative and supervision implementing duties and cooperation with PMO and FASPO. The main participating agencies and project components are shown in following table.

Participating Implem [illegible]

Component	Component Number	Participating/ Implementing Agency
Partnership Strengthening -Partnership development -Information center -Integration data system -Public assessment	1 1-A 1-B 1-C 1-D	Environmental Management Bureau's key responsibility with cooperating: CO of MWSS, RO of MWSS, LLDA, and PRRC
Master planning and policy development -Master planning -Policy development -Procedures and standards for CWA	2 2-A 2-B 2-C	Environmental Management Bureau's key responsibility with cooperating: CO of MWSS, LLDA, and PRRC
Innovative financing	3	Environmental Management Bureau
Use of market-based incentives	4	Laguna Lake Development Authority
Rate rebasing	5	Regulatory Office of MWSS
Joint sewage and septage treatment	6	Corporate Office of MWSS/ MWSI
Project management	7	PMO/ FASPO

Department of Environment and Natural Resources: Implementation of the GEF project would be guided by the existing Manila Bay Coordinating Committee composed of senior representatives of participating agencies, concerned government agencies, local community groups, and non-government organizations, chaired by DENR. Within DENR, the Manila Bay Project Management Office (PMO) of the EMB would be allocated the key responsibility for overall coordination and monitoring of the GEF project. It would serve as a secretariat to the Coordinating Committee and would report through the Project Management Office (PMO) to the Foreign Assisted and Special Projects Office (FASPO), which would be responsible for financial and procurement aspects of the GEF project and for general supervision on project implementation.

GEF project management: Because of the similarity in objectives of both projects located in the same area, the EMB's Manila Bay PMO currently implementing the Manila Bay Environmental Management Project would also manage the GEF project. These additional duties would be supported by a technical assistance team (TAT). The team would be composed of professionals such as environmental engineers, institutional specialists, environmental economists and environmental scientists. General administration, supervision, financial management, and procurement activities will be carried out by FASPO (the DENR specialized unit for foreign assisted projects). In respect of the GEF project, FASPO would upgrade its Procurement Manuals acceptable to the Bank and its procurement staff would receive respective training. In its responsibility for overall management including evaluation and dissemination of the GEF project findings, FASPO would be supported by consultants. Cooperation of project management with PEMSEA would be ensured through the FASPO chief who is the PEMSEA focal point in the Philippines.

The Environmental Management Bureau: EMB provides technical advice, policy and program support to the Office of the Secretary (OSEC) of DENR with respect to the implementation of environmental laws, formulates, coordinates and implements policies and plans to prevent and control pollution of land, air and water. Assisted by MWSS, LLDA and PRRC the EMB would implement Components 1 (Partnership Strengthening), 2 (Planning and Policy Development), and 3 (Innovative Financing).

Laguna Lake Development Authority: LLDA has broad policy, planning, regulatory and development functions for the Laguna de Bay Region. It would implement Component 4 (Use of Market-based Incentives) and test the findings within the area of its responsibility.

Regulatory Office - Metropolitan Waterworks and Sewerage System: MWSS RO was established during MWSS privatization to monitor and enforce compliance with the concession agreements, review water supply and sewerage rates and respond to service complaints against the concessionaires. It would implement Component 5 (Rate rebasing) and 1.D (Public Assessment on Water Services -PAWS).

Metropolitan Waterworks and Sewerage System: MWSS provides water supply, sewerage and sanitation services in MM through two concessionaires, Manila Water Company Inc. (MWCI) and Maynilad Water Services Inc. (MWSI). MWSS would implement, through MWSI, Component 6 (Joint Sewage and Septage Treatment Plant). The GEF project would support

procurement of goods while the designs, civil works, collection of septage and one-year operations of joint treatment would be financed by MWSI.

The Pasig River Rehabilitation Commission (PRRC) was established to oversee the rehabilitation of the Pasig River. Its programs include sanitation improvement especially within the easement areas along the river. It would cooperate with the GEF project in Components 1, 2, and 5. To facilitate implementation, it delegated responsibility for actions planned in component 1 (Partnership strengthening – Integration of water quality data systems) to EMB.

An overview of functions and responsibilities of the participating and implementing agencies is shown in following table.

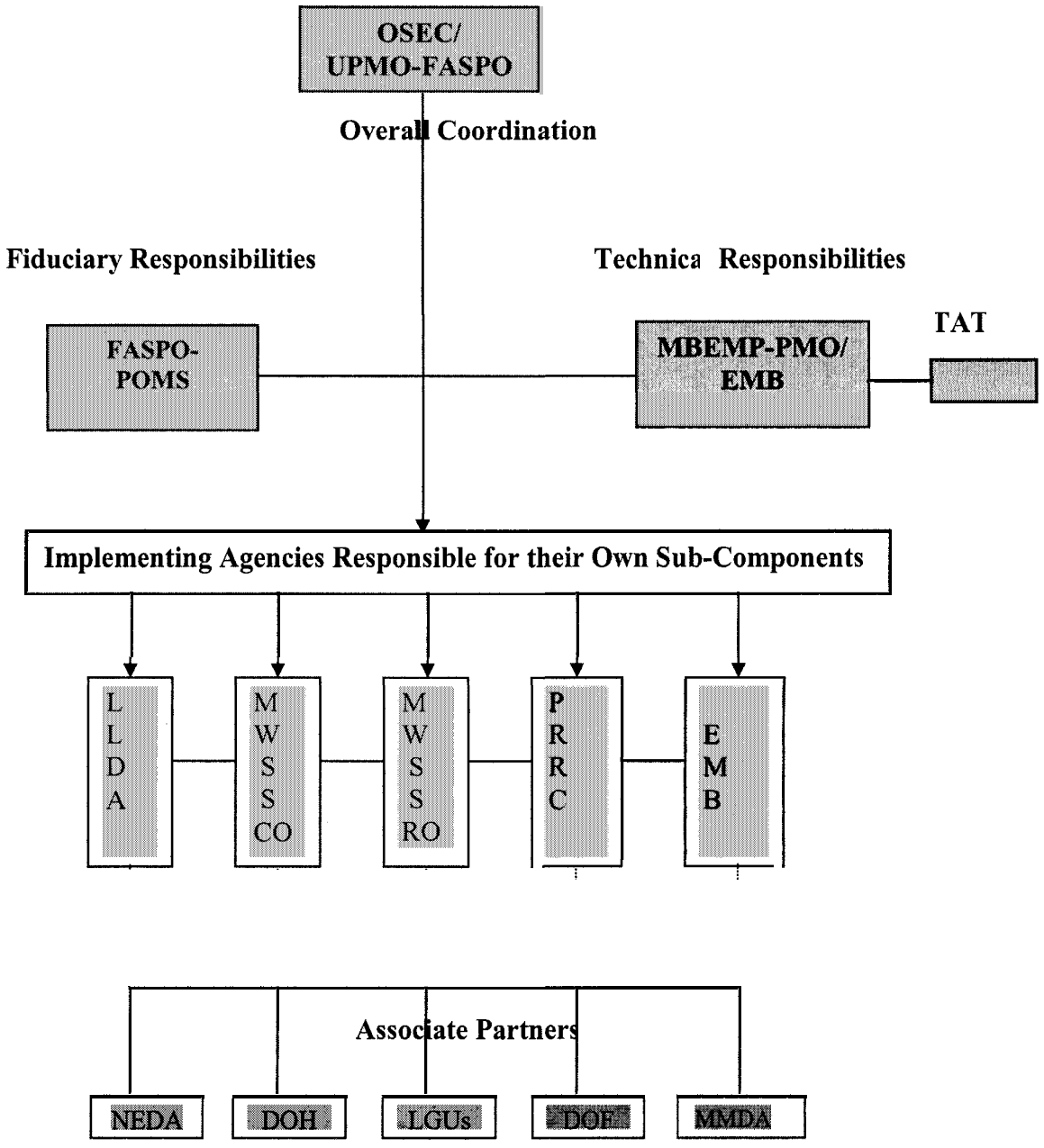
Table 2: Implementing agencies, functions, and responsibilities

Component	DENR FASPO	DENR EMB	MWSS RO	MWSS CO	LLDA	PRRC
Component 1: Partnership strengthening						
a) Partnership development	B/C	A	A	A	A	A
b) Partnership information center	B/C	A	A	A	A	A
c) Water quality data systems						
- Water quality monitoring	B/C	A/E/F	---	---	A/E/F	A1/
- Data standardization	A/B/C	A	---	A	A	A1/
d) PAWS to cover sewerage/sanitation	B/C	A	A/E/F	---	A	A
Component 2: Planning and policy development						
a) Master planning	B/C	A/E/F	---	A/D	A	A
b) Policy development	B/C	A/E/F	---	---	A	A
Component 3: Innovative financing						
a) World Bank/ADB guarantee programs	B/C	A/E/F	---	---	---	---
b) LGU-GC	B/C	A/E/F	---	---	---	---
c) LGU financing mechanism	B/C	A/E/F	---	---	---	---
Component 4: Use of market-based incentives						
a) LLDA EUF system	B/C	A	---	---	A/E/F	---
b) Testing effluent trading	B/C	A	---	---	A/E/F	---
Component 5: Rate rebasing						
a) Tariff structure	B/C	A	A/E/F	---	---	---
b) NRW incentive program	B/C	A	A/E/F	---	---	---
c) Tacking hotspots	B/C	A/E/F	---	D	A	A
Component 6: Joint STP and SpTP plant	---	A		A/B/C/D/E	---	---
Component 7: Project management	A/B/C/E/G	A	A	A	A	A

1/ PRRC has delegated responsibility to EMB-NCR

KEYS: A: Coordination; B: Disbursement & Auditing; C: Procurement & Reporting; D: Preparation and Implementation of investments; E: Preparation of TORs, selection and recruitment of consultants and short-term experts; F: Selection and monitoring of trainees; G. Dissemination and Replication.

Figure 1: Implementation Arrangements



Implementation Process: Each component or sub-component has specific arrangements for implementation. The units responsible for each component or sub-component would submit, through the agency coordinator, the project progress and achievements to PMO-TAT for project performance analysis, identification of implementation and coordination problems, and the production of semi-annual project progress reports.

The DENR will enter into a Memorandum of agreement (MOA) with MWSS to formalize the implementation of the two components of the project, Component 5 and 6, under its jurisdiction.

Management Information System - MIS
The PMO, assisted by TAT would design an MIS, which would help in implementation and supervision of the project. Its main objective would be to provide accurate and timely information, both technical and financial, on project progress as well as on its results and effects to all GEF project participants. It would be designed to be consistent with existing MIS systems and to present the information gathered in a form suitable for analysis of project impact and the production of semi-annual progress reports.

Project Supervision: Supervision requirements would be intensive, particularly in the first two years and World Bank missions from headquarters would visit the project at least twice a year. Including involvement from the Manila resident mission staff and consultants, supervision requirements are estimated at seven person-weeks a year.

Annex 7: Financial Management and Disbursement Arrangements

GEF-MANILA THIRD SEWERAGE PROJECT

Financial management assessment: A Financial Management Assessment Review of the Department of Environment & Natural Resources (DENR) was undertaken with the objective of ensuring that there is in place an adequate financial management system that satisfies the Bank's OP/BP10.02. The review was carried out in accordance with the Bank's guidelines under Financial Management Practices in World Bank-Financed Investment Operations dated November 3, 2005. It focused on the assessment of the Agency's FM system including those for Foreign Assisted Projects and considered the country and the sector's FM situation.

Overall, the Financial Management (FM) system of DENR satisfies the minimum requirements of the Bank. The risk that the grant funds will not be efficiently and effectively used for attaining the development objectives of the Project is **Minimal.**

The financial management function of DENR is lodged under the Financial Management Service (FMS) and the Foreign Assisted & Special Projects Office (FASPO) which are both under the Office of the Undersecretary for Management & Technical Services. It has adequate FM Staffing. The Agency's Internal Control system is acceptable overall , though there are areas for improvement, but these do not impact the Grant. There is an adequate accounting and reporting system in place for the Grant and good external audit arrangements.

The country and sector issues pertain to the substantial political risk and the tight budget situation. The political risk is beyond the FM system. On the tight budget aspect, the Project Grant funds are exempted from cash programming and the Direct Payment mode of disbursement is available to the project.

The Project will be mainstreamed into the FM system of DENR primarily in the FMS for its main database and books of accounts including preparation of the Financial Monitoring Reports (FMRs) and regulatory accounts. On the other hand, the FASPO shall handle the preparation of Withdrawal Applications, Statement of Expenditures (SOE) and Management of the Special Account, the consolidation and submission of the FMR financial, physical & procurement reports. The project would use SOE based disbursement. A Special Account shall be maintained only at the Central Office. The Project would be required to submit quarterly FMRs and annual audited financial report including the Management Letter of the Auditor.

Risk Assessment and Mitigation measures: The FM risk is considered on the overall to be Minimal. Following is the Risk assessment table.

Risk Category / Main FM Risk	Risk Rating	Risk mitigating Measures	Condition of Negotiations, Board of Effectiveness (Y/N?)
Inherent Risk	N		
There are no Country and Sector issues that apply to the Grant.	N	.	N
Implementing Entity			
Project Level	N	The entities performance in implementing Grants at the Central office is satisfactory.	N
		Project FM arrangements acceptable.	N
	N		
Control Risk	**N**		
. Funds Flow	N	Adopt Project funds flow	N
2. Staffing	N	Use current FM staff of the Agency for Grants	N
3. Accounting Policies and Procedures	N	Use NGAS	N
4. Internal Control	N		N
5. Internal Audit	S	Internal control on Grants are functioning well.	N
6. External Audit	M	Not needed for the Grant.	
7. Reporting and Monitoring	N	Continue use of COA as auditors.	N
8. Information Systems	M		N
		Require submission of Financial Monitoring Reports	N
		Will use eNGAS when installed.	

S- Substantial H – High M – Moderate N – Negligible or Low

Strengths: The strengths of the Financial Management system for the project are:

1. The documented Financial Management procedures and organization set up of the Agency provide completeness of instructions & clarity in processes and functions. It also ensures that the processes are not discretionary and that these are not under any person or Division's sole knowledge. It also facilitates turnover of functions or learning for a new staff on the FM job.

2. The use of the NGAS has upgraded the accounting system of the Agency to internationally accepted accounting standards. The Agency personnel have been trained in NGAS and they have now adopted said system. This provides a foundation for good accounting of Agency and project transactions. The Agency is now in the process of installing the electronic version of the NGAS, the eNGAS at the Central office and later at its Field Operating Units.

Weakness : The areas of improvement of the financial management system of DENR pertain to its weak Internal Audit function and deficiencies in Internal Control in areas on cash

advances/fund transfers, physical inventory of Inventory and Fixed Assets and lack of supervision over field operations of foreign assisted projects in the Finance area, and delayed Financial Reporting specifically in the Consolidation of the Accounts. These areas of improvements do not apply to the components of the Grant.

Financial Management Arrangements: The Project shall be mainstreamed into the FM system of DENR through its FMS and FASPO organization set up and FM system for foreign assisted projects. Following are the specifics of the arrangements:

Financing and funds flow: The flow of funds would be from the Bank, to the Government's Central Bank then to DENR Central Office. The Funds flow from the Bank will go through the general bank account of the Bureau of Treasury with the Central Bank and flows to the Agency based on the NCA issued by DBM. This goes into the Special Account (SA) established by the Central Office (CO). Eligible expenditures will then be paid out of the SA.

Special Accounts (SA) shall be maintained by DENR and managed by FASPO with the Land Bank of the Philippines (LBP). The SA maximum allocation shall be in the amount that would cover an average of 4 months planned monthly disbursement of the Project with about 1/3 of this amount as its initial allocation until disbursements come up to about 20% of the loan. In any case, should the SA become insufficient for the operation of the Project, a request for an increase, duly supported, may be done.

Disbursements for the Project shall be under the traditional SOE based method with option to convert to a periodic disbursements method using Financial Management Reports (FMRs) as acceptable to the Bank.

FM Organization & Staffing: The FM organization and staff that will handle the Project will be the same organization and staffing pattern of DENR. The main FM function for the Project, including preparation of Financial Monitoring Reports (FMRs), shall be handled by the FMS. The other FM activities such as management of the Special Accounts, preparation of Withdrawal Applications and Statement of Expenditures for submission to the Bank, consolidation of FMRs (Financial, Physical & Procurement reports) and liaison with the Bank shall be handled by FASPO.

Planning & Budget: The Project will use the Planning & Budget process of the Agency.

Internal Control: The Internal Control system especially on cash and accounts payable will apply especially the Manual of Approval which specifies the threshold of payments and its approval.

Accounting & Reporting: The NGAS shall be used as the accounting system for the Project. FMS shall produce the FMRs and regulatory accounts of the Project. The Project will need to move to a computerized accounting system in the second year of operation to improve efficiency.

The Project shall be required to submit a quarterly Financial Monitoring Report (FMR) as follows:

1. Financial Reports:
    a. Balance Sheet
    b. Statement of Sources and Uses of Funds
2. Physical Progress Report
    a. Output Monitoring Report
3. Procurement Management Reports:
    a. Procurement Process Monitoring Reports
    b. Procurement Contract Expenditures Report (Goods & Works, & Consultant's Services).

Disbursements (to be confirmed by appraisal): Following are the eligible expenditures under each component and categories:

Expenditure Category	GEF grant US$ '000	Financing percentage
Goods		
C.6. Joint Septage and Sewage Treatment Plant	1,300,000	100.0 %
C.7. Project management and monitoring	200,000	100.0 %
Services		
C.1. Partnership Strengthening	1,000,000	100.0 %
C.2. Planning and policy development	500,000	100.0 %
C.3. Innovative Financing	500,000	100.0 %
C.4. Use of market-based incentives	100,000	100.0 %
C.5 Rate rebasing	600,000	100.0 %
C.7. Project management and monitoring	800,000	100.0 %
Total Amount of the Grant	5,000,000	

Action Plan: There are no action plans for the Grant as the risk is minimal.

Audit Arrangements: The external Auditor for the Bank's Projects would be the COA. Audited Financial Statements shall be required to be submitted no later than 6 months after the Fiscal Year including a Management Letter which would contain the auditors' comments on the Project's Financial Management including its Internal Control. The audited Financial Statements shall consist of the: Balance Sheet; and Sources and Uses of Funds

Annex 8: Procurement Arrangements
GEF-MANILA THIRD SEWERAGE PROJECT

A. General

Procurement for the proposed project would be carried out in accordance with the World Bank's "Guidelines: Procurement Under IBRD Loans and IDA Credits" dated May 2004; and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, and the provisions stipulated in the Legal Agreement. The various items under different expenditure categories are described in general below. For each contract to be financed by the Grant, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements and time frame are agreed between the Borrower and the Bank in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation.

Procurement of works. Works procured under this project would include upgrading of combined septage and sewage treatment plant. The procurement will be done using the Bank's Standard Bidding Documents (SBD) for all ICB, and using the Government's Philippine Bidding Documents as harmonized with development partners, for National Competitive Bidding (NCB) and the prescribed documents for all shopping for works (SW) by the Government's Procurement Policy Board, following Sections 3.3, 3.4 and 3.5 of the Procurement Guidelines. The NCB Procurement Annex will provide the rules that are not acceptable to the Bank.

Procurement of goods. Goods procured under this project would include: (a) equipment for combined septage and sewage treatment plant; (b) office equipment such as computers and accessories, telecommunications, etc; and (c) software for a management information system. The procurement will be done using the Bank's Standard Bidding Documents (SBD) for ICB, and using the Government's Philippine Documents as harmonized with World Bank for National Competitive Bidding and the prescribed documents for all shopping for goods (SG), following Sections 3.3, 3.4 and 3.5 of the Procurement Guidelines. The NCB Procurement Annex will provide the rules that are not acceptable to the Bank.

Selection of consultants. Consulting firms and individual consultants will be required for (a) partnership strengthening; (b) master planning and policy development; (c) innovative financial mechanisms; (d) use of market-based incentives; (e) technical assistance for rate rebasing; (f) designs of joint treatment plant; and (g) project management and monitoring. Short lists of consultants for services estimated to cost less than $200,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines. Possible engagement of non-governmental organization in some components will be considered following Section 3.16 of the Guidelines.

B. Assessment of FASPO's capacity to implement procurement

Procurement activities will be carried out by FASPO, the procurement unit for DENR foreign assisted project. It is headed by a Director with staff of fifteen, which administers various types of procurement funded by international and bilateral institutions. None is currently assigned to manage the GEF project procurement. Bidding process, including evaluation and contract award is the responsibility of the permanent Bids and Awards Committee (BAC) No. 102.

Assessment. DENR's capacity assessment to implement procurement actions for the project has been carried out by Cecilia Vales on March 27, 2006 and updated on July 14, 2008. It reviewed the organizational structure for implementing the project and the interaction between the project's staff responsible for procurement and FASPO's relevant central unit for administration and finance.

Key issues and risks

1. Inadequate capacity to handle project procurement, in terms of available manpower and competency of existing staff. There is no procurement manual that will guide the procurement staff in the process.
2. Efficiency in the procurement process could not be assured because (a) procurement plans, although being prepared, are not being used as a planning and monitoring tool, (b) the low level of delegated approving authority, which was based on 1995 price levels.
3. Lack of transparency because: (a) contract awards are not being advertised in the government procurement electronic portal, (b) absence of civil society observers, and (c) the frequent use of shopping method in goods procurement.
4. Inadequate internal control because: (a) record keeping is not systematic; (b) internal audit has not been established; and (c) absence of formal systems to hear and document administrative cases for procurement.

Agreed corrective measures

1. To increase capacity, at least two FASPO staff would be designated as procurement officers for the Project. They should be properly trained before Grant approval. The BAC 102 should be designated as the BAC for the project before grant approval.
2. The FASPO Procurement Manual should be completed and approved by GPPB before Grant effectiveness. The Manual should clearly specify that in order to: (a) attain efficiency, require the proper use of procurement plans, revise and update the contract approving authority levels; (b) achieve transparency, require posting of contract awards in the GEPS, require the presence of civil society observers in the bidding process, and mandate the bulking of items to reduce the use of shopping methods in accordance with the law.
3. The Grant should provide resources for internal auditing which should be utilized to monitor compliance with the procurement arrangement.
4. Detailed anti-corruption measures are presented in attachment to this Annex 8.

Risk: With the improvements done by DENR since the date of the assessment, the overall project risk for procurement is rated as average.

C. Procurement plan. The Borrower developed an acceptable procurement plan for project implementation that provides the basis for procurement methods. This plan has been agreed

between the Borrower and the Project Team on July 18, 2006 and is available at FASPO. It will also be available in the project's database and in the Bank's external website. The Procurement Plan will be updated in agreement with the Project Team annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

D. Frequency of procurement supervision

In addition to the prior reviews to be carried out from Bank offices, the capacity assessment of the Implementing Agency has recommended one in six months supervision missions to visit the field to carry out post review of procurement actions.

E. Advanced contracting and retroactive financing. Advance contracting would be applied for expenditures incurred after August 15, 2006 (completion of appraisal) for employment of consulting firms. Procurement of consulting services, including required invitation for proposal, will be carried out in accordance with Bank guidelines. Proposed advanced contracting and retroactive financing is summarized in the table below.

Contract		Estimated value of advanced contract	Estimated retroactive financing	Financing percentage
Ref.	Name	US Dollar		
05	Rate rebasing	600,000	400,000	100%
06	Project management	800,000	200,000	100%
	Total	1,400,000	600,000	100%

Note: Eligible expenditures, not exceeding USD1.00 million, incurred after September 15, 2006, and up to the date of GEF grant signing, may be financed retroactively. The Beneficiary is aware that payments made in the expectation of retroactive financing are at the Beneficiary's risk and do not commit the Bank to making a GEF grant for the operation or financing of such payments.

F. Details of the procurement arrangements

1. Goods, works, and non-consulting services

(a) List of contract packages to be procured

1	2	3	4	5	6	7	8	9
Ref No.	Contract (Description)	Estim. Cost US$ M	Procurement Method	P-Q (yes/no)	Domest. Prefer (yes/no)	Review (Prior/ Post)	Expect. Bid-Opening	Comments
1	Joint STP	4.300	Public Bidding	No	No	Prior	April 2007	Partly Funded by Bank
2	Water quality monitoring equipment	0.200	NCB	No	No	Post	April 2007	
3	Sewage Treatment	0.200	Direct contracti	No	No	Prior	June 08	

	Plant Parts		ng					
4	Master Planning Software / equipment	0.100	Shopping	No	No	Post	March 2007	
5	Water quality recording equipment / software	0.050	Shopping	No	No	Post	Dec 2007	

(b) ICB contracts estimated to cost above $500,000 per contract and all direct contracting will be subject to prior review by the Bank.
(c) Contracts for goods estimated to cost above $250,000 per contract, and all direct contracting will be subject to prior review by the Bank.

2. Consulting Service

(a) List of consulting assignments

1	2	3	4	5	6	7
Ref. No.	**Description of Assignment**	**Estimated Cost US$ million**	**Selection Method**	**Review by Bank (Prior / Post)**	**Expected Proposals Submis-sion**	**Comments**
01	Strengthening Partnership				April 2007	
	-A partnership development	0.10	Lump sum	Post		
	-B information center	0.40	QCBS	Prior		
	-C water quality data	0.25	QCBS	Prior		
	-D Public assessment	0.10	Lump sum	Post		
02	Planning and policy development				April 2007	
	-A Master planning	0.40	QBS	Prior		
	-B/C Policy development	0.10	Lump sum	Post		
03	Innovative financing	0.50	QBS	Prior	April 2007	
04	Market-based incentives	0.10	Lump sum	Post	April 2007	
05	Rate rebasing	0.60	QBS	Prior	April 2007	
06	Project management	0.80	QCBS	Prior	April 2007	
07	Feasibility Study Pilot STP	0.15	CQS	Post	April 2007	

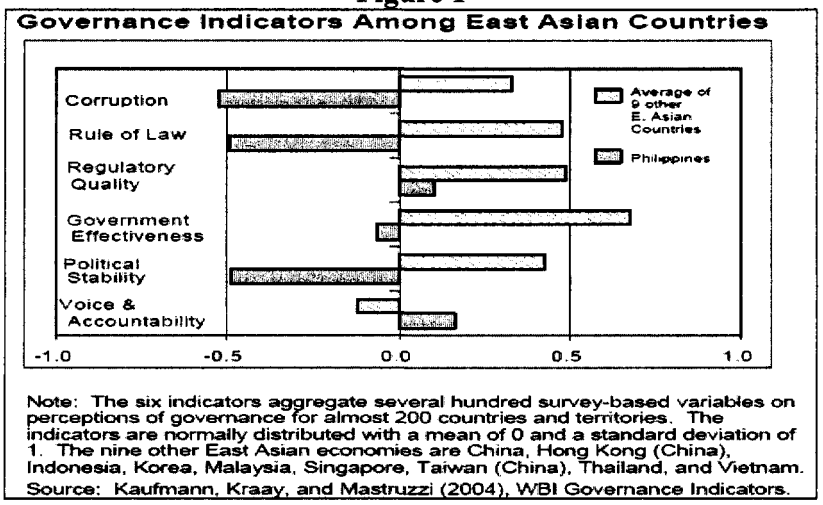
(b) Consultancy services of firms estimated to cost above $100,000 per contract, of individual consultant contract estimated to cost $50,000, and single source selection of consultant firms and individuals, regardless of amount will be subject to prior review by the Bank.

ATTACHMENT TO ANNEX 8

ANTI-CORRUPTION MEASURES

The issue of governance in the Philippines presents a paradox. There is a strong presence of civil society in the country, an open media and highly capable individuals working in public administration. Despite these characteristics, corruption remains an important barrier in the achievement of good governance. Governance indicators from a cross-country database indicate that, despite democratic processes, rule of law, political stability and control of corruption are lower in the Philippines than in comparable East Asian economies (see Figure 1). About 35 % of Filipino firms surveyed in the Investment Climate Survey reported corruption as a major constraint in doing business in the Philippines, second only to macroeconomic instability.[8] Corruption and collusion also pose significant challenges for government expenditures. Therefore, it is important to address how the government is responding to corruption and what specific strategies the program has employed to help mitigate the risk of corruption.

Figure 1



Note: The six indicators aggregate several hundred survey-based variables on perceptions of governance for almost 200 countries and territories. The indicators are normally distributed with a mean of 0 and a standard deviation of 1. The nine other East Asian economies are China, Hong Kong (China), Indonesia, Korea, Malaysia, Singapore, Taiwan (China), Thailand, and Vietnam.
Source: Kaufmann, Kraay, and Mastruzzi (2004), WBI Governance Indicators.

Government Efforts to Reduce Corruption

The government, with support from the Bank and other donors, is making some progress in improving governance and combating corruption. This has been primarily supported through national level reforms, but innovative efforts have also been instituted at the local level. National level reforms are described as follows:

Office of the Ombudsman. The Office of the Ombudsman is a major anti-corruption program of the government. Among its functions to prevent graft, it has the power to investigate, prosecute and adjudicate cases involving government entities and employees. In 2003, the Office formally adopted the government's *Lifestyle Checks Program*, which allows them to undertake life-style

[8] Asian Development Bank and World Bank, 2004; 716 Philippine firms surveyed.

checks on government employees and if warranted, remove them from their positions and initiate prosecution. Further, the Government has committed to doubling their budget over the next two years, allowing for the hiring and training of a significant number of new investigators and prosecutors.

Procurement and Financial Management Improvements. As part of the national procurement reform that began with the government Procurement Reform Act in January 2003, the government's Procurement Policy Board was established with the mandate to establish and monitor procurement performance benchmarks, provide for protest mechanisms, coordinate training within the government and among civil society organizations who observe on bid and evaluation committees and to issue generic and department-specific procurement manuals and related bidding documents. The Law is an anti-corruption measures that defines criminal, administrative and civil offenses for violation of the procurement rules and imposes corresponding penalties for them, the criminal judgment could sentence a guilty person of a minimum of six years in prison. Concurrent with procurement reform, the government also instituted financial management improvements through strengthening internal and external audit functions, enhanced timely accounting and reporting systems, and the implementation of the *electronic New Government Accounting System* (eNGAS), a simple bookkeeping and reporting system. The new eNGAS helps Government agencies in their financial reporting and is now being implemented by the Commission on Audit, which is the entity for ensuring that a good accounting system is maintained by the Government. To date, the eNGAS is still being rolled out, but most agencies have already adopted it in their central offices. DENR is currently installing eNGAS at the central office and later at the field offices.

Increased Involvement of Civil Society in Government.: The Philippines has increased transparency by recently increasing the participation of civil society in government. This has been achieved primarily by involving civil society observers in the public bid committees, providing greater transparency in the bidding process. Civil society groups have also initiated their own activities to fight corruption. For example, Government Watch (G-Watch) is an initiate from several civil society groups that monitors government projects and provides reliable information on project performance. Findings from the group have prompted the Office of the Ombudsman to initiate investigations into alleged corruption.

World Bank Efforts to Reduce Corruption

As of July 2004, the Bank had channeled over US $5 million in grants to support improvements in governance. These grants have worked to address systemic issues such as procurement and judicial reform and increase the role of civil society in monitoring government's use of public resources.

In the implementation of World Bank assisted investment projects, a system of fiduciary controls of procurement, financial management and disbursement procedures are in place, overseen by field staff in Manila and reviewed by managers in Washington. Based on a risk assessment of the project and implementing agencies, larger contracts are subjected to prior review by the Bank at each key stage of the process, while smaller expenditures are subject to post-review on a sample basis, to confirm that procurement and financial management processes adopted by the implementing agencies were consistent with Bank policies. Where government implementation

capacity is limited, consultants may be used for construction supervision or technical audit of completed works. For small local projects, community monitoring teams have proved very successful in ensuring quality and accountability.

Implementation review missions visit project sites and review physical achievements, funds utilization and the development impacts of project expenditures. Audit reports are required each year, and exceptions are followed up by field based FM staff. Where anomalies are noted, the implementing agencies are requested to follow up and report on remedial actions.

In a number of cases, anomalies or alleged fraud and corruption have been referred to the Bank's Department of Institutional Integrity for further review. Some of these cases have been identified through Bank review processes, and some from external complaints. The Department of Institutional Integrity has also provided training in fraud detection for Bank staff and government agencies, and will in future be asked to assist in developing strategies to resist collusion. The remedies available to the Bank include non-approval of procurement actions, recovery of funds not spent for intended purposes, referral for prosecution or administrative actions, misprocurement, suspension of project disbursements, and imposition of sanctions against errant firms. These remedies are sometimes constrained, however by in the difficulty of proving such alleged irregularities. Examples of past irregularities were those pertaining to CPPAP NGO case:, ODS project cash management case, and collusive biddings in public works.

Steps to Mitigate Corruption Under Proposed Project
Anchored in the five-pronged strategy of improving political accountability, civil society participation, private sector involvement, public sector management, and limit on institutional power, and in complementing the broader effort at country program level, the following steps have been undertaken to help mitigate corruption in the project

1. ***Civil Society Participation.*** To increase transparency, DENR's Bids and Awards Committee will comply with the procurement law and invite civil society observers in procurement biddings.

2. ***Public Sector Management.:*** Steps will be taken in the program to enhance transparency and accountability in procurement and financial management. Strict adherence to the Procurement Reform Act and measures to ensure that bid notices and contracts are published in the eGPS and UNDB/dgMarket will be implemented, where appropriate. Further, there will be a full enforcement of delayed penalty provision of contracts, particularly those involving ICB and/or large contract values.

3. ***Strengthen Internal Control.*** DENR will institutionalize its internal audit unit to take the lead in determining the adequacy of internal control, monitor and enforce policies, rules and regulations on procurement and financial management. Further, DENR will operationalize the New Government Accounting System in all its offices and will convert to eNGAS agency-wide within a period of two years.

4. ***Procurement Reviews***

a. Using the Agency Procurement Performance Indicator System, evaluate the performance of the agency based the data being monitored by the Government Procurement Policy Board – Technical Support Office (GPPB-TSO).
b. A procurement review team comprising DENR's Internal and External Audit and the Bank's joint fiduciary team will conduct an extensive review of project expenditures and procurement processes.
c. To detect fraud and collusion in procurement contracts, Picalo software will be utilized under the supervision of the Government Procurement Policy Board Technical Support Office (GPPB-TSO) and, if needed, appropriate guidance from the Department Integrity Unit of the Bank, will be requested.
d. Checking the integrity of contract implementation by reviewing variation orders and inspecting the quality of completed works, delivered goods and submitted outputs.
e. Findings of anomalies uncovered in the review will be referred to and investigated by the Commission on Audit, the Office of the Ombudsman and the National Bureau of Investigation. The Integrity Unit of the Bank will collaborate with the investigators.
f. Complaint of anomalies in procurement resulting from the review will be referred to the Internal/External Auditor and the GPPB-TSO, for initial investigation. If there is prima facie evidence or sufficient proof, the auditor will refer the case to the Office of the Ombudsman and/or the National Bureau of Investigation for formal investigation. Filing of charges will be the responsibility of the NBI or the Ombudsman.
g. Blacklisting or suspension and administrative processes against erring parties will be pursued by the GPPB-TSO based on the reports of the investigators while debarment process will be handled by the Bank internally.
h. Filing of appropriate criminal charges to the court will be handled by the NBI and/or the Office of the Ombudsman.

Annex 9: Economic and Financial Analysis

GEF-MANILA THIRD SEWERAGE PROJECT

Economic Analysis: An incremental cost analysis was completed for the GEF project. Under the baseline scenario, an investment in sewerage and septage management of US$104 million would take place over the period 2005 - 2025. This would include construction of infrastructure, institutional strengthening, and capacity building.

Under the GEF scenario, additional investment of US$ 8.35 million would catalyze, principally through the rate rebasing exercise, significantly higher additional investment during the period 2005 – 2025 through: replication of the technology demonstrated under the project, in the first instance through a follow-on Bank project and later through additional investment by the concessionaires and infusion of new investment in pollution control from private sector investors using the project's financial innovations. Moreover, in addition to an expected increase in investment in the sector, the project's outcomes would ensure that the environmental efficiency of the investments improve through better targeting of environmental hotspots. Please refer to Annex 15 for more details.

Financial Analyses. A detailed financial analysis was prepared during the project preparation including the implication of the Restructuring Agreement of MWSI that covers the period out to 2013. The equity required for this project is $3.35 million, considered very small compared with the projected indicators of MWSI. Financial projection shows that MWSI will have a tariff driven revenue of around $1,931 million and CAPEX of around $331 million. So, the required equity represents around 0.1 % of the revenue and less than 1% of the CAPEX.

MWSI generated positive net cash flow in both 2003 and 2004, but this was achieved only by suspending concession fees, continually rolling over its debt before finally suspending payments in late 2003, cutting capital expenditures to the maximum extent possible, and delaying payments to suppliers. Net cash flow over this two year period totaled over $33.7 million, which brought the cash balance to $55.9 million by the end of 2004. This is equivalent to 411 days worth of cash expenditures, which would normally be considered to be a very healthy level. However, because MWSI accumulated this cash balance only by suspending payments, outstanding liabilities have also been increasing and are now much greater than the cash balance.

The Restructuring Agreement provides the basis under which a successful financial rehabilitation of MWSI could be achieved. Given that MWSI successfully implements the key elements of its restructuring and business plans, the financial projections indicate that the company can re-establish itself as a financially viable entity over the 2005 – 2013 rehabilitation period. The projected strong growth in revenues together with continuing tight control over expenditures will enable MWSI to become profitable beginning in 2005. Revenue growth is achieved by the 52% increase in the average tariff implemented in January 2005 in combination with major improvements in NRW over the rehabilitation period. No further analysis is considered necessary.

Annex 10: Safeguard Policy Issues

GEF-MANILA THIRD SEWERAGE PROJECT

Overview. The MTSP GEF will result in overall, positive, environmental impacts by attracting additional investments to reduce environmental and health risks from exposure to wastewater and polluted surface waters. The Project goals of aligning the concessionaires performance targets to environmental goals, forging partnership and cooperation among different agencies/entities involved in sewerage management and sanitation and broadening the spectrum of available finance for pollution reduction will strengthen the framework for financing the long-term environmental protection of the area.

Safeguards policies triggered. The project is largely comprised of technical assistance and contains one component that will finance the civil works to rehabilitate and upgrade a sewage treatment plant to a combined septage and sewage treatment plant. The project triggers the Environmental Assessment policy because of the environmental issues associated with this component. The resettlement and IP policies are not triggered as there is no acquisition of land or economic resettlement and the area does not contain indigenous groups.

Environmental Assessment Process. The environmental assessment process covered the impacts and mitigation measure for the civil works. The project design also considered regional environmental issues in its design.

The impact of the civil works under Component 6 was analyzed using the Philippines environmental assessment process which is largely compatible with World Bank OP 4.01. Through the DENR Administrative Order No. 2003-30 (DAO 2003-30 and 2004-61) the national regulatory framework requires the MWSI to submit an Initial Environmental Examination (IEE) to obtain an Environmental Compliance Certificate (ECC) from LLDA prior to the start of the construction activities. The MWSI submitted the IEE to the World Bank on March 17, 2006. It contains an overview of the baseline conditions, assessment of impacts, and the accompanying Environmental Management Plan (EMP) describing measures to mitigate and monitor this component.

In addition to the environmental assessment undertaken for the civil works, the project took a regional approach to environmental enhancement based on work done during preparation of the IBRD Manila Third Sewerage project and the associated Regional Environmental Assessment. Some of the key regional issues identified through this process and addressed through project design are: (i) wastewater is politically and socially much less of a priority than water supply and therefore needs specific incentives and efforts to increase public awareness; (ii) financing mechanisms for sewerage and sanitation are limited and innovative financing mechanisms are thus necessary; (iii) monitoring compliance with laws and institutional coordination are limiting investment in and maintenance of sewage and septage management systems; and, (iv) standards and accreditation for septage tank desludging service providers are needed to improve the quality and availability of this service and reduce the environmental impacts of illegal disposal practices.

Alternatives considered in project design. The project was designed with environmental enhancement in mind and thus the alternatives considered all had environmental benefits. Some of the key alternatives considered were:

No project alternative. In the no project alternative, environmental degradation will be higher as investments in sewerage and treatment will be of lower standard, and use less effective planning with limited consideration of environmental hotspots. Additionally, investments in treatment systems will be fewer or completed at a slower rate due to lack of understanding of the benefits of the combined septage and sewage treatment system and innovative financial mechanisms.

The project was designed with environmental enhancement in mind and thus the alternatives considered all had environmental benefits. Some of the key strategic alternatives considered were:

Focus of rate rebasing technical assistance. The project will support capacity building and training for the upcoming negotiation of the rate rebasing exercise. Rather than adopting the ongoing approach to sewerage and sanitation, the project will pursue an alternative that specifically supports several measures that would improve the environmental performance of the concessionaires through investments in sewerage and sanitation. These include improving the tariff structure to support scaling up investment in sewerage and sanitation and ensuring investment is prioritized in key hotspots which will be identified during implementation based on environmental impact and performance.

Technology for demonstration. Alternatives for sludge disposal and use as well as alternative treatment technologies were considered in the demonstration pilot. The alternatives for sludge disposal and use were considered during the preparation of the Manila Third Sewerage Project. Specifically, the disposal of treated septage in the lahar area was chosen over other options including ocean dumping which underwent a trial during the Manila Second Sewerage Project but was less desirable due to a lack of public support. Alternative technologies for treatment were also considered and the use of a combined septage/sewage treatment plant was chosen as it provides an opportunity to demonstrate a low cost solution that could utilize close to 20 non-functional small scale sewage treatment plants in Manila to treat sewage and septage of the cities, septic tanks. The technology also provides additional treatment that would reduce the amount of septage sludge that would need to be disposed or used as soil conditioner.

Site of the demonstration plant. Two sites from MWCI and five sites from MWSI were considered for the proposed prototype sewage-septage treatment plant under Component 6. The site was selected due to a number of advantages from a technical perspective and also due to the following environmental/social issues: (i) the wastewater currently pollutes Culiat Creek; (ii) it is close to the source of septage and thus reduces the length of time for travel and potential traffic disruptions; (iii) the site area is relatively small; (iv) there are no informal settlers on the site; and (v) there are significant numbers of septic tanks in adjacent areas to draw septage.

Environment Impacts and Mitigation measures. The project impacts are related to Component 6 including the construction and operation of the treatment plant and the collection of and transport of the sludge. They are shown below along with their mitigation measures.

Impacts	Mitigation Measures
Construction of treatment facility	
Minimal erosion from site preparation and spoil management.	Dry season construction activities, spoil management plan.
Demolition and construction wastes	Proper recycling and disposal including asbestos wastes as they are encountered.
Safety of workers and pedestrians.	Protective equipment, fencing of areas, safety nets to prevent falling debris.
Traffic congestion.	Hauling of debris in non-rush hour. Assign workers to direct traffic.
Dust from construction site activities.	Regular watering in affected areas.
Noise	Use of new and well-maintained earthmoving equipment.
Waste management from construction workers.	Sanitation facilities and proper waste collection and disposal.
Local flooding	Provision of adequate drainage system.
Operation of treatment facility	
Impact of wastewater effluent	Meet treatment and effluent standards.
Air emissions from generator and odor from treatment plant operation.	Operation and maintenance of generator. Use of odor control system.
Noise pollution.	Good foundation design and enclosures.
Solid waste from facility.	Treatment of wastewater in facility and proper waste collection and disposal.
Flooding impacting area and building.	Drainage system and good building design.
Health and safety for residents and visitors.	Design of building and safety equipment.
Management of sludge produced.	Will be used as a soil conditioner in lahar area.
Collection and transport of sludge	
Spillage and cleaning of vehicles and septage collection equipment	Regular maintenance and management of equipment, plant and of vehicles
Air quality and odor from vehicles.	Regular maintenance and cleaning of vehicles.
Traffic and congestion.	Assign workers to direct traffic, traffic plan and ensuring sufficient parking area for operational vehicles at plant site.

The costs of mitigating construction impacts will be included in the costs of facilities. Other mitigating and monitoring costs (odor, noise, workers health, site safety and hygiene) will be borne by MWSI.

Key environmental risks. The key environmental risks are enforcement by MWSS-Regulatory Office and DENR, and the management of septage and sludge by the operators.

Enforcement. As the MWSS-Regulatory office updates the tariff structure and DENR delineates the hotspot areas, there is a risk that there would not be sufficient effort by the various government agencies to enforce related laws including the regulation of effluents and other wastes in these areas. The project helps mitigate this risk through the strengthening of partnerships among stakeholders including the regulatory agencies.

Management of septage and sludge. Disposal of septage and sludge has been a perennial problem in Metro Manila and presents two project-related risks. The first risk is that viable and safe disposal options will not be available in the long term. More specifically, while disposal of septage sludge in the lahar areas over the last 12 months is beneficial to the farmers, it has proven to be an expensive activity to operate and thus may not be the most viable alternative. If this option proves to be costly, it could increase the risk that lower cost and environmentally damaging options such as open dumping would be adopted in the long term. The second risk is that private groups that collect septage from households will continue to dispose of the waste illegally, causing environmental degradation. The project mitigates these risks by strengthening the standards and regulatory requirements for septage management and sludge disposal and use.

Implementation arrangements. The MWSI would be primarily responsible for compliance with the environmental safeguards of Component 6 by securing proper implementation of the ECC and EMP. Implementation of the environmental management plan during construction will be undertaken by the construction contractor as an obligation under their contract with MWSI.

Institutional Responsibilities. The Department of Environment and Natural Resources (DENR) Foreign Assisted Project Office as the implementing agency of the Grant, shall be responsible for ensuring the completeness and accuracy of all GEF MTSP environmental reports to be submitted to the Bank. DENR, through its environmental/social unit, will perform an oversight function to ensure that environmental covenants in the Grant Agreement are complied with, and that the EMP is properly incorporated into the contracts used by the MWSI to implement Component 6 of the project.

The LLDA is the regulatory agency in charge of EA clearance and will review and provide the ECC in accordance with Philippine law. It will also supervise the implementation of the EMP through ECC monitoring reports.

Monitoring, auditing and reporting. Monitoring, auditing and reporting procedures related to the EA implementation, covering both biophysical and socio-economic parameters, are described in the EMP and in the LLDA-issued ECC for the project. Monitoring arrangements include:

Internal monitoring. MWSI's site managers, wastewater project development team, plant managers and Pollution Control Officer (PCO) will be responsible for the monitoring and oversight of the EMP including oversight of associated obligations of the construction contractor.

External monitoring. An external auditor will be hired to serve as a third party monitoring unit during project implementation. The auditor will check MWSI's compliance with EMP. Additionally, LLDA will be in charge of reviewing the implementation of the EMP.

Reporting: MWSI will provide LLDA its ECC monitoring report and this will be forwarded to DENR and copied to the World Bank. The World Bank supervision missions will summarize the status of compliance.

Implementation completion report. As part of the monitoring/impact assessment to be done at the end of the project, the World Bank will work with the DENR, LLDA, MWSI and other project participates to evaluate the effectiveness and implementation of the EMP. The evaluation will be attached to the final report on the project and lessons learned will be incorporated into the EMP and EA process for future projects, as appropriate.

Capacity to implement safeguards. DENR, MWSS, MWSI and LLDA have extensive experience in the preparation and implementation of similar World Bank projects. Through the implementation of the ongoing various investment projects such as the Land Administration Management Project 1, Laguna de Bay Institutional Strengthening and Community Participation Project and the Mindanao Rural Devt., Project- GEF Coastal Marine Biodiversity component; and various technical assistance projects funded by trust funds such as the Montreal Protocol Ozone depleting substances phase-out project and the Capacity building on Persistent Organic substances, DENR has developed effective working procedures for coordinating investment activities. Also MWSI has extensive experience with Bank procedures, as this project is a follow-up to the MSSP and DSMWSS.

Consultation and disclosure. The IEE for the Project was conducted to comply with the requirements of DENR in accordance with DENR Administrative Order (DAO) No. 2003-30. The EIA process, which requires extensive consultations, commenced with meetings with LLDA, EMB, EIA Review Committee (EIARC) representatives and various stakeholders. The findings, issues and concerns will be incorporated in the scope of the IEE.

For Component 6, meetings will be held and focus group discussions will be conducted to elicit issues and concerns from the partner agencies, stakeholders including Non-Government Organizations (NGOs) and Local Government Units (LGUs). Subsequently, surveys and interviews, public consultations for concerned barangays and communities, and focus group discussions with local government officials (barangay and municipal level) will be conducted in the Pasig River – Laguna Lake – Manila Bay watershed.

The environmental documents prepared by MWSI were publicly disclosed on March 17, 2006 at the InfoShop in Washington and in the Knowledge Development Center of the World Bank Manila Office. One set of reports was also sent to the barangay of Component 6 and the Pollution Control Office at City Hall of Quezon City. The documents will be posted in the MWSS and MWSI public library informing the public of their availability for public consultation. LLDA will also put a copy of the newspaper advertisement in the public board of its branches in the project area to increase the coverage of the disclosure.

Annex 11: Project Preparation and Supervision

GEF-MANILA THIRD SEWERAGE PROJECT

	Planned	Actual
PCN review		
Initial PID to PIC		
Initial ISDS to PIC		
Appraisal	August 2006	
Negotiations	September 2006	
Board/RVP approval	June 2007	
Planned date of effectiveness	January 2008	
Planned date of mid-term review	June 2010	
Planned closing date	November 2012	

Key institutions responsible for preparation of the project: DENR and MWSS

Bank staff and consultants who worked on the project included:

Name	Title	Unit
Luiz Tavares	TTL	EASUR
Mara Warwick	Co-TTL	EASUR
Mei Wang	Sr. Counsel	LEGEA
Edouard Daoud	Sr. Finance Officer	LOAG1
Nicolas Kotschoubey	GEF processing	EASUR
Cecila Vales	Procurement	EAPCO
Mariles Navarro	Economic Analysis	Consultant
Joseph Reyes	Financial Management	EAPCO
Anne Harrison	Program Assistant	EASUR
Maya Villaluz	Operations Officer	MNLWB
Tracy Hart	Reviewer	EVN
Juan Quintero	Reviewer	LCSEN
John Morton	Environmental Specialist	EASEN

Bank funds expended to date on project preparation:

1. Bank resources: $225,201.28
2. Trust funds:
3. Total: $225,201.28

Estimated Approval and Supervision costs:

1. Remaining costs to approval: $35,000.00
2. Estimated annual supervision cost: $65,000.00

Annex 12: Documents in the Project File

GEF-MANILA THIRD SEWERAGE PROJECT

1. Philippines – GEF Manila Third Sewerage Project (Vol. 1 of 8): Main text and figures;

2. Philippines – GEF Manila Third Sewerage Project (Vol. 2 of 8): Environmental management plan summary;

3. Philippines – GEF Manila Third Sewerage Project (Vol. 3 of 8): Annex on Public Consultations;

4. Philippines – GEF Manila Third Sewerage Project (Vol. 4 of 8): Annex on septage and sludge disposal in Lahar Area;

5. Philippines – GEF Manila Third Sewerage Project (Vol. 5 of 8): Bio solids management strategy;

6. Philippines – GEF Manila Third Sewerage Project (Vol. 6 of 8): Regional environmental assessment (REA);

7. Philippines – GEF Manila Third Sewerage Project (Vol. 7 of 8): Environmental and social assessment framework;

8. Philippines – GEF Manila Third Sewerage Project (Vol. 8 of 8): Initial environmental examination: prototype treatment plant for sewage—septage project

9. Assessment of FASPO procurement capacity

10. Financial management assessment review of DENR

11. Concept Paper: Implementation of the Manila Bay Coastal Strategy

12. Procurement Plan (FASPO)

13. TOR for Rate Rebasing Component

14. Initial Environmental Examination (MWSI)

15. Procurement Manual (FASPO)

16. Dissemination and Replication Strategy in the Project Document "GEF Manila Third Sewerage Project (GEF-MTSP)". In TF055659 - GEF PDF B-PHILIPPINES: MANILA THIRD SEWERAGE PROJECT (MTSP): Reports and Studies

17. Detailed financial analysis of MWSS and MWSI including the implication of the Restructuring Agreement of MWSI that covers the period out to 2013.

Annex 13: Statement of Loans and Credits

GEF-MANILA THIRD SEWERAGE PROJECT

			Original Amount in US$ Millions						Difference between expected and actual disbursements	
Project ID	FY	Purpose	IBRD	IDA	SF	GEF	Cancel.	Undisb.	Orig.	Frm. Rev'd
P078034	2005	Targeted Research for Coral Reefs	0.00	0.00	0.00	11.00	0.00	7.97	0.83	0.00
P045864	2000	4E-MEKONG WATER UTILIZ.	0.00	0.00	0.00	11.00	0.00	2.19	1.93	0.00
		Total:	0.00	0.00	0.00	22.00	0.00	10.16	2.76	0.00

GEF-MANILA THIRD SEWERAGE PROJECT

STATEMENT OF IFC's

Held and Disbursed Portfolio

In Millions of US Dollars

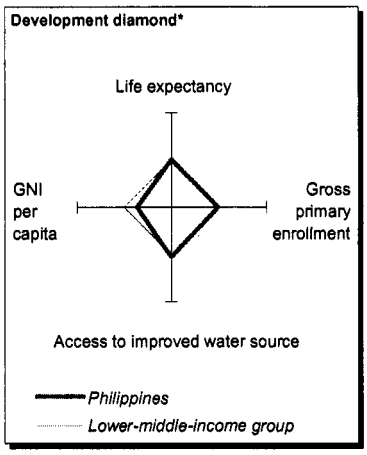
		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
1994	AIF MGMT CO	0.00	0.10	0.00	0.00	0.00	0.10	0.00	0.00
1999	AOF	0.00	41.81	0.00	0.00	0.00	13.76	0.00	0.00
2004	AVENUE ASIA	0.00	39.88	0.00	0.00	0.00	28.78	0.00	0.00
1994	Asian Infra Fund	0.00	16.95	0.00	0.00	0.00	13.85	0.00	0.00
2003	EASGF	94.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	Kula Fund	0.00	0.35	0.00	0.00	0.00	0.35	0.00	0.00
2004	Modern Asia	14.09	0.00	0.00	0.00	9.09	0.00	0.00	0.00
2004	Olam	0.00	7.50	0.00	0.00	0.00	7.50	0.00	0.00
2002	SMELoan	0.32	3.00	0.28	0.00	0.32	0.00	0.28	0.00
2001	Vital Solutions	0.00	0.17	0.00	0.00	0.00	0.17	0.00	0.00
	Total portfilio:	108.81	109.76	0.28	0.00	9.41	64.51	0.28	0.00

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic.
2002	EACBO	0.00	0.00	0.00	0.00
2005	Modern Asia Swap	0.00	0.00	0.00	0.00
	Total pending committment:	0.00	0.00	0.00	0.00

Annex 14: Country at a Glance

GEF-MANILA THIRD SEWERAGE PROJECT

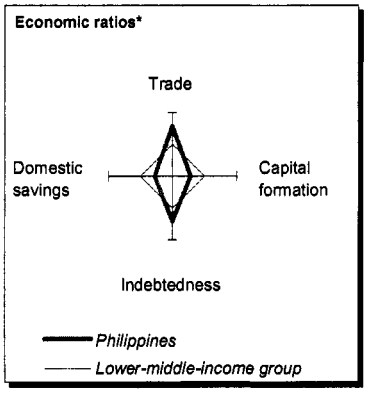
POVERTY and SOCIAL	Philippines	East Asia & Pacific	Lower-middle-income
2004			
Population, mid-year *(millions)*	83.0	1,870	2,430
GNI per capita *(Atlas method, US$)*	1,150	1,280	1,580
GNI *(Atlas method, US$ billions)*	95.1	2,389	3,847
Average annual growth, 1998-04			
Population *(%)*	2.1	0.9	1.0
Labor force *(%)*	2.8	1.1	0.7
Most recent estimate (latest year available, 1998-04)			
Poverty *(% of population below national poverty line) /a*	30	..	..
Urban population *(% of total population)*	62	41	49
Life expectancy at birth *(years)*	70	70	70
Infant mortality *(per 1,000 live births)*	27	32	33
Child malnutrition *(% of children under 5)*	32	15	11
Access to an improved water source *(% of population)*	85	78	81
Literacy *(% of population age 15+)*	93	90	90
Gross primary enrollment *(% of school-age population)*	112	113	114
Male	113	113	115
Female	112	112	113



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

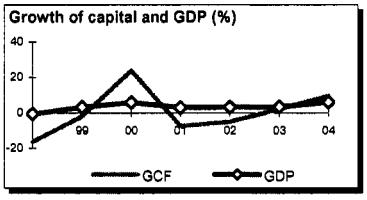
	1984	1994	2003	2004
GDP *(US$ billions)*	31.4	64.1	77.7	84.6
Gross capital formation/GDP	20.3	24.1	17.0	17.4
Exports of goods and services/GDP	24.0	33.8	50.5	51.5
Gross domestic savings/GDP	19.3	17.8	14.9	18.0
Gross national savings/GDP	16.6	21.8	33.3	36.5
Current account balance/GDP	-4.1	-4.6	1.8	2.5
Interest payments/GDP	6.2	3.3	3.7	4.1
Total debt/GDP	77.5	62.8	80.7	72.2
Total debt service/exports	33.5	19.0	20.4	20.2
Present value of debt/GDP	..	..	84.2	..
Present value of debt/exports	..	..	130.4	..

	1984-94	1994-04	2003	2004	2004-08
(average annual growth)					
GDP	2.8	3.7	3.6	6.1	5.1
GDP per capita	0.5	1.5	1.6	4.2	3.1
Exports of goods and services	7.1	4.0	4.1	14.1	5.8

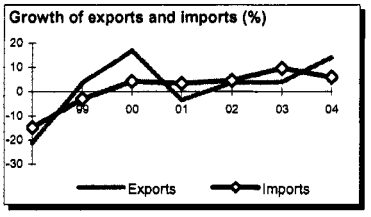


STRUCTURE of the ECONOMY

	1984	1994	2003	2004
(% of GDP)				
Agriculture	24.8	22.0	13.0	13.7
Industry	37.9	32.5	32.6	32.4
Manufacturing	24.6	23.3	23.8	23.5
Services	37.3	45.5	54.4	53.9
Household final consumption expenditure	73.7	71.4	73.7	71.6
General gov't final consumption expenditure	7.0	10.8	11.3	10.4
Imports of goods and services	25.1	40.1	52.6	50.9



	1984-94	1994-04	2003	2004
(average annual growth)				
Agriculture	2.0	2.2	-1.8	5.1
Industry	2.2	3.1	3.8	5.2
Manufacturing	2.7	3.4	4.2	5.1
Services	3.8	4.9	5.8	7.1
Household final consumption expenditure	3.5	4.2	7.7	1.5
General gov't final consumption expenditure	3.9	1.6	2.5	0.0
Gross capital formation	6.9	1.8	2.3	9.5
Imports of goods and services	11.2	3.5	9.8	5.9



Note: 2004 data are preliminary estimates. a. Family Income and Expenditure Survey 2003.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

Annex 15: Incremental Cost Analysis
GEF-MANILA THIRD SEWERAGE PROJECT

Overview

The pollution of the Laguna Lake-Pasig River-Manila Bay watershed area and its tributaries as a consequence of unprecedented economic growth has significant negative impact on the country's socio-economic activities considering that Metro Manila contributes about 38 percent to the country's GDP (2003). The source of pollution is largely land-based and emanating from Metro Manila or the National Capital Region. The economic impact on Manila Bay is potentially significant as well. An initial estimate of the economic value of selected major uses and habitats in Manila Bay amounted to ₱8.3 billion in 2004.[9] Damages associated with water pollution of Manila Bay are estimated to reach as high as ₱4.2 billion.[10] Internationally, Manila Bay is considered a major source of transboundary pollution in the East Asia Large Marine Ecosystems, which makes it a pollution hotspot in the East Asia Seas region.

The Philippine Government recognizes the extent and seriousness of the problem and as a response, it has enacted many water-related laws and initiated programs to mitigate the environmental impacts of water pollution. However, the sector remains fragmented and lacking in coordination, which has led to inefficient investments that do not maximize benefits for the environment and the economy as a whole. For example, after the 2003 rate rebasing for the two concessionaires of Metro Manila, the service targets agreed during that rate rebasing were found to be inadequate to meet the needs of Metro Manila as these targets did not address explicitly the environmental "hotspots" in the region. The main reason for this was that the Government had not yet defined the hotspots at the time of negotiation with the concessionaires.[11] The next rate rebasing is scheduled for 2008. It is the intention of the Government to more closely align service targets to be renegotiated, as necessary, to areas where the investments generate the most impact for the environment while considering the economic and financial viability of the strategy, including the feasibility of mobilizing additional resources to finance investments. At present, there is still inadequate information available to assist the Government in identifying the environmental priorities in Metro Manila and consequently, for the Government to provide appropriate policy guidelines and directions particularly on the types of investment and where these investments should be made.

The project aims to create an enabling environment where investments could be made more cost-efficient and directed to identified priority environmental areas in the watershed, and where investment incentives are enhanced. This includes testing financing mechanisms to facilitate additional private and public sector investments beyond existing mandated commitments in the concession agreement and to areas beyond Metro Manila, and the feasibility of a combined sewage and septage treatment plant in Metro Manila as a means for more cost-efficient investments. An immediate output of this project is to provide technical support to the Government in the negotiation with the concessionaires of Metro Manila in 2008.

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[9] "Initial Valuation of Selected Uses and Habitats, and Damage Assessment of Manila Bay", Manila Bay Environmental Management Project, December 2005

[10] Ibid.

[11] See Project Appraisal Document of the Manila Third Sewerage Project, World Bank, May 2005

Baseline Scenario

The baseline scenario for the project is taken as the current investments that are being undertaken in the sewerage and sanitation sector in Metro Manila (under the MTSP project), plus additional investments that might be included in the 2008 and 2013 rate rebasing if the Government were to negotiate the rate rebasing without the additional assistance provided by this project. The baseline scenario is therefore expected to include limited investments by MWCI in the eastern concession area and no investments by MWSI in the western concession area, as described in detail below. Moreover, only extremely limited investments outside the concession areas would be expected under the baseline scenario.

Current plans and programs serving the Laguna Lake–Pasig River–Manila Bay watershed generally address the need for better environmental management of the watershed area, including reducing pollution load discharges on these major water bodies. Most often, these plans and investment programs are prepared based on specific mandates of the implementing agencies, and therefore address issues and concerns directly facing these institutions. Consequently, from a broader perspective of the environment and the economy, these plans have not been able to benefit from the synergy of closer coordination among the lead stakeholders in the Government and the private sector at all levels, making the investments generally limited in scope and reach. The CWA provides the legal mandate and policies for water quality management in the country; its recently promulgated implementing rules and regulations (IRR) define its operationalization, which would continue to be subject to refinement as implementation of the IRR is tested against, for example, existing specific laws such as that governing LLDA, the Sanitation Code, among others, and as policies are refined based on the implementation of this project.

Investments in Sewerage and Sanitation in the Laguna Lake-Pasig River-Manila Bay Watershed Area. In 2005, MWSS prepared a Master Plan for Sewerage and Sanitation that covers the period 2005 to 2025 with a total funding requirement of about $1 billion. The master plan gives priority to the sewerage and sanitation targets of the concessionaires agreed during the 2003 rate rebasing. Upon expiration of the concession period in 2021, priority is placed on investments that will be according to population density, environmental sensitivity and ability to pay. This master plan, however, is viewed as a first-stage review and revision of the sewerage and sanitation targets of both concessionaires, and analysis during preparation of this project has shown that even if this masterplan were implemented, the Government's environmental goals for Metro Manila would be far from met. Therefore through this GEF/World Bank project, the MWSS master plan would be further reviewed and revised accordingly towards applying a more rational approach in establishing the priorities for the environmental clean-up of Metro Manila.

For the next rate rebasing in 2008, investments in sewerage and sanitation will largely depend on the financial capacity of the concessionaires and the political will and capability of the Government to implement revised (expectedly higher) tariffs. In the case of MWCI, which is in good financial health, the expectation is for them to at least complete the implementation of MTSP under World Bank funding. The cost of MTSP was partially covered by the 2003 rate rebasing. Of the approved tariff of PhP 17.00 per cubic meter, PhP 0.59 was attributed to the recovery of the MTSP costs; an additional PhP 1.20 would be recovered in the 2008 rate

rebasing. It is also speculated that MWCI would also consider recommending some limited additional investments to be included in the rate rebasing, given their experience in implementing MTSP. In planning for MTSP, MWCI undertook extensive information gathering on existing drainage systems and outfalls within its concession area. The experience also increased awareness of its staff on the importance of prioritizing environmental benefits and of seeking the most cost-effective solutions in the provision of sewerage and sanitation services. The implementation of MTSP increased MWCI's understanding of the issues and therefore built capacity in implementing follow-on investments in the next rate rebasing.

On the other hand, MWSI has been in severe financial difficulties due to a heavy debt burden, exacerbated by the multiple devaluation of the peso triggered by the Asian financial crisis in 1997. It has also been less successful in its strategies for service provision, all of which have caused MWSI to suspend its payment of concession fees in 2002 and to enter into arbitration with MWSS. In April 2005, MWSI entered into a Debt and Capital Restructuring Agreement (DCRA) with its lenders and MWSS. Among the features of the DCRA affecting MWSI's ability to make investments are: (a) limiting the use of MWSI's cash flow to prescribed levels of capital and operating expenditures, with capital expenditures directed mainly at reducing non-revenue water; (b) any additional indebtedness by MWSI is required to result in an improvement of its cash flow and without impairing its ability to pay its lenders; and (c) any special projects provided with funding by MWSS would have to be recovered from a tariff adjustment; any under recovery of the costs will not be absorbed by MWSI. The DCRA also calls on MWSS subscribing to about 84 percent of MWSI's ownership. In this regard, the Government has opted to bid out MWSS' stake to the private sector; bidding scheduled to be completed in November 2006[12]. An important feature of the DCRA with respect to additional investments is that it disallows its stockholders from infusing capital without express approval of the lenders and for any return on such capital to be subordinated to the lenders until after 2013. Given that MWSI remains to be in a less than robust financial position and the slow pace of developments, it is foreseen that under the baseline scenario, MWSI would not include any investments in sewerage and sanitation in the next rate rebasing.

Based on the experience in the previous rate rebasing in 2003, the Government is highly sensitive to any substantial increases in tariffs. Thus, any expanded program for sewerage and sanitation service provision to mitigate further environmental degradation would depend on improved cost-effectiveness of investments and better operational efficiencies of the concessionaires.

A conservative, realistic baseline scenario for the MWSS concessionaires would therefore consist of the ongoing projects for septage management under MTSP and MSSP, and for sewage management, the areas covered by the MTSP in MWCI's east concession area. The total cost of the baseline scenario in the MWSS concession area is $93 million (see Table 1).

[12] To date, at least five firms have bought bidding documents.

Table 1. Baseline Scenario for the MWSS Concession Area

Project	Amount (US$ million)
Septage Component	
(a) East Zone	
- Funded under the MTSP	23.9
(i) 70 vacuum trucks of 5 and 10 m^3/d capacity	
(ii) 800 m^3/d capacity SpTP in Taguig	
(iii) 600 m^3/d capacity SpTP in San Mateo	
- Funded by the Pasig River Rehabilitation Commission under its ADB project	12.0
(iv) 36 vacuum trucks of 5 and 10 m^3/d capacity	
(v) 600 m^3/d capacity SpTP in Antipolo	
Sub-total	35.9
(b) West Zone	
- Funded under the Manila Second Sewerage Project	
(i) 250 m^3/ 8hours at 2 shifts a day capacity SpTP in Dagat-Dagatan	4.6
Sub-total	
Total	40.5
Sewage Component	
(a) East Zone - funded under MTSP	52.4
- to support STPs, interceptor sewers, pumping stations, repair of existing drainage, upgrading of communal septic tanks to provide secondary treatment	
Grand Total	92.9

Additional investments on sanitation could be realized from the LISCOP project of LLDA, the MBEMP of the DENR and from private operators. LISCOP has a component on co-management of micro watershed environmental interventions, which may include investments in sewerage and septage management, with a budget of $5 million. The Operational Plan for the Manila Bay Coastal Strategy prepared under MBEMP estimates a total funding requirement for water pollution investments of ₱8.6 billion or US$168 million for the period 2006 to 2025; however, there are no firm indications as yet of investments coming from the LGUs and private sector. An additional 5 to 10 percent can be attributed to private providers for investments on septage treatment plants in commercial establishments and real estate developments, and private tank desludging services. Overall, the additional investment expected outside the concession areas is minimal.

Institutional Strengthening and Capacity Building for Environmental Management of the Watershed Area. There are currently two other projects addressing institutional strengthening and capacity building for environmental management of the Laguna Lake-Pasig River-Manila Bay watershed area. Under the first project (LISCOP), one of the objectives is to improve planning, regulatory instruments and incentives, and participation in the environmental management of the Laguna de Bay watershed. This requires strengthening of institutions and instruments. The implementation arrangement calls for the coordination among LLDA, DENR, other partner government agencies, LGUs, river councils, non-government organizations, people's organizations and other stakeholders. In preparing for the implementation of subprojects, watershed assessment and environmental action planning is undertaken at the micro-watershed level using a participative planning approach. At the agency level, the project provides institutional development support to LLDA in strengthening its regulatory tools and economic instruments, as well as in operationalizing its developmental mandate, in coordination with DENR. This component has a budget of US$5 million and is funded by the Dutch government.

The second project (MBEMP) attempts to bring together various stakeholders in the government, at both the central and local levels, and the private sector including civil society, to a consultation process to discuss and agree to a vision and action plan for restoring the heritage of Manila Bay. The project components involve the conduct of baseline studies on risk assessment, resource valuation, institutional analysis, and the development of plans, information management system and advocacy programs. The project has a budget of about US$1 million from PEMSEA.

For both projects, it is difficult to assume how much of the resources allocated for institutional strengthening can be attributed to sewerage and sanitation planning, although addressing water pollution is a major agenda.

Table 2. Summary of the Baseli

Project	Activity	US$ million	Proportion
(a) Investments in sewerage and sanitation			
(i) Sanitation			
- MWSS Concessionaires	(a) Purchase of vacuum trucks (b) Construction and expansion of septage treatment plants	40.5	
- LGUs covered by LISCOP project	(a) Construction of communal septic tanks	1.0[13]	
- Private sector	(a) Septage treatment plants in commercial establishments (b) Tank desludging operators	4.2[14]	
Sub-total		*45.6*	*47%*
(ii) Sewage management by MWCI under MTSP	(a) Expansion and rehabilitation of combined and separate sewerage systems (b) Construction of sewage treatment plants; upgrading of non-operational communal septic tanks to sewage treatment plants	52.4	
Sub-total		*52.4*	*53%*
Total		98.1	99%
(b) Institutional strengthening and capacity building			
(i) LISCOP project	(a) Regulatory strengthening and economic instruments ( ) Policy and planning support (c) Information dissemination	5	
(ii) MBEMP	(a) Manila B tal strategy ( ) Risk assessment ( ) R ti ( ) k (e) Institutional studies management system I t t t it oastal l sea use p p l for th j) ronment in stments (k) Manila	1	
Total		6	6%
Grand Total		104.1	

[13] Assuming 20 percent will be investment on sanitation.
[14] Assuming about 10 percent will be coming from private providers.

GEF Scenario

The alternative scenario proposed for GEF funding aims at improving the quality of investments, and at increasing the amount of investment in the sewerage and sanitation sectors. This will be achieved through application by the Government of the results of the project during two rate rebasing sessions (2008 and 2013). The project components and the implementation schedule of the components have been carefully designed to ensure that both rate rebasing sessions can be positively influenced by the project. demonstrating innovative financing mechanisms that would expand the availability of financing for the sector.

The GEF scenario enhances existing institutional arrangements to make them more effective and responsive to the environmental needs of Metro Manila, Manila Bay and the seas of East Asia. In particular, the project strengthens a partnership mechanism that will allow DENR, which is responsible for the identification of environmental priorities, and MWSS Regulatory Office, which is responsible for tariff setting and for conducting the rate rebasing exercise, to prioritize a common set of goals during the rate rebasing exercise. This will allow for a more rationale decision-making on service targets including clearly defined environmental priorities, whereby investments would be made more effective by addressing defined environmental hotspots in the region and made more efficient by adapting available technologies globally on combined treatment to local conditions.

Moreover, the project has initiated a significant breakthrough in promoting investments by the financially less secure MWSI in the sewerage and sanitation sectors by providing a grant incentive to test a pilot septage and sewage plant, and by promoting the inclusion of replication of this pilot septage and sewage plant in the upcoming World Bank financed recovery investment loan for MWSI.

With the aim of establishing a sustainable institutional arrangement for more effective coordination and collaboration, the GEF scenario will involve strengthening and developing partnerships among lead stakeholders, including setting up an information management and sharing system on the three water bodies, strengthening water quality monitoring and establishing a system of getting feedback from beneficiaries on concerns relating to sewerage and sanitation investment. This will enable the use of consistent data on water quality across the watershed area for public information dissemination to increase awareness on the three water bodies, and for planning purposes in developing unified policies, plans and regulations as input to the rate rebasing in 2013 and for further refining the implementation of the CWA.

The project will support the development of innovative financing mechanisms, including increasing the environmental fee, currently at 10 percent of the water bill, as a means to mobilize more resources from user-beneficiaries. The financing mechanisms will also provide incentives for local governments to invest and for the private sector to invest beyond mandated commitments in the concession agreement scheduled to expire in 2021 and possibly in areas outside of Metro Manila.

Lastly, the project will test the feasibility of a combined septage/sewage treatment plant in Metro Manila. This will address a particular situation in Metro Manila where septic tanks are prevalent

(2.2 million in number), and where there are a number of non-functioning sewage treatment plants in the concession areas. It is expected that significant replication of this technological approach throughout the concession areas, particularly in the west zone, will occur. This component will also provide practical inputs to resolving institutional uncertainties that currently hamper the enforcement of the Sanitation Code and the provisions of the CWA.

From the perspective of the MWSS concession area where much of the pollution on the watershed is coming from, the economic benefits of this project would accrue from implementing (a) a prototype for cost-efficient investments in combined septage/sewage treatment that would be immediately replicated and scaled up by the concessionaires, and (b) a cost-effective approach to addressing environmental hotspots that consider economic concerns and that is based on a robust institutional set-up and mechanisms. The outputs of this GEF project will provide important policy directions for the 2008 and 2013 rate rebasing and for the revision and updating of the MWSS master plan. The updated master plan is foreseen to be the basis for the 2013 rate rebasing. However, the scaling up of investments will still be subject to the financial situation of the concessionaires, but enhanced by the innovative financing mechanisms developed and piloted in this GEF project, including a restructured tariff that is expected to result in more resources for sewerage and sanitation services and incentives for the concessionaires to invest beyond the concession period. In the case of MWSI, the environmental agenda would be advanced through the replication of the pilot combined septage/sewage treatment plant in Project 7 to its other non-functioning sewage treatment plants across its service area. The MWCI is foreseen to continue to be financially capable to comply with any new targets proposed in the 2013 rate rebasing. In addition, the innovative financing mechanisms would provide incentives for LGUs to make additional investments.

At this point, it is difficult to quantify exactly the economic benefits of the GEF scenario but it is believed to be substantial particularly in terms of the environmental benefits for the watershed and for Manila Bay. In addition, health benefits and other benefits from a cleaner environment in the watershed area and extending to the East Asia Seas region are expected.

The total cost with the GEF scenario is estimated at $113.83 million. The difference between the total and the baseline scenario represents the additional cost of $8.83 million under this GEF project, with $5 million representing the GEF grant.

Component	Category	Expenditure (US$ million)	Benefits
(a) Investments in sewerage and sanitation	Baseline scenario	98.1	See Table 2
	With GEF scenario	102.96	(1) Revenues from independent haulers of septage (2) Maximize use of treatment plants and vacuum trucks (3) Increase in number of legitimate septage treatment and disposal sites
	Additional cost	4.86	
(b) Institutional strengthening and capacity building	Baseline scenario	6	See Table 2
	With GEF scenario	10	(1) Stronger partnership and collaboration among stakeholders and a sustainable institutional arrangement (2) Consistent data on water quality in the watershed area for info dissemination and planning purposes (3) Practical and more relevant policies, plans and guidelines for water quality management (4) Additional and more efficient investments from the private sector and LGUs (5) Practical implementation guidelines for the Sanitation Code and CWA (6) More efficient regulatory mechanisms
	Additional cost	3.97	
Grand Total	Baseline scenario	104.1	
	With GEF scenario	112.93	
	Total additional cost	8.83	
		5.0	GEF grant funding
		3.83	MWSI counterpart

Annex 16: STAP Roster Review

GEF-MANILA THIRD SEWERAGE PROJECT

In accordance with GEF guidelines, a Scientific and Technical Advisory Panel (STAP) review of the proposed project was performed by Dr. Jeffrey Thornton, a member of the STAP Roster of the GEF. The STAP review below was received on December 7, 2006.

STAP ROSTER TECHNICAL REVIEW OF THE PROPOSED GEF-IW PROJECT: "*THIRD MANILA SEWERAGE PROJECT*"—A PARTNERSHIPS IN ENVIRONMENTAL MANAGEMENT FOR THE SEAS OF EAST ASIA (PEMSEA) PROJECT (THE PHILIPPINES)

by J. A. Thornton PhD PH CLM
Managing Director
International Environmental Management Services Ltd – United States of America

Introduction

This review responds to a request from The World Bank (WB) to provide a technical review of the proposed International Waters project element integrated into the Third Manila Sewerage Project. This project element is proposed to be funded under the Strategic Partnerships modality established within the GEF Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) Program.

I note that I am a designated expert on the STAP Roster of Experts with particular experience and knowledge concerning watershed management and land-ocean interactions. I have served as Government Hydrobiologist with the Zimbabwe Government, Chief Limnologist with the South African National Institute for Water Research, Head of Environmental Planning for the City of Cape Town (South Africa), and, most recently, as Principal Environmental Planner with the Southeastern Wisconsin Regional Planning Commission (USA), a position that I hold concurrent with my position as Managing Director of International Environmental Management Services Ltd, a not-for-profit corporation providing environmental education and planning services to governments worldwide. In each of these positions, I have had oversight of projects and programs designed to assess contaminant loads to aquatic ecosystems from land-based activities, and to develop appropriate and affordable mitigation measures to reduce such loads and minimize their impacts on the aquatic environment, both freshwater and marine.

This review is based upon a thorough review of the Project Appraisal Document (20 pages plus Annexes 1 through 15, and 17), and the Partnership Investment Fund Brief (23 pages) of the GEF-WB International Waters project, entitled: "Partnership Investment Fund for Pollution Reduction in the Large Marine Ecosystems of East Asia," dated September 2005. Other, relevant documents served as reference sources, including the GEF *Operational Strategy*, *Agenda 21*, and related materials establishing the necessity and priority of land-based activities to control marine pollution as set forth in the Global Program of Action for the Protection of the Marine Environment from Land-Based Activities.

Scope of the Review

This review addresses, *seriatim*, the issues identified in the Terms of Reference for Technical Review of Project Proposals.

Key Issues

Key issue 1. Scientific and technical soundness of the project. Overall, the project appears to be scientifically and technically sound. The approach proposed—which includes capacity building, institutional strengthening, planning and policy development, creation of innovative financial mechanisms, and demonstration project-based programming—adequately addresses the needs to initiate actions to reduce urban-based contaminant loads to the East Asia Regional Seas by creating and implementing an ongoing program to manage onsite sewage treatment systems (septic tanks) within the various wastewater management jurisdictions in and around Metropolitan Manila.

Functioning onsite sewage disposal systems can provide a high level of sewage treatment at a relatively low cost. Construction of traditional onsite sewage disposal systems is well established, and technologies are readily available to support the construction of efficient sewage disposal systems. Nevertheless, ongoing maintenance of these systems is required to ensure their continued functioning. One element of the use of onsite systems is the need for inspection, periodic pumping and occasional replacement of these systems over time. State-of-the-art recommendations relating to septic system maintenance include annual pumping of the systems to ensure capacity, inspection of system integrity on a three- to four-year basis, and relocation of drain field on an approximately 20-year rotation to ensure consistent treatment of the septage. Pumped septage should be disposed of at a wastewater treatment facility capable of receiving pumper truck discharge, or disposed of by land spreading the septage. Functioning onsite sewage disposal facilities can provide up to 90 percent retention of common water contaminants, such as phosphorus, and elimination of bacterial contaminants.

Consequently, creating an appropriate regulatory framework, and an understanding of the need for maintenance of onsite sewage disposal systems, as well as creating the necessary infrastructure to service such systems, is fundamental to not only water quality management but also maintenance of the public health. Where onsite sewage disposal systems coexist with onsite water supply systems (wells or boreholes), adequate onsite sewage disposal system management is essential for limiting risks from waterborne diseases spread by contamination of well water by waste water. Development and implementation of an appropriate management system would address both of these issues.

An initial step in this process would be to update the data on the sewerage system requirements, plans and standards for the various entities having oversight of wastewater management in the Metropolitan Manila area. Specifically, these plans and policies would be refined to include reference to onsite sewage disposal systems and their management within those jurisdictions where such plans and policies are lacking, and to coordinate such plans and policies across the various jurisdictional boundaries to ensure a common approach to the environmental management of the shared aquatic resources.

Combined with these actions, the project proposes to develop and pilot financial instruments designed to ensure the availability of funding, staff, and institutions necessary to manage the wastewater needs of Metro-Manila. These activities would contribute to the evaluation and recommendations forthcoming from the scheduled rate rebasing negotiations, and help to ensure that the results of the project are implemented in a sustainable manner. The practical outcomes of this process will be one wastewater treatment plant with capacity to accept and treat septage, in addition to sewage, and a market-based fee structure within which communities, the private sector, and governmental bodies participate to ensure equitable application of tariffs.

Key issue 2. Identification of global environmental benefits and/or drawbacks of the project, and consistency with the goals of the GEF. *The proposed project establishes a framework within which to address one the major causes of environmental stress within the aquatic environments of Laguna de Bay, Manila Bay, and the South China Sea, into which the Bays discharge; namely, the discharge of untreated and under-treated septage from non-functioning or malfunctioning onsite sewage disposal systems.*

The threat of ongoing degradation of the aquatic environment as the result of wastewater discharges from urban enclaves includes both water quality degradation and public health impacts related to the spread of waterborne diseases. Waterborne diseases remain the single greatest cause of infant mortality, despite significant improvements in water supply and sanitation. If unchecked, discharges from non-functioning or malfunctioning onsite sewage disposal systems will continue to threaten the globally significant ecosystems of South China Sea and its tributary waterbodies. These ecosystems, in addition to their inherent importance as waterbodies, are either directly or indirectly connected to the transboundary waters of the South China Sea Large Marine Ecosystem (LME). Consequently, true global benefit is presumed as a result of its connection with the Pacific Ocean Kuroshio Current. Indeed, the Philippines form the beginning of this LME, which extends northward to Japan.

The project is consistent with the goals and objectives of OP 10,[15] *contributing to the global effort to address priority environmental concerns arising from land use practices and land-based activities, in this case focusing on the treatment of sewage using onsite sewage disposal systems, and the dissemination of "best practices" for the management of pollution from septage in multi-jurisdictional metropolitan areas. The project complements related initiatives being conducted under the auspices of the GEF Strategic Partnerships modality within the PEMSEA Program by including financial mechanisms, private sector treatment facilities, and application within a highly urbanized metropolitan area of the tropics.*

[15] Operational Program 10 (OP 10) includes as indicative activities, *inter alia*, global projects which are designed to "demonstrate ways of overcoming barriers to the use of best practices for limiting releases of contaminants..., and to involve the private sector in utilizing technological advances for resolving these transboundary priority concerns." Priority transboundary concerns include "land-based activities..., contaminants released from ships, persistent toxic substances such as persistent organic pollutants (POPs), and targeted regional or global projects useful in setting priorities for possible GEF interventions, meeting the technical needs of projects in this focal area, or distilling lessons learned from experience." This Operational Program is intended to include "projects that help demonstrate ways of overcoming barriers to the adoption of best practices that limit contamination of the International Waters environment."

In this regard, the participation of the relevant governmental organizations with responsibility for wastewater treatment is an important element in ensuring the implementation of the project outcomes. This participation is provided through the relevant national, provincial, and local government agencies, including the Philippine Department of Environment and Natural Resources (DENR), the Metropolitan Waterworks and Sewerage System (MWSS), Laguna Lake Development Authority (LLDA), Pasig River Rehabilitation Commission, and relevant local governments. Establishment of a functional operational strategy between and amongst these multiple agencies, as proposed in the project document, will contribute to achieving this objective. It also is important to note that the water supply and sewerage system mandate of the MWSS is accomplished, in part, with the participation of private sector concessionaires, the Manila Water Company, Inc., and Maynilad Water Services, Inc., providing a potentially useful case study for other communities considering the use of private sector partners in water and wastewater management projects.

As previously noted, this project is complementary to other GEF initiatives within the East and South China Seas. The proposed project also is complementary to ongoing WB investments in environmental infrastructure in the region, and, in particular, in the Philippines, and contributes to the GEF aim of incrementally funding projects that contribute to sustainable economic development in a replicable manner. The current proposal and its companion activities would seem to be well-suited to achieving such an aim.

Key issue 3. Regional context. While the project is centered on the Laguna de Bay, an internal sea wholly within the Philippines, and on Manila Bay, the connection of these waters to the South China Sea and, ultimately, via the Kuroshio Current to the Pacific Basin argues that adequate and appropriate consideration has been given to the regional context of the project. Actions proposed to better integrate the national regulatory initiatives within a regional program are fully consistent with the development of a sustainable regional approach to managing these waters. These actions are proposed in the project to strengthen the national regulatory programs and institutions.

The proposal clearly indicates an intention to disseminate information and results on both a regional and global basis. In part, this dissemination process will utilize the offices of the internationally recognized LLDA, DENR, and PEMSEA, as outlined in the dissemination and replication strategy.

Key issue 4. Replicability. The implementation of the project clearly contributes to the potential for replication of beneficial practices and techniques—including financial practices, engineering practices for the receipt and treatment of septage, and intergovernmental coordination measures. Further, the inclusion of mechanisms for disseminating information and results achieved fosters replication of effective and successful measures throughout the Philippines. Notwithstanding, it is recommended that this project seek to ensure the dissemination of lessons-learned in the broadest possible manner, given the widespread use of onsite sewage disposal techniques in Asia. Use of the GEF International Waters network, IW:LEARN, and its companion best practices data base for the dissemination of the project results is strongly recommended as a means of disseminating feasible practices on a global basis.

Key issue 5. Sustainability of the project. The PAD indicates that a significant element of the sustainability of the project rests upon the ability of the project team to overcome barriers affecting governmental actions in Metropolitan Manila; namely, the lack of regulatory leadership, inadequate treatment targets established for concessionaires, low levels of public awareness, a limited willingness to pay on the part of communities, and relatively short term concessions that discourage longer term investments by concessionaires. Each of these barriers will be addressed to some degree within the project, focusing on "hot spots" or priority areas for interventions identified during project preparation and through other initiatives that complement the activities proposed for execution during the current project.

The initial commitment of the Philippine governmental authorities to support the project activities provides some assurance that the project results will be continued beyond the immediate period of project implementation with GEF support. Further, the project proposes to address a key element of sustainability through the development and strengthening of appropriate governmental units and their private sector partners (the concessionaires), including the development of necessary financing mechanisms to sustain an ongoing program of sewage and septic system operations. The development of a trained cadre of individuals, the establishment of coordination mechanisms among the appropriate institutions, and the promulgation of the necessary enabling legislation are included as elements of the proposed project. The execution of the project within and under the auspices of the DENR also provides a single point of contact for project monitoring and supervision that should assist in creating conditions contributing to sustainability, as the DENR is the governmental agency tasked with oversight of environmental and pollution control functions within the Philippines.

Nevertheless, concerns relating to the capacity of the various governmental agencies and their contractors to implement the project in a timely and cost-effective fashion, documented in Annex 2, have led to the development of a detailed description of implementation arrangements and institutional responsibilities (Annex 6), financial management and disbursement arrangements (Annex 7), and procurement arrangements (Annex 8). These measures, combined with the monitoring and evaluation protocols adopted for the project set forth in Annexes 10 and 11, would seem to be adequate for addressing these concerns.

Key issue 6. Targeted Research Projects. Targeted technical demonstration and capacity building projects are key features envisioned within the GEF International Waters Contaminant-based Operational Program. These activities are clearly included as major elements of this proposed project. There is provision within the PAD for developing and replicating the necessary infrastructure to implement the proposed onsite sewage disposal system management program. Interventions, such as the pilot project aimed at upgrading a selected wastewater treatment plant in Quezon City, proposed to be funded in part by the GEF, will provide the data, experience, and technical understanding necessary for replicating such practices in a sustainable manner; i.e., for installing systems and practices that will continue beyond the project period. For this reason, it is most important that the onsite sewage disposal system management measures and practices confirmed by the project be internalized within the appropriate agencies and organizations, including the contractual relationships between such agencies and private sector suppliers, so that they will continue to be implemented over the longer term.

To this end, it is important that the demonstration projects be monitored and the results reported, using the information dissemination mechanisms previously identified, beyond the project period. Such continuity is totally consistent with the catalytic nature of the GEF, and an essential element to the sustainability of the project. Capacity building and institutional strengthening, envisioned in the PAD, thus become the basic building blocks upon which this project will succeed or fail, both from the point of view of its sustainability and from its scientific and technical integrity.

Secondary Issues

Secondary issue 1. Linkage to other focal areas. This project is formulated as an International Waters project under OP 10 of the GEF *Operational Strategy*. No specific cross-cutting areas have been identified.

Secondary issue 2. Linkages to other proposals. The project recognizes the complementarities between the management of wastewater in the Metropolitan Manila area and other WB- and GEF-related initiatives in the region; indeed, the inclusion of the GEF-financed activities into the PEMSEA Program provides specific linkages with other East and South Asia Sea projects and with complementary land-based actions within the component LMEs to minimize environmental degradation as a result of land-based activities.

In addition, as noted above, it is recommended that the project make use of IW-LEARN. Such an overt linkage provides a high degree of sustainability and connectivity to this project, and contributes to the likelihood that lessons learned can and will be transferred beyond the project boundaries to other, similar situations and locations within the East and South Asia Sea region and beyond.

Secondary issue 3. Other beneficial or damaging environmental effects. *The project has no known or obvious damaging environmental impacts associated with the activities proposed to be executed. The beneficial impacts of the project have been fully articulated above, and include the implementation of targeted interventions that address both chronic land-based sources and catastrophic ocean-based events that contribute to the degradation of Laguna de Bay, Manila Bay, and the South China Sea, and their resources. The provision of trained staff and institutional capacities needed to enforce and enhance existing environmental protection regulations, and the dissemination of successful management measures further contribute to the benefit of this region. All of these benefits accrue not only within the project area, but, as a result of their wider dissemination using the electronic and other media provided, also within the wider China Sea basin and beyond.*

Secondary issue 4. Degree of involvement of stakeholders in the project. The project involves stakeholders, including citizens (through the Partnership Information Center), corporations (in the form of the wastewater management companies), and governmental agencies. The project explicitly indicates support for capacity building and institutional strengthening with respect to these organizations, and the development of economic instruments. Such involvement and development is critical to the sustainability of the project and its expansion into areas not specifically involved in the demonstration projects.

Secondary issue 5. Capacity building aspects. Capacity building is a critical element of the proposed project. Creation and strengthening of the appropriate institutions, conduct of the demonstration project, and the training of agency staff form the core of the GEF-financed elements of the Project. Annex 4 also notes that dissemination of lessons learned with respect to wastewater disposal practices is an essential element of the GEF-financed project activities. As noted above, this element should be implemented in conjunction with the best practices data base being compiled by the United Nations Environment Programme (UNEP) and the IW-LEARN initiatives being executed by the United Nations Development Programme (UNDP). These efforts will enable wider dissemination of knowledge of practices that have positive effects beyond the project area. Such knowledge is an essential element in building capacity and strengthening institutions in the region and beyond.

Secondary issue 6. Innovativeness. Development of appropriate management practices for the management of sewage is a critical element for the protection of the marine environment, within the context of an integrated land- and water-based management program. By creating and strengthening the appropriate human resources, institutions, data acquisition and dissemination systems, shared management mechanisms, inter-institutional coordination and cooperation, and economic instruments for waste management, the proposed program will complement other pollution abatement practices being implemented by the basin governments and stakeholders. The proposed actions and approaches reflect state-of-the-art practices. Their application to Laguna de Bay, Manila Bay, and the nearshore areas of the South China Sea and connecting waterways will significantly advance current practice in the Metropolitan Manila region, as well as within the East and South China Sea region as a whole. In this manner, the project promotes innovation and development of regionally applicable remedial practices and experiences.

General Conclusion and Recommendations

Overall, it is the conclusion of this reviewer that the proposed project is wholly consistent with the GEF International Waters operational program, its broader philosophy, and funding criteria. Consequently, this project is recommended for funding.

RESPONSE TO STAP REVIEWER BY TASK TEAM

Dr. Thornton's support of the proposed project is most welcomed and his agreement with the project's overall approach is encouraging.

The task team expresses its appreciation of Dr. Thornton's comments and his depth of understanding of the development objective and impact of the proposed project.

The task team would like to respond to the following comments by Dr. Thornton in the order of the sections where the comments were made.

Comment

It is recommended that this project seek to ensure the dissemination of lessons-learned in the broadest possible manner, given the widespread use of onsite sewage disposal techniques in Asia. Use of the GEF International Waters network, IW:LEARN, and its companion best practices data base [UNEP] for the dissemination of the project results is strongly recommended as a means of disseminating feasible practices on a global basis.

Response

The team agrees as to the usefulness of using the GEF's International Waters: Learning Exchange and Resource Network (IW:LEARN) facility and will include it as part of its replication plan. Likewise, the project will utilize the UNEP best practices database as part of its dissemination plan.

Comment

Mention of the project as a "PEMSEA project" in the STAP review title and in the text.

Response

This is not specifically a "PEMSEA" project, it is a project under the Strategic Partnership, the investment fund which is managed by the World Bank and the regional component which is managed by PEMSEA.

Annex 17: Strategic Partnership Investment Fund

GEF-MANILA THIRD SEWERAGE PROJECT

1. In 1995, twelve East Asian countries came together with a common vision to ensure the sustainable development of their shared waters. This partnership of governments, with the support of the Global Environment Facility (GEF), United Nations Development Program (UNDP), and the International Maritime Organization (IMO), created the *Partnerships in Environmental Management for the Seas of East Asia* (PEMSEA). One of the main achievements of the countries through their contribution to PEMSEA has been the development and adoption of the *Sustainable Development Strategy for the Seas of East Asia* (SDS-SEA), which was endorsed by each of the twelve countries in December 2003. The SDS-SEA is significant as it is the first, and the broadest, partnership agreement in the region to address the management of the regional seas. One of the highest priorities for action in the SDS-SEA is the reduction of land-based pollution that has an impact on the marine environment.

2. The countries of East Asia have recognized that a coordinated and innovative approach with a strong focus on scaling up investment is urgently needed to implement the SDS-SEA. GEF's new operational modality – the Strategic Partnership – has provided East Asia with an opportunity to undertake the necessary actions with coordinated support from GEF and the World Bank. The *WB/GEF Partnership Investment Fund for Pollution Reduction in the Large Marine Ecosystems of East Asia* (the Fund), an US$80 million grant financing facility managed by the World Bank, was approved by GEF in November 2005. The Fund forms the key financing arm of the East Asia Seas Strategic Partnership.

3. The objective of the Fund is to scale up investments in coastal land-based pollution reduction in East Asia through co-financing of projects that remove technical, institutional, and financial barriers, which currently limit efficient investment in pollution reduction. The US$80 million grant financing provided by GEF is expected to leverage between US$800 million and US$1.5 billion in counterpart financing from the World Bank and other sources, including the public and private sectors. The Fund has adopted a coordinated approach to monitoring such that the contribution of all projects to the overall objectives of the Fund can be measured. Tables 1 and 2 below show the overall Fund indicators and the expected contribution of the project.

Projects under the Fund

4. The first project to be financed by the Fund is the GEF - Ningbo Water and Environment Project, which was approved by the Board in June 2006. This project provided a significant environmental enhancement to the IBRD-financed Ningbo Water and Environment Project (NWEP), which was approved by the World Bank in March 2005. Under NWEP, Cixi City, located on the coast of Hangzhou Bay and the East China Sea, would construct two wastewater treatment plants with a total treatment capacity of 150,000 m3/d. This project would enhance Cixi's wastewater treatment strategy and coastal management through the provision of a constructed wetland to provide tertiary treatment at the largest of the two wastewater treatment plants. This pilot was expected to prove the technical and economic viability and increased environmental benefits of wetland treatment compared with the chemical tertiary treatment process more conventionally used in China. In addition, the project would support innovations

in coastal management in China through the conservation of a natural coastal wetland for non-point source pollution control, establishment of a wetland education center, and policy reform to support coastal wetland conservation and management.

5. The GEF – Second Shandong Environmental Project (SDEP2) is the second project to be financed under the Fund. The GEF co-financing would take place within the Yantai wastewater component of the SDEP2. GEF support would initiate and facilitate implementation of the proposed major institutional and technological task to demonstrate to Chinese municipalities the rationale of proper management of wastewater facilities. The key objectives are to demonstrate in the *pilot septic-tank project* the feasibility of institutional and technical arrangements ensuring (a) improvement of local environment status, and (b) disseminate among Bohai Declaration signatories feasibility of positive impact on reduction of pollution load annually discharged in the Bohai and Yellow Seas.

6. The GEF – Manila Third Sewerage Project (MTSP) is the third project to be financed under the Fund. It builds on the IBRD Manila Third Sewerage Project, which supports wastewater collection and treatment in Metro Manila (MM). The GEF project is designed to remove barriers to investment in sewerage and sanitation and to pilot cheaper treatment technology for disposal of septage. Identifying roles of different agencies in the wastewater sector and gaps and overlaps in their responsibilities is also an important task of the GEF project. MM has seventeen local government units (LGUs), which need to coordinate their efforts in improving sanitation services with many government agencies and the private sector, such as the Department of Environment and Natural Resources, the Laguna Lake Development Authority, the Pasig River Rehabilitation Commission, and the Metropolitan Waterworks and Sewerage System and its two concessionaires. The GEF project will also enhance the capacity of LGUs to raise money to finance municipal wastewater collection and treatment.

Table 1. Arrangements for results monitoring at the level of the Fund (extracted from Fund Brief approved by GEF Council in November 2005)

	Target indicators		Project reporting to Fund			Fund reporting to GEF	
Outcome Indicators	**2010**	**2015**	**Frequency and Reports**	**Data Collection Instruments**	**Responsibility for Data Collection**	**Frequency and Reports**	**Responsibility for Data Collection**
Increased investment in pollution reduction ($ million)	350 to 500	800 to 1,500	Annual project progress report (PPR) and Bank disbursement reports	PMO project implementation records, Bank disbursement data	Project Management Office (PMO); Bank task team	Report annually to GEFSEC; Report to GEF Council at time of request for subsequent tranche	Fund Mgmt Team with data derived from World Bank project task team reporting
Reduction in discharge of BOD to seas of East Asia (metric tonnes)	150,000	300,000	Annual PPR	Measurements by project implementing units, government statistics	PMO; Bank task team		
Result Indicators							
Removal of barriers to pollution reduction:							
Number of cost-effective technologies/ techniques demonstrated in specific country contexts	5	12	Annual PPR	Commissioning reports on investments	PMO; Bank task team		
Number of institutional and/or regulatory reforms approved and implemented	4	10	Annual PPR	Register of government regulations/decrees	Government agencies, PMO, Bank task team		
Financing through revolving funds:							
Number of countries that have established a Revolving Fund	1	4	Annual PPR	PMO project implementation records	PMO; Bank task team		
Minimum amount of capital invested in revolving funds ($ million)	15	60					
Dissemination and replication of demonstrated technologies, techniques and mechanisms:							
Products: Number of publications	6	12	Annual PPR	PMO project implementation records	PMO; Bank task team		
Products: Number of project websites	6	12					
Events: Number of country workshops	6	12					
Events: Number of regional conferences/workshops participated in	2	5					
Mainstreaming of SDS-SEA in World Bank EAP operations:							
Number of Strategic Partnership Council meetings participated in by World Bank staff (events/year)	2	2	N/A	N/A	N/A		
Number of World Bank CAS which include Fund	3	5					

Table 2. GEF-Manila Third Sewerage Project contribution to Fund targets

	Target Indicators	Explanation
Outcome Indicators	**2010**	
Increased investment in pollution reduction ($ million)	80 – 90 (cumulative by 2010)	Additional investment in wastewater treatment and sanitation from IBRD, private sector investment and water tariff, as a result of better coordination, better enabling environment, and increased public awareness
Reduction in discharge of BOD from project (cumulative tonnes)	30,000	BOD removal by sewage and septage treatment
Reduction in discharge of N from project (tonnes) (cumulative to 2010)	2,200	N removal by sewage and septage treatment
Reduction in discharge of P from project (tonnes) (cumulative to 2010)	340	P removal by sewage and septage treatment
Result Indicators		
Removal of barriers to pollution reduction:		
Number of cost-effective technologies / techniques demonstrated in specific country contexts	1	Septage management: collection and treatment
Number of institutional and/or regulatory reforms approved and implemented	3	a. Septage management: regulations for septic tanks desludging operators b. rate rebasing exercise c. partnership strengthening
Financing through revolving funds:		
Number of countries that have established a Revolving Fund	-	Fund level indicator, not applicable to this project
Minimum amount of capital invested in revolving funds ($ million)	-	Fund level indicator, not applicable to this project
Dissemination and replication of demonstrated technologies, techniques and mechanisms:		
Products: Number of publications	1	Summary GEF project achievements
Products: Number of project websites	1	Establish project website
Events: Number of country workshops	TBD	
Events: Number of regional conferences/workshops participated in	1	Participate in East Asian Seas Congress (Dec 2006 in Hainan, China)
Mainstreaming of SDS-SEA in World Bank EAP operations:		
Number of Strategic Partnership Council meetings participated in by World Bank staff (events/year)	-	Fund level indicator, not applicable to individual projects.
Number of World Bank CAS which include Fund	-	Fund level indicator, not applicable to individual projects.

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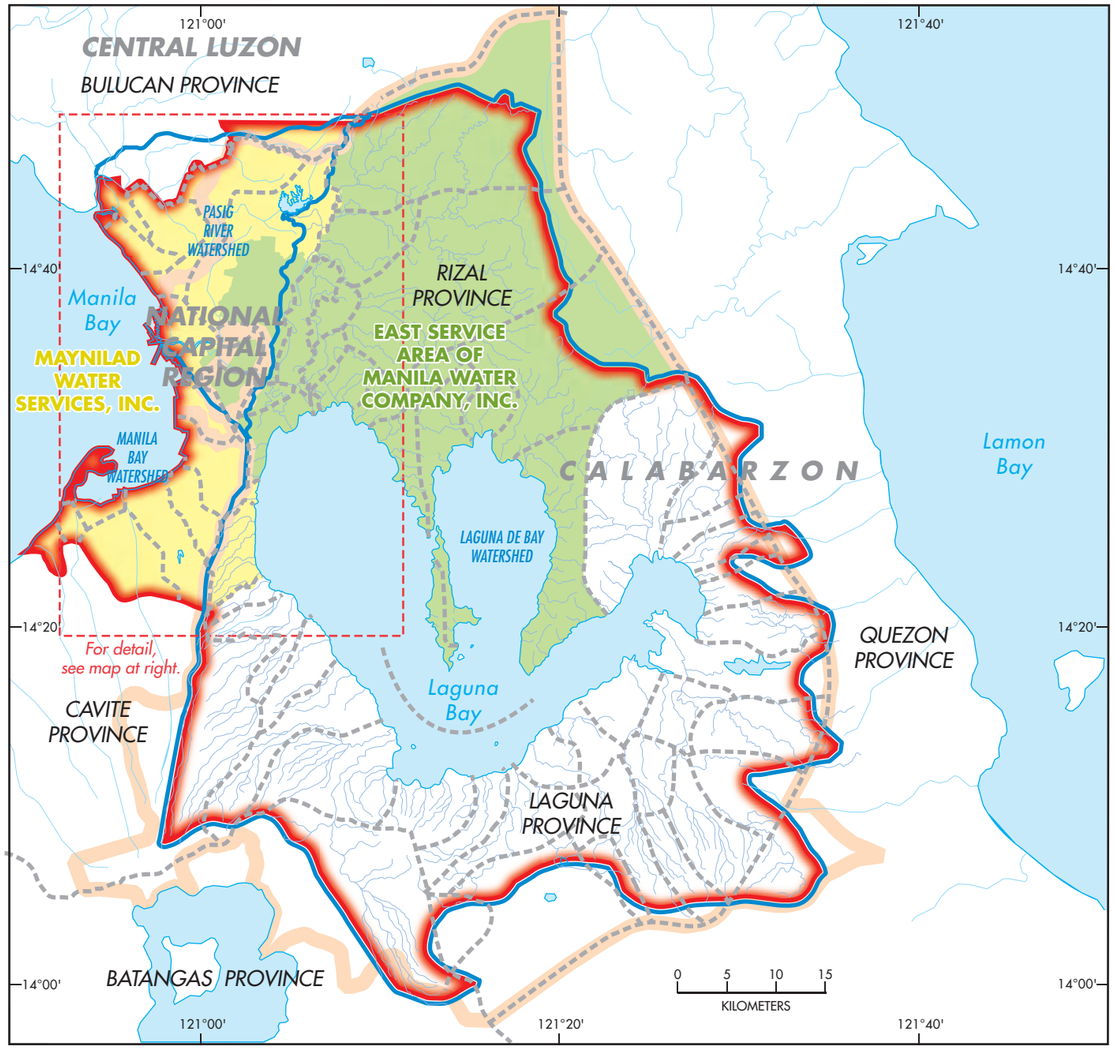
PHILIPPINES

GEF MANILA THIRD SEWERAGE PROJECT (MTSP)

- PROJECT AREA
- PROJECT 7 COMBINED SEWAGE/SEPTAGE TREATMENT PLANT
- PROJECT INFORMATON CENTER
- LAGUNA LAKE DEVELOPMENT AUTHORITY BOUNDARY
- WATER COMPANY SERVICE AREAS
- WATERSHED BOUNDARY
- PROVINCE AND MUNICIPALITY BOUNDARIES



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