

# Demonstration Investments in Eco-Waste Infrastructure Solutions: Thanlyin and Ayeyarwady Watersheds

Review CEO Endorsement and Make a recommendation

## Basic project information

**GEF ID**

10447

**Countries**

Myanmar

**Project Name**

Demonstration Investments in Eco-Waste Infrastructure Solutions: Thanlyin and Ayeyarwady Watersheds

**Agencies**

ADB

**Date received by PM**

12/3/2019

**Review completed by PM**

6/10/2020

**Program Manager**

Leah Karrer

**Focal Area**

International Waters

**Project Type**

FSP

**PIF**

**CEO Endorsement**

**Project Design and Financing**

**1. If there are any changes from that presented in the PIF, have justifications been provided?**

**Secretariat Comment at CEO Endorsement**

Yes, the changes are justified (Karrer, Dec 6 2019).

The title has changed to reflect the new locales, which also changed and are justified based on consultations with the government to expand the geographical scope of the project.

The types of activities have changed. Strategic Action Programs are noted as Component 1, which is not part of the plan noted in the PFD (Outputs from Annex on Mandalay below). This shift is due to the change in geographical scope. The need to articulate SAP activities is noted in #2 concerns, which follow.

## **Response to Secretariat comments**

### **2. Is the project structure/ design appropriate to achieve the expected outcomes and outputs?**

#### **Secretariat Comment at CEO Endorsement**

No (Karrer Dec 6, 2019).

The most significant concern is the lack of actionable items. The vast majority of activities are assessments, monitoring, and capacity building. There are few action items. The design needs to be reconsidered with a focus on measures to actually reduce pollution. Adding in the ADB loan activities should help in this regard.

Following are more specific concerns:

- a) Component 1 is “Integrated Water Resources Management (IWRM) Strategic Action Programs (SAPs)” and the outcome is pollution reduction; however, the Outputs are focused on quality controls, modeling, monitoring, and education. Only Output 1.1 notes SAPs. The outputs need for this component need to be revised to support the development and execution of the SAPs.
- b) It needs to be clear if C1 is intended to develop and execute the SAPs or just develop. Presumably, it is both in order to reduce pollution.
- c) It is unclear how C1 and C2 and their outcomes differ. Both indicate they will reduce pollution in the cities.
- d) C2 has a few more actionable outputs than C1, but still is heavy on surveys, data entry, assessments, and designs. More emphasis needs to be placed on action.
- e) C2 is only focused on coastal cities and not Mandalay; whereas C1 is all 3 cities. Please explain this disconnect.
- f) Output 3.1 seems redundant with Output 1.2. Perhaps you could move all monitoring/data entry/assessments/ surveys into one component on monitoring and assessments.
- g) C3 focuses on sharing data when it needs to focus on sharing best practices on how to reduce pollution (the focus of this project) – e.g. who to engage, what measures to propose, how to motivate compliance, etc.
- h) The KM section notes there will be sharing of eco-waste infrastructure approaches and financing models. So presumably these models and approaches are part of the project; yet, they are not mentioned in C1 or C2. Please add.

i) The text in the Alternative Scenario section needs to be consistent with Table B. In particular, the text notes, “The main project components include:...” but then only Output 1.1 is noted, not C1, which reflects a disconnect between C1 and the associated outputs that needs addressing.

J) The Objective needs to reflect upon the fact that this investment will be supporting the implementation of the BOBLME SAP.

K) The agency project document needs to be uploaded. The project document is the internal agency document with which decisions and project/program management decisions are made. It has to include most of what is in the CEO Endorsement Request, the project description and may have annexes/budgets. This expectation was noted in the latest policy update on the project cycle.

L) The Taxonomy and Core Indicators for the project need to be completed.

M) Core indicators 7 and 11 for the project need to be filled in. These two seem to have been omitted in the submission.

n) Regarding the Gender Action Plan, the focus of the GAP as written is on ensuring gender equity for the project processes, such as hiring and inviting training participants. While these aspects are important, it is also important to consider how the actual project will impact women. In this project, the activities are focused on reducing wastewater pollution. Given women are often responsible for household sanitation and family health, they are likely to greatly benefit from this project. The GAP needs to assess and consider how to address the benefits and any negative impacts of the project.

(lkarrer Feb 13, 2020) No.

a)The headings and text within Table B, the main text and the Summary Table in the text are inconsistent making it difficult to assess what is actually planned. Please edit for **consistency**. Some specific examples are provided in the following comments, but this is an overall concern that needs review.

a & b) The **C1** tasks continue to focus on tasks that are **not action-oriented**. Only task 1.1.4 indicates plans to establish a septic system. Task 1.1.8 indicates assistance with implementation of SAPs; however those tasks are focused on “data updates, GIS assistance, modeling and tracking results” which is more monitoring – not actual change in pollution practices. With \$10.3M going toward this component, there need to be more actionable tasks.

e) A more detailed explanation than under 1. Project Description needs to be provided regarding the change in plans for the project to now include not only Mandalay, but also **Mawlamyine and Hpa-An**. This explanation needs to explain the impact on the project, including to the outcomes and outputs.

Documentation needs to be provided that the Mawlamyine and Hpa-An loan has cleared. If the Mandalay loan is not approved, then reference to activities in Mandalay need to be removed.

Relatedly, in reviewing the narrative, there are inconsistencies with regard to working in the three cities. For example, Outcome 1 references all 3 cities, but only notes Mawlamyine and Hpa-An in Tasks 1.1.4 and 1.1.5. Please clarify.

Finally, it is unclear what the GEF funds and what the **ADB loan will go toward** in each of the components. In particular component 1, which is largely capacity building and planning, includes \$7.9M from ADB, but it's unclear what those funds will go toward. Presumably they would go toward Tasks 1.1.4 and 1.1.5, which explicitly note the two cities, but this tie to the loan is not indicated. Perhaps a table indicating by task the funding from the GEF and from ADB would help clarify.

h) The **knowledge management** section is much improved; however the text in the narrative differs from the table. For example, Table B notes plans to engage with the Global Partnership on Nutrient Management and IW:LEARN but this plan is not noted in the narrative text. Please edit for consistency. Also, plans for learning from other projects needs to be clear.

l&m) Please add to the indicators an estimate for Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment. Such an estimate is already provided in the Target Contribution to GEF document.

n) With regard to the **Gender Action Plan**, the concerns noted have not been addressed. Text has been added noting that women are important with regard to waste water management; however, the GAP still only addresses gender equality as related to hiring staff, ensuring equal representation in events and raising capacity and awareness of women. The Pro Doc does not consider how women and men are affected by the actual project activities to reduce wastewater pollution.

o) Please clarify the institutional arrangements. The text and table indicate that MONREC will be the EA, but Figure 6 suggests the EA will be a consulting firm.

(LKarrer, April 27, 2020)

a) No. The Table and Alternative Scenario narrative are still not aligned. Just reviewing Component 1 identified these discrepancies.:

i) The narrative refers to “Task 1.1.1 Project Inception” and then explains data quality expectations. The narrative explains that “...the SAP will lay out the DQOs and provide a roadmap of how water quality data is to be collected.” In contrast Table B, refers to Task 1.1. as “Pollution Reduction SAP priorities and parameters defined,” which suggests policies, regulations will be set to reduce pollution. The narrative suggests the tasks will focus on data collection and standards; whereas the Table suggests this task will set controls through the SAP. Which is it?

ii) The Project Description Summary Table notes Task 1.1.1 City-level environmental data management..., which suggests a focus on data collection, modeling and assessments; whereas the narrative in the Alternative Scenario section explains that a septage waste management system will be established. Which is it?

iii) The Table notes 1.1.4 ECD implementation of pollution reduction SAP components implies that this task will implement the SAP. In contrast the narrative refers to upgrading monitoring capacity with improved laboratory resources and improving staff capacity.

Please address these and ensure the other components are aligned between the Project Description Summary table and the narrative in the Alternative Scenario section.

Please review all components and ensure the narrative and the framework are aligned.

a&b) The previous concern that Component 1 does not have enough action-oriented tasks is addressed by moving funds to Component 2 as explained in the response to this comment. It is, therefore, confusing that Box 2 lists “action oriented” tasks for Component 1, which are not action oriented (except 1.1.3 Establishing the

septage waste water system...) on the basis that they do not directly reduce pollution. It's also not clear the purpose of the column titled, "Support to ADB projects". Is this column items that ADB is funding through the loan?

e) Documentation was not found attached to the CEO Endorsement Request document indicating the loan was approved.

n) The Gender Action Plan still does not address how women and men are expected to be affected by the actual project activities to reduce wastewater pollution.

Also 1) As agreed by email, please submit the Technical Assistance document for the project as the Project Document.

2) The Core Indicators have nothing listed under Indicator 7. Since this project will be improving management of BOBLME, it would seem that at least one LME would be listed.

2) 3) Table B does not include any of the stress reduction indicators, but instead these have been highlighted (tons of N etc) in the Annex A Results Framework. In addition, the 30,000 hectares included under core indicator 5 in the RF in Annex a is not noted in Table B. Please edit for consistency.

((KKarrer, June 8, 2020). Yes.

### **Response to Secretariat comments**

ADB Response 02 March 2020:

a) The tables in the narrative document have been aligned for consistency (including Table B), with amended explanation of the changes to the project from PIF stage.

a-b) There is a justified concern regarding the proposed IRWM SAPs being accepted and implemented in the three project cities. Recognizing the concerns, the inputs are scaled back to a more achievable goal of developing 'Pollution Reduction SAPs' for the ECDs in the three cities. The ECD scopes in the three cities remains much the same with integration with any City data or GIS platforms, however the inputs to city-wide data collection, integration and GIS across all departments is eliminated. Also scaled back is the investment in data collection methods and data quality methodology. Although the methodology is still provided by an international team, the upscaling nationally and ongoing data reviews is eliminated. Box 2 in the narrative section summarizes the "action orientation" of activities.

Project resources instead are directed to pollution reduction in the two ADB GMS3 project cities, Mawlamyine and Hpa-An. The budget in C1 shifts nearly 50% of the task 1 budget to task 2, the eco-demonstrations. Additional capacity to collect and deliver fecal sludge from septic tanks and the markets to ADB's biophilic landfill will reduce pollution while also increasing the landfill degradation performance. An investment increase in the largest, single domestic pollution source in Mawlamyine and Hpa-An, the public markets, are upscaled to further reduce pollution entering the BOBLME. Pollution treatment for 3 of Mawlamyine's open

sewers will reduce pollution entering the BOBLME while converting the open sewers in to a safe, useable pedestrian byway that also allows tourist access from the tourist waterfront to the ADB financed temple historic preservation.

Regarding Task 1.1.8 - This task is now reduced to 'Pollution Reduction SAPs' for Mandalay, Mawlamyine and Hpa-An. Supporting subtasks are institutional, capacity and technology support for the setage and wastewater collection, treatment and disposal program (the budget is reduced and shifted to task 2). These are also important for the current ADB GMS loan, where there are no current discharge criteria for the leachate, for the market waste or for the septage waste. By establishing the baseline criteria and monitoring the results, the detailed designs can be made, the project implemented and post-evaluation completed.

Myanmar lacks environmental management infrastructure, enabling conditions and good data on which good decisions need can be based. In the global environmental legislation and management field, Myanmar can be considered a 'new' country. There is very little ambient, domestic or industrial water quality data, which is necessary to make any discharge decisions, plans or legislation sellable to the government and community. These initial tasks in the Pollution Reduction SAP not only collect the needed data for 3 cities, provide the decision-making tools and develop priority investments. Some of the investments are in ADB's lending program now but others are likely to be future investments by ADB, World Bank and other development partners – all of which will be based on the these GEF sponsored SAPs. Once implemented under this Project, both in a major city (Mandalay) and smaller cities (Mawlamyine and Hpa-An), they are likely to be replicated and upscaled nationally

e) Because of the increase of scope from one city on a single watershed to: 3 cities on two watersheds there is some background that is updated. With the Mandalay Project on hold it was suggested to widen the project to include the ADB GMS3 loan which includes: an equally important watershed; 2 coastal cities; and a landfill project that could be modified into a new, biophilic landfill that treats septage waste while increasing solid waste degradation. Mandalay ECD remains in the project since the Mandalay region remains a large pollution source that eventually enters the BOBLME. The pollution reduction SAP will engage the Mandalay ECD while awaiting a re-start of the ADB project or additional investments are made to complete the domestic wastewater treatment, septage waste collection and industrial waste treatment.

The GMS loan is approved and effective from November 2019 (the loan agreement is accessible through the link annexed to the RRP document); and the supervisory consultants are in the field; the landfill team(s) for Mawlamyine and Hpa-An are awaiting the GEF investment so the 'biophilic' landfill design can be updated and implemented. The Mandalay Urban Services Improvement Project is a two phase loan - phase one is on-going and subject to a number of delays, which have pushed the scheduling of the Phase 2 (the waste water infra) into the future. Once this second phase does come on line, efforts will be made to link directly. For now, the work in Mandalay is focussed on ECD capacity development and supporting scientific and environmental monitoring actions.

The TA financing from ADB to support the main loan is primarily for the Supervision Consultants (\$5.3M) who are supervising the two landfills in Mawlamyine and Hpa-An and water supply in Mawlamyine, Hpa-An and Myawaddy. There is also \$1 million for the design of the Hpa-An Industrial Park and \$1 million for the restoration of the Mawlamyine Temple Historic Preservation. Other TA activities include training and cross border cooperation for Myawaddy (funded by the Thai International Cooperation Agency).

Most of the cooperation from the ADB GM3 loan are in Task 2, which include collection and disposal of septage sludge at the biophilic landfills in Mawlamyine and Hpa-An. However Task 1 provides the enabling conditions for a sustainable system proposed in Task 2.

h) the Knowledge Management section below has been updated, with elaboration on the targeted collaboration with GPNM and IW: LEARN5.

l-m) the Core Indicator 11 is updated in the Portal and also a worksheet is annexed.

n) additional narrative on Gender Action Plan has been provided.

o) Figure 6 has been amended for clarity.

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The project approach has been refined for more clarity and detail on actionable items. For the first component / outcome on SAPs, it should be noted that support will also include SAP implementation for the three respective cities / local governments and stakeholders; with view to upscaling nationally

For component / outcome 2, there is increased clarity on how investments in demonstrations pilots will contribute to actual and future pollution reduction loads. This is explained in more detail below

A summary table of project actions is provided towards the end of the Alternative Scenario section of the Request for CEO Endorsement document.

More specific responses below:

a) Revised and provided more detail on the SAPs and their implementation (see table below)

b) The intention is to encourage and support the implementation of the SAPs. The timing is ideal for the SAPs with the recent National Waste Law and the ensuing National Ambient Water Quality Standards and the need to plans of how to implement these laws. The SAPs would, among other things, focus on: i) integrating with broader city development planning, ii) protecting water resources, iii) reducing pollution, and iv) promoting climate risk screening / assessments.

c) C1 and C2 have the same outcome, reducing pollution. However, C1 delivers results from implementing environmental policy across all stakeholders and is intended to be upscaled throughout the country. Principal among the policy implementation priorities will be to strengthen institutional and human capacity to enforce provisions related to the National Waste Management Action Plan, and in particular the water quality standards referenced in the project documentation. These are in line with the adage: “ you can’t manage, what you can’t measure”. C2 delivers more ‘on the ground’ pollution reduction through several technology demonstrations that enhance the ADB baseline investments and also are intended to be upscaled. These demonstrations are intended to be pilots, two of which will deliver clear, measurable pollution reduction outputs.

- d) Action items better described and summarized neatly in a table included in the latter part of the Alternative Scenario .
- e) The two coastal cities have near-term ADB loan investments that either compliment the GEF investment or are expanded to further reduce pollution with the GEF investment. Mandalay has ongoing and future ADB loans (as indicated in the document on page 18) that the GEF investment is meant to influence. The MUSIP loan package in Mandalay is experiencing some delays, but expected to come on track in latter 2020 and beyond. Furthermore, the increased focus on the two coastal cities provides a stronger rationale for demonstrable pollution reduction, whereas the case for such is more difficult to make for Mandalay given that it is much further upstream.
- f) Agreed. Consolidated into in Output 1.2, specifically Task 1.1.2..
- g) Additional detail provided for C3. The stakeholder engagement plan provides a framework for organizations to be engaged and C3 provides a method for ECD and the city to work with these organizations. We would however, emphasize that data management is an essential element of IWRM. By strengthening institutional capacity in this regard, this will contribute to the design and execution of pollution reduction activities.
- h) The approaches, financing and compliance mechanisms are better discussed and included in C1 and C2.
- i) The alternative scenario and tables throughout are updated and more consistent between text and table.
- j) The tie to the BOBLME SAP is better identified in sections of the narrative; as well as the Portal question specific on this item.
- k) The main loan document for the ADB baseline project has been uploaded, as well as a draft Knowledge Sharing and Technical Assistance paper, which will be processed internally by ADB should the CEO endorsement be secured.
- l) We require some additional guidance on this. The current project is GEF 6 - where as the Portal Core Indicator framework is for GEF 7. Not sure how to reconcile this. But the documents attached do provide information on GEBS and relevant sub-indicators, along with BOD reduction worksheet.
- m) Please see attached.
- n) Addressed in the updated Gender Action Plan.

#### **ADB RESPONSE 05 MAY 2020**

**Note: Recent modifications to Request for CEO Endorsement highlighted in yellow**

- a) i) Task 1.1.1 has been clarified and aligned between the Table B, the alternative scenario narrative and the Annexed Results Framework
- a) ii) Same as above

- a) iii) This section on 1.1.4 has been revised and elaborated for clarity – in the Table and the alternative scenario
- a) and b) Box 2 has been removed as it is redundant. There is already a section on the GEF project linkages with ADB loan.
- e) The Loan Agreement between ADB and Government of Myanmar is now uploaded as supporting document
- n) the revised Gender Action Plan has been uploaded (see yellow highlights)
- 1) The "Draft ADB Project Document" has been uploaded as supporting document
- 2) Core Indicator 7 - denoting the Bay of Bengal has been included. The supporting document on "Target Contributions to GEBs" also includes this reference (although there is no Core Indicator 7 under GEF 6)
- 3) The Table B has been adjusted as have references to the stress reduction indicators etc. Please note that this figure has been revised to 60,000 hectares (With breakdown provided per project area)

Also please note under **RISKS** - a section has been added related to response to Covid-19 health crisis

**3. Is the financing adequate and does the project demonstrate a cost-effective approach to meet the project objective?**

**Secretariat Comment at CEO Endorsement**

No (Karrer Dec 6, 2019).

The ADB co-financing letter states that the ADB investment is estimated at \$80M with a further \$6.53M contribution from the government. ADB cannot speak on behalf of the government. The letter needs to only reflect the ADB commitment for the \$80M. Please revise and resubmit.

Yes (Karrer Feb 13, 2020).

**Response to Secretariat comments** 3. The revised co-financing letter has been uploaded.

**4. Does the project take into account potential major risks, including the consequences of climate change, and describes sufficient risk response measures? (e.g., measures to enhance climate resilience)**

#### **Secretariat Comment at CEO Endorsement**

No (Karrer Dec 6, 2019).

Risks are articulated and measures to address these risks are explained in section A.5 Risks; however, the one point on climate change focuses only on changes in river flows. Other impacts, such as flooding and increased storm frequency, need to be considered, particularly for the coastal impacts.

Yes (Karrer Feb 13, 2020).

#### **Response to Secretariat comments**

4. Narrative on climate risks is included in the A.1.1 among the environmental problems. In the Alternative Scenario, climate risk screening and assessment will be included in the IWRM SAPs – based on ADB, GEF and STAP guidance. This is reflected in the revised narrative and also in the Project Results table; as well as the A.5 Risks section.

**5. Is co-financing confirmed and evidence provided?**

#### **Secretariat Comment at CEO Endorsement**

No (Karrer Dec 6, 2019).

The co-financing consists of \$80M loans from ADB, which are explained in section A.1.2 Proposed alternative scenario; however, the ADB plans are not explained as part of the project plans. The ADB plans are not included in Table B although the amount is noted. And in the text, the ADB plans are described separately from the GEF investments. These plans need to be incorporated into the project framework.

No (Karrer Feb 13, 2020).

As noted above, the ADB plans need clarification with regard to the project activities relative to GEF investments.

Yes (LKarrer, April 27, 2020)

**Response to Secretariat comments**

02 March 2020

There is a clear separation between ADB loan activities and GEF - supported activities. These are summarized in Box 1 of the narrative above.

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5. The link between the ADB baseline investments and the GEF grant has been explained in a summary table in Alternative Scenario front section. In the explanation of outputs and activities, there are references on how the GEF financing will complement the ADB loan, where relevant.

**6. Are relevant tracking tools completed?**

**Secretariat Comment at CEO Endorsement**

Yes (Karrer, Dec 6 2019).

**Response to Secretariat comments**

**7. Only for Non-Grant Instrument: Has a reflow calendar been presented?**

**Secretariat Comment at CEO Endorsement**

Not applicable.

**Response to Secretariat comments**

**8. Is the project coordinated with other related initiatives and national/regional plans in the country or in the region?**

**Secretariat Comment at CEO Endorsement**

Yes (Karrer, Dec 6 2019). Plans are aligned with government and NGO plans.

**Response to Secretariat comments**

**9. Does the project include a budgeted M&E Plan that monitors and measures results with indicators and targets?**

**Secretariat Comment at CEO Endorsement**

No (Karrer, Dec 6 2019)

These plans are in place; however, some of the indicators need to be quantified. 1.3, 1.4, 1.5, 3.1. Some of the indicators may change with revisions of the activities to address comments in question #2 above. Please keep in mind the need to quantify the indicators.

Yes (Karrer Feb 13, 2020)

**Response to Secretariat comments** More details on the M&E Plan and associated budget are provided in the relevant section of the Portal.

**10. Does the project have descriptions of a knowledge management plan?**

**Secretariat Comment at CEO Endorsement**

Yes (Karrer, Dec 6 2019). Particularly important are plans to hire a knowledge sharing expert to the team.

No (Karrer, Feb 13 2020). Upon further reflection knowledge management plans in Component 3 need to include sharing lessons learned and experiences through IWLEARN. One percent of the budget needs to be explicitly noted as allocated to engagement in IWLEARN. There is only cursory reference to IWLEARN in the description of Component 3. More explanation needs to be provided in this section and in A.8 Knowledge Management section.

Yes (LKarrer, April 27, 2020)

### **Response to Secretariat comments**

02 March 2020

The project budget has always allocated 1% for IW:LEARN. Please review.

The Knowledge Management section elaborates on the nature of potential targeted collaboration with GPNM and IWLEARN5.

### **Agency Responses**

**11. Has the Agency adequately responded to comments at the PIF stage from:**

**GEFSEC**

### **Secretariat Comment at CEO Endorsement**

Not applicable.

### **Response to Secretariat comments**

**STAP**

**Secretariat Comment at CEO Endorsement**

Not applicable.

**Response to Secretariat comments**

**GEF Council**

**Secretariat Comment at CEO Endorsement**

Not applicable.

**Response to Secretariat comments**

**Convention Secretariat**

**Secretariat Comment at CEO Endorsement**

Not applicable.

**Response to Secretariat comments**

**Recommendation**

**12. Is CEO endorsement recommended?**

**Secretariat Comment at CEO Endorsement**

No (Karrer, Dec 6 2019). The previously noted points need to be addressed.

Yes (Karrer, June 8, 2020).

**Response to Secretariat comments**

**Review Dates**

**Secretariat Comment at CEO Endorsement**

**Response to Secretariat comments**

	<b>Secretariat Comment at CEO Endorsement</b>	<b>Response to Secretariat comments</b>
<b>First Review</b>		
<b>Additional Review (as necessary)</b>		

**CEO Recommendation**

**Brief Reasoning for CEO Recommendations**

The ADB project *Demonstration Investments in Eco-Waste Infrastructure Solutions: Thanlyin and Ayeyarwady Watersheds* (ADB; \$4.59M GEF; \$80M Co-Financing) is designed to create the enabling conditions and support actions to reduce pollution discharged to the Thanlwin and Ayeyarwady Rivers, and ultimately the Bay of Bengal Large Marine Ecosystem (BOBLME). Focused in Myanmar, this child project supports the programmatic goals of implementing the BOBLME Strategic Action Program, particularly with regarding to addressing wastewater pollution.

The project includes policy interventions in Mandalay, the coastal cities of Mawlamyine and Hpa-An, eco-demonstrations in Mawlamyine and Hpa-An and national and regional knowledge sharing of experiences. The project is aligned with the ADB \$80M loan to the government of Myanmar, which will upgrade basic infrastructure, including for wastewater and for solid waste, and strengthen urban management capacities to develop the towns of Mawlamyine and Hpa-An. The project targets include 30,000 ha of marine habitat under improved practices to benefit biodiversity, one Large Marine Ecosystem with reduced pollution and hypoxia, 4 new strategic action programs, and over 25,000 beneficiaries with the majority female.

The project demonstrates several innovations, including developing and implementing dedicated pollution reduction strategic action programs for 3 cities in 2 key watersheds in Myanmar. The SAP processes involve cross-sector government coordination, including the environmental agency and the city engineering departments, as well as collaboration with community service and women organizations. The focus on science-based decision-making will lead to the development of water quality standards as Myanmar develops their nascent environmental and pollution management system. Finally, the mixing of septage waste with landfill is also a novel approach designed to enhance biophilic treatment.

Sustainability is addressed at several levels and includes building local capacity to develop and implement the SAPs. Each component builds individual capacity and the institutional mechanisms to ensure continuous use beyond the GEF and ADB project funding. Linkages between Components 1, 2 and 3 are designed to create momentum and the capacity as well as incentives for sustained work after GEF support. The success of the components will motivate city governments to further expand their sewage collection and treatment network; to control industrial pollution discharges; and to address non-point source pollution.

Scaling up of the project experiences will be achieved through knowledge sharing, which is a critical aspect of the project. The ties to the BOBLME program and to IWLEARN will facilitate knowledge sharing at regional and global scale. More specifically, the eco-demonstration component is designed to expand local demand for expansion of pollution control and is intended to encourage other Myanmar mayors to address their cities' pollution and water quality issues.

This project provides a unique opportunity to invest in addressing pollution into the BOBLME through innovative approaches and technologies and with opportunities to scale regionally and globally.