

Annex D: Example Strategy – ECO Asia

1. AN ECO ASIA STRATEGY FOR IMPROVING BANKABILITY AND FINANCING OF WATER AND SANITATION SERVICES IN ASIA

This document describes the strategy for improving access to financing for water and sanitation services⁵⁹ in Asia. The strategy deliberately combines innovative financing with the effort to make utilities “bankable.” Experience clearly shows that working on financing without complementary efforts to enhance the credit capacity of utilities does not work. Banks want to lend to bankable utilities; and only bankable utilities are capable of meeting their obligations under loan and bond agreements.

2. STRATEGIC FOCUS AREAS FOR THE ECO ASIA PROJECT

The Eco Asia project has five Strategic Focus Areas related to financing and creditworthy water and sanitation services. Each Strategic Focus Area addresses a basic constraint to the development of sustainable water and sanitation services in Asia. These are regional challenges in Asia. Here, regional problem refers to the fact that multiple Asian countries face similar constraints. The Eco Asia Strategic Focus Areas are:

- A. **Effective models for serving the poor.** The poor are often excluded from services from public water systems. The reasons the poor are underserved include inadequate prices for services to poor consumers, weak governance of the utility, and inappropriate service models, such as house connections in areas where community standpipes and wholesale services are more appropriate. This Focus Area will identify business and technical models that expand services to poor consumers on a sustainable basis.
- B. **A sustainable business case for sanitation services.** Sanitation services in the region are generally under-funded and lack business models for sustained service. There are some cases where donors or governments have built wastewater collection and treatment systems that are not maintained. In other cases, financial constraints make it impossible to expand sanitation services. It is now well known that throughout much of the region, the system of user charges – price, method of billing and collection, and powers to enforce user charges – is not adequate for long term growth of sanitation services. Unless an adequate business case is developed for sanitation services, facilities will not expand to meet the region’s needs.⁶⁰

⁵⁹ Throughout this strategy, we refer to water and sanitation utilities as either “utilities” or more generally as “service providers.” Depending on the country, these may be departments of a national or local government, public authorities, public corporations, or private operators.

⁶⁰ The USAID Environmental Health Project (EHP), for example, identified the business problems of sanitation as underlying reason that sanitation services are not expanding in LAC region. The EHP report “Improving Sanitation in Small Towns in Latin America and the Caribbean” states: “The root causes of inadequate sanitation are insufficient recurrent revenues and poor management, not inappropriate technologies... Trying to solve the problems (of sanitation) by introducing “new” and “more appropriate” technologies more often does not address the main constraint.” Page 25.

- C. **Innovative governance of water and sanitation utilities.** A key constraint to expanding water and sanitation services is the weak governance of water and sanitation utilities. For example, the ADB’s recent report titled “Asian Water Supplies: Reaching the Urban Poor”⁶¹ explains that weak governance of water utilities is the single most important reason that the poor are underserved. The World Bank’s recent Characteristics of Good Performing Water Utilities provided detailed evidence showing that the excellent performance of some utilities is due to their good governance arrangements.⁶² This Strategic Focus Area will support introduction and exchange of innovative governance methods that are associated with good performing water and sanitation utilities. The emphasis is on corporate governance models that are considered “best practice” in developing country water and sanitation utilities. These include corporatization, performance contracts, staff incentive programs, benchmarking and other approaches.
- D. **Regulation, price setting and cost recovery.** Cost recovery is a major challenge for water and sanitation utilities throughout the Asia region. There is a pressing need to improve the ability of utilities throughout the region to cover their costs. A key objective of the Eco Asia project is to help Asian partners develop, test and share effective methods of setting water and sanitation prices so that they are reasonably cost reflective.⁶³ This involves setting up effective regulators and introducing good regulatory methods.
- E. **Financing mechanisms for water and sanitation services.** The objective of this Strategic Focus Area is to support and disseminate innovative financing mechanisms for water and sanitation capital investment. Water and sanitation utilities that are in transition from financially troubled to bankable require specialized types of financing. In addition, specialized financing mechanisms enable utilities to borrow from local capital markets.

These Strategic Focus Areas are the basis for focusing, organizing, and evaluating project results related to innovative financing and transition to creditworthiness in water and sanitation utilities. It is important to note that these Strategic Focus areas are consistent with the Eco Asia project’s stated objective of helping Asian partners achieve full cost recovery. The Focus Areas are building blocks on which cost recovery and sustainability is established.

⁶¹ Arthur McIntosh, 2003, Asian Development Bank & International Water Association Publishing.

⁶² Governance refers to two things: civil governance, and corporate governance. Civil governance is related to the institutions and processes of local, regional and national governmental bodies, and civil society involvement with these bodies. Corporate governance refers to the institutions and processes that govern management of a water or sanitation utility. These are often easily identifiable as the corporate form, supervisory structures, primary and secondary legislation directly related to the utility, by laws, and incentives for good performance.

⁶³ “Reasonably cost reflective” here is a practical cost recovery concept that indicates that the utility has enough cash to pay its recurring cash costs. This is basically the same as a “revenue requirements” approach that is commonly used by regulators. This is contrasted with “full cost recovery” which means that the utility recovers its entire economic cost, including depreciation, debt service, and pension obligations.

3. SPECIFIC FINANCING ISSUES

There are four areas in which the Eco Asia project can help mobilize financing for water and sanitation utilities:

- **First and foremost, help with the transition to “bankable”⁶⁴ utilities.** The majority of Asia’s water and sanitation utilities are not creditworthy. In fact, almost all utilities operate without full cost recovery, and most do not even recover O&M costs. Unless utilities become creditworthy, the opportunity for financing through private credit markets is limited. Establishing financing facilities that specialize in lending to water and sanitation utilities will not accomplish much unless the number of creditworthy utilities grows dramatically. Four of five Eco Asia Strategic Focus Areas help utilities become bankable. For example, they help utilities expand services to the poor without adding to the financial losses of the utility. If financing of water and sanitation is to expand, it is essential to concentrate resources on helping utilities transition to bankability, and at the same time, establish innovative, sustainable financing mechanisms. Supporting transition to bankability is not a financing task per se; it is strategic activity that makes innovative financing work.
- **Second, there is a need for well managed, sustainable, specialized financing institutions and mechanisms, such as revolving funds, bond pools, and special water/sanitation loan windows in financial institutions.** Specialized financing mechanisms allow three important financing objectives to be accomplished: (1) specialized lending products tailored to the needs of utilities in transition can be provided. (2) bond pools, leveraged revolving funds, and special lending windows enable utilities to indirectly access private credit markets. This is particularly important for utilities that are in secondary and tertiary cities. (3) market oriented subsidies can be channeled to utilities by combining public grants and private loans. In OECD countries, revolving funds are considered a highly efficient mechanism for channeling public subsidies into water and wastewater services that would otherwise not be financially viable.⁶⁵ The Eco Asia project will help transfer effective models specifically tailored to the needs of utilities in the region.⁶⁶

⁶⁴ The term “bankability” here means that the utility is capable of servicing a term loan. It also implies that the utility has sufficient cash revenues to pay its cash operating costs, including any debt service obligations. It is essentially equivalent to the “creditworthiness” of the utility, although “creditworthy” also refers specifically to the credit criteria of a rating agency or bank in many cases.

⁶⁵ The transfer of public subsidies for water, and particularly wastewater, facilities is a common practice in developed countries. This practice reflects the fact that clean water and good sanitation are considered to have extensive public goods associated with universal access to these services. In many situations, the utility cannot pass all costs to direct users of services. In these situations, governments, including the U.S. and other developed countries, adopt a policy of transferring public funds into the services. Generally, the subsidies are capital subsidies, not operating subsidies. Revolving funds make this policy of subsidizing a portion of the cost of water and sanitation services more predictable, efficient and enable leveraging through the capital market.

⁶⁶ It is important to note that Eco Asia’s role in actual design and implementation of bond pools and revolving funds may be limited by the fact that several bilateral USAID missions already have ongoing bilateral technical assistance projects that are working specifically on this. For example, USAIDs in India, Indonesia, and Philippines have

- **Third, there is an urgent need for suitable loan products⁶⁷ for water and sanitation utilities that are in transition to bankability.** Utilities that have just reached operating “breakeven” cannot immediately take on large term loans for major capital development projects, like expansion of connections for the poor or construction of new water treatment plants. Utilities that are in transition need specialized credit products that support their transition to bankability. The types of investments that help with this transition would generally include the following:
 - i. Customer enumeration
 - ii. Programs to convert illegal customers to legal customers
 - iii. Billing and collection systems
 - iv. Metering of larger consumers
 - v. Leak detection and repair equipment
 - vi. Replacement of pumps and valves
 - vii. Limited sectorization to increase the reliability and efficiency of an existing network
 - viii. Establishment of customer service programs

Lenders need to develop loan products that are specifically designed for utilities in transition, including the types of investment that are allowed under the loans, grace periods, and tenor of loans.⁶⁸

- **Fourth, introduce appropriate project financing structures, such as lease contracts, and Rehabilitate and Operate contracts.** It is very common now to use innovative project structures as a means of mobilizing finance for water and sanitation services. This is commonly referred to in the infrastructure finance business as “structured finance.” Rehabilitate and operate contracts are very commonly used in the Middle East and West Asia to help mobilize financing. In Macau, Senegal, Cote d’Ivoire, Armenia, Poland, the Czech Republic, Morocco and other countries, lease contracts have been excellent models in terms of both performance improvement and providing access to new financing. In many cases over the past decade, water and sanitation projects are financed through a combination of private operator equity and debt, and new public sector loans within the framework of a sound project structure. Both leases and

ongoing project activities aimed at establishing pooled financing mechanisms. The role of the Eco Asia project may focus on helping the countries share best practices related to these facilities.

⁶⁷ The term “loan products” refers to the financial characteristics and objectives of a loan. These would include the tenor, grace period, types of security, and the purposes for which the loan may be used by the borrower. As noted above, in “transitional” situations, loan products should generally fit the transitional capital investment requirements of the water or sanitation utility.

⁶⁸ One of the recent operational lending policy developments that is common among development finance institutions is that different loan products are offered depending on the financial condition and capacity of a utility. It is common today for IFIs to stipulate that water utilities that suffer from high levels of non-revenue water will not be eligible to take loans to build major new water treatment plants. This reflects two important considerations of the lender: (1) utilities with high non-revenue water are also generally financially weak, and cannot take on large loan repayment obligations, and (2) the utility could meet its need for additional treated water by reducing losses.

Rehabilitate/Operate contracts are an important area for further innovation in Asia.

This “financing” strategy for Eco Asia Project addresses all these areas: support for transition to bankability, development of appropriate financial institutions and credit products, and introduction of best practices in project finance structures.

4. PILOT STRATEGY AND CANDIDATE PROJECTS

The purpose of pilot projects under the Eco Asia project is to enable Asian partners to develop and share successful solutions to the major constraints facing the development of the Asian water and sanitation sector. Pilots are an opportunity for Eco Asia partners to test and demonstrate innovative reform approaches. Each pilot will involve a local partner designing and testing an innovative solution to a major regional constraint. In addition, the Eco Asia project has a strategy for sharing the results of the pilots with teams of high level decision makers working in each country on these Strategic Focus Areas.

The project will work on approximately 16 pilots during the next four years. At this point, the preliminary list of potential pilot projects includes the following:⁶⁹

- **Continuous water supply for poor consumers in Pune, India.** This pilot is designed to demonstrate three things. First, the pilot will demonstrate that it is feasible to provide continuous (24/7) service to a poor community in Pune. Second, it will develop a business model for sustainable high quality water service to a poor community. Third, it will test the important hypothesis that poor consumers are willing to pay more for water when they receive better service.
- **A model of sustainable decentralized sanitation services in Sri Lanka.** This pilot will demonstrate a sustainable decentralized model of sanitation services. The sanitation services will include septic systems, sewage collection and drainage, and primary treatment facilities. The model is decentralized in the sense that it is a set of locally based utilities. A specific effort will be made to demonstrate that financial sustainability of the services.
- **An Internet-based billing and payment system for water services in Sri Lanka.** This pilot, based on a commercial twinning arrangement between Manila Water and the Water Development Board, will demonstrate the application of already widely available utility billing and collection technology using the Internet. Application of this type of technology is important to increase the efficiency and improve financial performance of a water utility. The pilot serves two purposes: (1) using a commercial contract, Manila Water will help WDB design and install an improved billing and collection system based on the excellent system currently used by Manila Water; (2) the pilot demonstrates the

⁶⁹ This list is preliminary, and does not reflect the full range of potential pilots. None of these pilots has been initiated. The list is provided here principally to illustrate the point that the pilots are directly relevant to achieving results in the five Strategic Focus Areas.

potential to transfer critical management technologies on a commercial basis, rather than through donor TA.

- **An improved water utility lending program in Philippines.** LUWA, the agency that provides a large share of financing for water utilities in Philippines, is implementing a new approach to lending. The Philippines has approximately 460 local water utilities. As would be expected, these utilities range from well run, financially strong entities, to deeply troubled utilities. When LUWA was first established, its statutory obligation was to provide loans and grants to all water utilities, including financially strong and deeply insolvent entities. By the early 1990s, the performance of LUWA's loan portfolio was – as would be expected – very poor, with only 35% of loans providing repayments. A decision was made to reform LUWA by allowing it to concentrate principally on the most creditworthy water utilities. This shift in operational policy resulted in a dramatic improvement in LUWA's credit portfolio, to an almost 90% repayment rate. However, the change in credit policy also resulted in the large majority of water utilities in the country becoming ineligible for loans from the principal agency responsible for credit support to the water sector. Recently, a national Executive Order requires reform in LUWA's credit policies and practices so that they become similar to credit norms in the private credit market. A key feature of the reform involves a credit rating system that puts water utilities into one of four categories: creditworthy (A), semi-creditworthy (B), pre-creditworthy (C), and not creditworthy (D). The Eco Asia project will support a pilot to help LUWA operationalize this new credit program. The pilot will involve two main features. First, the project will assist LUWA in designing the appropriate credit products for each category. Second, the project will work with two or three specific water utilities to prepare loan applications using the new credit criteria and credit product framework. The result will be that two or three borrowers will receive loans under a financing system that is both more sustainable and has stronger incentives for performance improvement than the past systems. On a regional basis, this pilot will demonstrate an effective approach to lending to water utilities that are in transition from financially troubled to bankable.
- **Expansion of PDAM Medan water services to rural towns and villages.** This pilot will provide technical support to Medan's water utility, PDAM Medan, in expanding services to outlying villages and towns. Today, PDAM Medan is the best performing water utility in Indonesia. However, although it is responsible for provision of water services on a provincial basis, it has concentrated its services in the city of Medan. One important global trend is expansion of municipal water utilities into regional utilities. This has been an effective means of expanding water and sanitation services in countries such as Armenia, Chile, Cote d'Ivoire, Hungary, Lithuania, Russia, Senegal, Thailand and Uganda. This pilot support a twinning agreement between PWA and Medan PDAM to help Medan PDAM identify an effective business and service model to use in expanding services to selected villages and towns that now do not have adequate service. It is important to implement this expansion in a manner that does not damage the existing excellent performance of PDAM Medan. This will involve identifying a business and servicing model that involves cost recovery, and decentralized management, possibly using innovative profit sharing incentive schemes such as used in other countries that have regional service models. In terms of Asia regional impact, this pilot will

demonstrate a model for strong city utilities to expand coverage on a regional basis using decentralized, incentivized approaches.

- **A corporate development program for Provincial Water Authority (PWA) of Thailand.** Through a twinning arrangement between PWA and the Singapore Public Utilities Board (PUB), PWA will prepare a corporate development plan that will drive the improvement of services, expansion of coverage, and increase the financial sustainability of water services in much of rural Thailand. This twinning arrangement will allow PWA to adopt corporate innovations and techniques that have resulted in PUB becoming one of the best performing water utilities in the world. This demonstrates the value of regional cooperation, disseminates global best practices in water utility governance and management in Asia.
- **A performance contracting framework in an Asian water utility.** In the 1990s, the Provincial Water Authority (PWA) of Thailand adopted a performance management contracting framework. The performance management contracting framework is a key best practice method that has led many water utilities in other countries to dramatically improve performance and sustainability. Introducing a performance agreement accomplished this in Thailand as well, transforming PWA from heavy yearly financial losses, to substantial financial surpluses that support PWA's capital investment program. Under the Eco Asia project, PWA will work with another Asian water utility to design and implement a performance management contracting system. It is possible that a candidate partner can be identified in Vietnam, where some water companies have expressed interest in this type of innovation.
- **Rehabilitate and Operate contract for wastewater treatment in Thailand.** The Royal Thai Government built 83 wastewater treatment plants over the past 15 years. These plants were intended to serve most of Thailand's municipalities. However, after these were built, because of weak business, institutional and regulatory models, the large majority of these plants have ceased to operate. It is estimated that of 83, today, only 6 plants are operational. There is a major opportunity to improve sanitation services through the demonstration of a contracting and business model for returning some of these plants to service. Eco Asia will assist the key stakeholders – a municipality, the Wastewater Management Authority of Thailand, and the Pollution Control Department – in designing and letting a Rehabilitate and Operate contract for one plant. Because the plants are already built, the total cost of providing wastewater treatment service is expected to be relatively low, and the development period to bring a plant on line should be short due to the fact that they were built recently. Possible candidate cities include Hua Hin, Pang Na or Phuket, because they all have non-operational wastewater treatment plants and a significant dependence on tourism, a key driver for demand for wastewater services. This pilot will demonstrate a business case and contracting model for sustainable sewerage service in Asia.
- **A pilot implementation of cost recovery tariffs in Sri Lanka.** Sri Lanka has recently formulated a new tariff setting methodology for water services. This method, however, has not been officially enacted and applied, due to a combination of political and practical implementation concerns. The Eco Asia project will work with the key agencies responsible for water pricing and with two municipalities to conduct a trial

implementation of the new water tariffs. The purpose of the pilot is two-fold: (1) to help the Sri Lankan government and Water Board develop an implementation plan for the new tariff policy, and (2) to identify adjustments to the tariff methodology prior to full national implementation. The result will have major implications for water sector pricing and regulation both nationally and regionally. On the national level, the pilot will help the government with its transition to cost reflective water pricing. On a regional basis, the pilot will demonstrate how an effective new water regulatory system can be introduced and how appropriate transitional approaches needed for successful implementation of cost-based pricing can be designed.

- **Bond pool in Indonesia.** The Eco Asia project may collaborate with the ESP Project and one of the USAID EGAT Water Finance GDA partners to design a bond pool for a group of municipalities in Indonesia. There appear to be a number of local governments (possibly 8) that are interested in issuing bonds to support local infrastructure investment.
- **BRI micro-finance facility for household water connections.** The project will provide technical assistance to design a micro-finance facility for household water connections in a slum area in Indonesia.
- **Water Revolving Fund in Vietnam.** Vietnam does not have a capital market that is necessary for municipal bond issues. However, the country does have several financially strong water companies. Financing of the water sector has been predominantly through a combination of capital grants and subsidies from provincial and central government agencies. In order to transition toward a more sustainable loan-based financing system, the project will provide assistance jointly with one of the EGAT Water Finance GDA partners to prepare a plan for establishing a water and sanitation revolving fund. The purpose of this pilot is two-fold: (1) to establish a sustainable water financing mechanism in Vietnam, and (2) to demonstrate the non-leveraged Revolving Fund model in Asia.

The criteria for selection of the pilots will include the following:

- A. The pilot is related to one or more of the five Strategic Focus Areas. The pilot should demonstrate a potential solution that would help to resolve the constraints in the focus areas.
- B. There are high-level stakeholders committed to successful implementation of the pilot.
- C. The implementation plan for the pilot demonstrates that the pilot can be completed within the time frame and budget available to the Eco Asia project.

Special priority will be given to pilots implemented through a twinning or commercial arrangement between an Asian best practice leader and a utility trying to improve its performance.

5. MECHANISMS FOR REGIONAL SHARING OF BEST PRACTICES

The strategy is implemented at two levels:

- Regional workshops and conferences that allow the sharing of best practices, discussion of policy and governance reform approaches, and twinning.
- Pilot projects that demonstrate solutions to key water and sanitation development constraints.

There will be three different types of regional experience sharing mechanisms:

- Annual water and sanitation development conferences involving all of the participating countries in the region;
- A Water and Sanitation Leadership Forum, comprised of representatives of each participating country.
- Water and Sanitation Innovation Panels in key technical areas, possibly such as:
 - (1) Service Models for the Poor;
 - (2) Business Models for Sanitation Services;
 - (3) Innovative Corporate Governance;
 - (4) Water Pricing and Regulation; and
 - (5) Innovative Water Financing Models.

These three mechanisms reinforce the sharing of regional innovations and best practices. The Leadership Forum would consist of high level officials including both utility operators and policy makers with strong ties to senior decision makers in each country. The Leadership Forum would be responsible for setting the agenda and general design of each annual Water and Sanitation Conference. In addition, they will help with resolving issues related to pilots and will advise on engaging the policy change process in each country. The Innovation Panels would consist of relatively senior specialists in the respective areas covered by the panels. They could establish a technical innovation agenda, manage best practice discussions in their respective areas, and will advise Eco Asia staff on the technical content of the Annual Conferences.

6. COUNTRY ASSESSMENT PURPOSE AND METHODOLOGY

The purpose of the country water and sanitation assessments is to provide a summary of each country's status, conditions and opportunities in the five Strategic Focus Areas. These assessments are intended to provide a comparable statement of progress and critical deficiencies in the Strategic Focus Areas.

The Country Assessments will be organized generally around the five Focus Areas, using the following outline:

- A. **Overview of Water and Sanitation Services in the Country:** This section gives an overview of the status of services and coverage in each country. Key indicators will be presented when available, including percentage of coverage with water and sanitation services, average hours of water service, percent of wastewater treated, level of cost recovery, annual national budgetary allocation for water and sanitation infrastructure, and any information on piped water quality. (1 page)
- B. **Water Coverage for the Poor: Key Issues and Challenges:** This section summarizes available information on water services for the poor. It should provide an idea of whether water services are reaching the poor, and whether the poor have access to formal networked systems or rely on informal markets for water. Water quality in poor areas should be summarized if data are available. Pricing of water for the poor will be summarized, including some comment on pricing policy for services for poor consumers, and how these prices relate to cost recovery.⁷⁰ Comments will be provided on the cost recovery situation for formal water services for the poor. This section will generally be based on a composite of secondary data and reports. This data will often be specific to certain cities or provinces, and may not include information on slum populations, or rural poor as specific sub-populations. (Approximately 0.5 page)
- C. **Sanitation Service Development: Key Issues and Challenges:** This section will summarize key issues related to operation and expansion of sanitation services. Included in this section will be topics such as annual budgetary expenditures on sewerage and other sanitation services, coverage expansion rate and patterns, key policies with respect to sanitation development, and pricing and cost recovery for sanitation services. The purpose of this chapter is to provide an indication of progress in extending sanitation coverage in the country. (0.5 to 1 page)
- D. **Corporate Governance of Water and Sanitation Utilities:** This short section should summarize the predominant models of service delivery, and provide evidence and commentary on key deficiencies, trends and reform initiatives related to corporate governance of water and sanitation utilities. Key trends related to reforming utilities to make them more autonomous, efficient and commercially-oriented will be identified. The main question that should be addressed is whether there is significant progress in governance arrangements for water and sanitation services.⁷¹ (0.5 to 1 page)
- E. **Water Pricing and Regulation:** This section will briefly summarize the general pattern of cost recovery, the principal approaches to price setting that are in use, and efforts to develop more systematic and effective economic regulation of water and sanitation services. (Approximately 0.5 page)
- F. **Innovation in Water Financing: Key Issues and Challenges:** This section will summarize the key specialized financing mechanisms for water that are in operation. In addition the section will identify reform initiatives in these institutions, key performance

⁷⁰ The purpose of the information on prices and cost recovery for the poor is to provide the Eco Asia project and USAID a sense of whether (1) prices are held at levels significantly below cost recovery, and (2) whether there is an explicit policy or initiative of government to create more sustainable prices.

⁷¹ The main focus here is on “corporate governance.” However, key initiatives related to civil governance of the water utility sector should also be included.

problems, and new institutions or mechanisms that are being considered or established.
(Approximately 0.5 page)

Each report will be 5 to 7 pages. The reports will provide an overview of the key constraints in each Focus Area, and will identify areas in which reform is occurring. The reports will be short, and will generally be based on inputs from experts who work with each of the participating countries.

7. PLAN TO ENGAGE KEY REFORM ADVOCATES

Many of the constraints facing the water and sanitation sectors in Asia are a combination of policy, governance and managerial issues. In some countries in the region, there are significant national or local initiatives underway aimed at introducing basic reforms in key areas that tend to have major impacts on expansion of water and sanitation services. Key reforms include, but are not limited to, the following:

- Corporatization
- Performance management contracts and performance incentive frameworks
- Economic regulation
- Benchmarking
- Private sector participation

Eco Asia will engage stakeholders at all levels. However, the project will only achieve major results if senior policy makers are involved. The challenge is to engage senior policy makers in issues related to each of the Strategic Action Areas. The following steps will be taken by the project to engage senior policy makers:

- The Eco Asia team will identify key reform initiatives in each country as part of the country assessment process. The key reform initiatives that would be of interest would be related to the five Strategic Focus Areas: Service Models for the Poor, Business Case for Sanitation, Innovative Governance Reforms, Improved Pricing and Regulation, and Innovative Financing.
- The team will discuss these reform initiatives with key sector experts to determine (1) which are progressing well and are supported by high level stakeholders; (2) who are the key high level stakeholders who support these initiatives. Key sector experts would include leading World Bank and ADB sector specialists, senior academics and policy advisors working at high levels of policy in the countries, and officers in line ministries directly concerned with policy reform issues.
- In consultation with the USAID bilateral mission, the team will approach selected reform supporters and will discuss potential for Eco Asia pilots to help with these reforms.

8. ADDITIONAL IDEAS

- It is important to note that the region's utility operators are not at a sufficiently high level of policy control to be able to push the reform agenda on the key areas that are constraints to development of water and sanitation services. Higher level policy makers are required to advocate reform. Therefore, SEAWUN, being an operators' network, is not the right counterpart for actually advocating change along the broad fronts required. It is, however, probably adequate to provide a venue for higher level policy making discussions and advocacy. It will probably need the Leadership Forum and various technical panels to make it relevant to the reform issues.
- Credit capacity and cost recovery are two core issues in expanding the coverage and quality of water and sanitation services. It is important for the project to coalesce attention among policy makers, financial institutions and utility operators on this issue. Approaches to this issue could be developed by a working group consisting of CRISIL, IDFC, LUWA, and Indian Institute of Management – Bangalore, or another of the Indian business management institutes, all of which have direct interests in the creditworthiness and cost recovery issue. The purpose of focusing attention on this issue is to identify ways of raising the importance of cost recovery and creditworthiness in the national policy process in each country.
- It is worth considering support for a pilot in which one of the Asian institutions that is traditionally involved in management and corporate reform assists a water or sewer utility in introducing a major corporate innovation, such as performance contracting. Candidates would be the Asian Institute of Management, or the Administrative Staff College of India, or one of the IIMs in India. These institutions are often tasked by their respective governments with leading reform pilots using best practices. Staff in these institutions often have strong links to senior national policy makers, and can be effective allies in reform-related pilots.
- The project could support a workshop on pooled financing that covers the following areas: (1) review of results of innovative financing facilities such as TNUDF and KSIDC facilities, LUWA credit procedures reform, and Singapore national system for infrastructure finance; (2) a panel of insurance company and pension fund executives discussing preconditions for marketability of infrastructure bonds issued by pooled financing facilities; (3) suitable models for transitional borrowers. Key stakeholders in most Asian countries covered by Eco Asia have already been exposed to the concepts of revolving funds and bond pools. Generic workshops that simply present the U.S. model are not likely to achieve much because of the prior exposure. It is now time to move on to (1) sharing the results and lessons learned from pooled financing experience, (2) engaging the capital markets – principally pension funds and insurance companies – in a dialogue on the design of pooled financing facilities, and (3) brainstorming on new facilities suitable to the transitional challenges in the region.

- The project could consider sponsoring an internship program that would send 2 to 4 counterpart experts to key institutions that are implementing innovative efforts in the five Strategic Focus Areas. It is interesting to consider making these internships available on a somewhat competitive basis in the 5 Focus Areas. The announcement of the annual internships could then be made at each Annual Water Workshop.

ANNEX 1: STRATEGIC FOCUS AREA SUB COMPONENTS

Effective models for serving the poor.

- **New methods of billing and collection from poor customers**
- **Sustainable pricing and tariff designs for poor customers**
- **Appropriate service connections, including community standpipes, yard pipes, wholesale vending points**
- **Cooperative and other community based distribution service models**

A sustainable business case for sanitation services.

- **Cost reflective pricing and regulation approaches**
- **Community based service models**
- **Low cost technologies**
- **Innovative use of private sector contracting**
- **Innovative billing and collection methods**

Innovative governance of water and sanitation utilities. Regulation, price setting and cost recovery.

- **Corporatization models**
- **Mechanisms for allowing commercial autonomy of the utility**
- **Performance contracting**
- **Mechanisms for establishing accountability to external stakeholders**
- **Mechanisms for establishing decentralized authority within the utility**
- **Mechanisms for providing incentives for good performance**
- **Mechanisms for internal accountability and performance measurement**
- **Mechanisms for improving customer responsiveness**

Financing mechanisms for water and sanitation services.

- **Specialized financing facilities**

- **Revolving Funds**
- **Bond Pools**
- **Specialized Lending Windows at Established Financial Institutions**
- **Loan products appropriate for utilities in transition**
- **Project financing structures and structured finance models**

ANNEX B: IMPORTANT REFORM TRENDS IN THE WATER AND SANITATION SECTOR

A review of operational policy and research on water sector reform in developing countries shows some important trends among both donor agencies and developing country host governments. Listed below are a number of the key trends, supported by references to examples and documents that represent the trends.

Trend 1: Performance improvement initiatives are not enough to solve the problems in the sector.

There is a broad consensus among donor experts that performance improvements such as NRW reduction program, metering, leak detection and repair programs, and billing and collection system installation alone is not enough to establish sustainable utilities. For example, the World Bank’s recent report titled *Characteristics of Good Performing Water Utilities* states:

“Today, there is a good understanding that past approaches to and interventions in reform will not work. The record has been poor. Part of the reason for this failure is the fact that efforts were inordinately focused on changing the utility by strengthening its management and its processes, but without making commensurate advances on the governance framework or the institutional environment in which the utility operates. In the end, utility managers respond according to the wishes of important external stakeholders, most notably national government, municipal officials, community leaders, and lenders. Misdirected incentives on their part will have direct consequences for the internal incentive systems of utility managers and their staff.”⁷²

Similarly, the ADB’s report on *Asian Water Supplies: Services for the Poor* makes a clear and repeated point that the principal reason that the poor are underserved in the region is weak governance of water utilities, and prices that are set too low to make it feasible to serve poor communities. It is extremely difficult to “improve performance” when the governance arrangements of the sector are not working.⁷³

The EBRD and EIB have published similar sector policies that emphasize the importance of (1) effective economic regulation; (2) better corporate governance at the utility level; and (3) private

⁷² Page 24.

⁷³ For a specific example of the governance challenge, the Thai wastewater treatment example is useful. Eighty three plants were built and only about 6 are operating. The capital and technology is already available; they are built and could be operational. However, the sector lacks a business model for operating them, and the corporate and civil governance arrangements to make any decisions about putting them into service are not working.

sector participation to the extent possible. In addition, the EBRD has explicitly acknowledged that in some countries, local governments have not been able to expand and run services that meet adequate standards, and therefore numerous countries have chosen to “agglomerate” utilities so that they are either regional or national in scope.⁷⁴ This is a basic change in the corporate organization and governance of water and sanitation services that has been relatively effective in improving services.

A number of important studies have also been conducted on reform of public enterprises more broadly. One of these⁷⁵ concluded that achieving significant improvement in public enterprise performance requires change of management, and that performance improvement efforts alone with ineffective management is not sufficient. A second study of performance agreements in public enterprises concluded that performance agreements generally are not sufficient to fix troubled public enterprises.⁷⁶

USAID’s Water Team recently conducted a review of nine water utilities that have transitioned from deeply troubled to bankable. In most of these cases, success in transition was a result of basic reforms in corporate organization, internal incentives for good performance, management or governance.⁷⁷

The overall conclusion that one would reach after reviewing these various donor policies and studies is that improving water and sewerage utilities will require changes in the governance, management and incentives of the utility.

Trend 2: Innovations in Private Sector Participation

There have been a number of innovations in the design of PSP contracts in the past 5 years. In the 1990s, the most common models used in developing countries in the water sector were: management contracts, BOTs and full concessions. Management contracts suffered from too many performance indicators and excessively small bonuses. Operators generally stated that they had little incentive to transform the utility, and host governments complained that the operators were not doing enough to fix the utility.⁷⁸

BOTs were successful in situations where the distribution side of the water or sewerage business was performing well. In places where collection efficiency was low and non revenue water was high, BOTs were often unaffordable, because there was not enough cash in the system to pay the BOT operator charges.

The concession model was popular with donors from about 1995 to 2003. Concessions were let in Buenos Aries, Bucharest, La Paz, Jakarta, Manila, and several other Argentine and Colombian

⁷⁴ See the EBRD Municipal and Environmental Infrastructure Operations Policy 2004-2008.

⁷⁵ The Determinants of Enterprise Restructuring in Transition: An Assessment of the Evidence, Simon Djankov and Peter Murrell, World Bank, 2000.

⁷⁶ “Why Performance Contracts for Public Enterprises Haven’t Worked.” Mary Shirley, Private Sector Note 150, World Bank. August 1998.

⁷⁷ Case Studies of Bankable Water and Sewerage Utilities. USAID, August 2005.

⁷⁸ This assessment of management contracts is based on discussions with officials involved in the Yerevan, Armenia, Amman, Jordan, Dar Es Salam, Tanzania and Kampala, Uganda management contracts.

cities. By and large, these contracts have had serious difficulties, although there have been several exceptions, most notably the Manila Water contract. Buenos Aires, La Paz, Maynilad, Tucman (Argentina) have been cancelled or are in arbitration. Jakarta's two contracts have been in repeated renegotiation and disputes. The reasons for the difficulties are a combination of the macro-economic shocks that have occurred since 1997, deficiencies in the basic regulatory conditions of these contracts, and performance deficiencies by the parties involved. Given this experience, there is little effort to replicate the full concession model now, and no appetite for these types of contracts in the operator community.

The fourth model that has generally been prevalent has been the French version of the lease contract, often called an affermage. The affermage contract has been used generally successfully in places like Casablanca, Morocco, Senegal, Cote d'Ivoire, Burkina Faso, a dozen cities in Poland and the Czech Republic, several Colombian cities, Macau. Recently an innovative version of the affermage using Output Based Aid was awarded for water and sewerage services in Yerevan, Armenia.

Of the four models, the lease/affermage and updated versions of management contracts are the preferred PSP approaches recently. Management contracts have been updated in the following ways:

- The number of performance targets and measures used to award bonuses has been reduced;
- Bonuses are now dependent on performance relative to the most important performance outcomes, such as increases in number of connection, continuity of service, and gross profit of the business.
- Clearer terms for resetting allowed operator charges have been incorporated in the contracts.

It is important to note that there is a broad recognition now that when the distribution side of a water business is performing poorly, it is usually not feasible to use BOTs for bulk water supply or wastewater treatment.⁷⁹ Therefore, the focus of most donor efforts in the PSP area have tended toward management contracts and leases that “fix” the distribution side of the water business.

It is also notable that some innovative public sector performance contracting methods have also become more effective and widespread. The best example is perhaps the “delegated management contract” system used by Uganda National Water and Sewerage Corporation. Similar models have been successfully used for years in the electricity sector; the main examples of this are the Bangladesh Power Development Board's profit center unit approach, and Electricite de France's performance target approach.

Trend 3: Improved regulation helps with transition to sustainability

⁷⁹ There are exceptions to this, such as the Jordan As Samra BOT wastewater treatment plant and the Disi Bulk Water Pipeline Project. These projects are feasible because of a combination of donor grants and central government operating cost subsidies.

USAID recently conducted a review of high performing water utility regulators in developing countries. Nine countries with excellent regulatory systems were identified, including one in Asia, one in the Middle East, three in Africa, one in Eastern Europe, and two in Latin America. Key conclusions of this study include:

- Establishing good regulatory methods and effective regulatory frameworks has been a very important step in moving a country's water utilities toward cost recovery. There is no question that good regulation is a major factor driving transition to cost recovery.
- To be effective, there must be "regulatable utilities." This means that utilities must be responsive to regulatory incentives and penalties. This refers mainly to the difficulties that regulators face when utilities are public sector bodies.
- Cost recovery has many different definitions. The definition of cost recovery ranges from recovery of operations and maintenance costs, through recovery of all cash needs of the utility (often called a "revenue requirements" approach), to "Full Cost Recovery." Full Cost Recovery refers to recovery of all "economic" costs, which include O&M, additional costs which are imposed on the utility, such as pensions, and capital costs, including both debt service charges and depreciation. Most regulators seek first and foremost to incentivize a utility to meet their basic cash revenue requirement. Full Cost Recovery is a longer term objective, and is achieved by very few utilities in the study.
- Most regulators are dealing with the introduction of new cost-reflective tariff methods by designing transitional periods in which tariffs are gradually adjusted toward cost recovering levels.

Trend 4: Regionalization of water and sanitation services works

Decentralization has been a trend that has been advocated by donor agencies for the last 30 years. Many countries have implemented decentralization policies in the water sector. Results have been mixed, with some local governments showing excellent progress in expanding the quality and coverage rates for water and sanitation services. In other countries, however, national policy makers have been frustrated with lack of progress. This has led to a "recentralization" trend in the water sector. The "recentralization" trend involves national governments passing laws and regulations that establish either national utilities or regional providers.

Reasons for this trend include:

- Larger utilities have greater economies of scale. It is often cheaper for large utilities to provide service (when measured on a per cubic meter cost) than for a small utility.⁸⁰
- Providing technical capacity. In addition, when large regional utilities extend services to outlying towns and villages, the large utility can afford to retain qualified business management and engineering staff that would be unaffordable for small utilities.

⁸⁰ See for example, "Optimal Size for Utilities," Public Policy for the Private Sector Note 283, World Bank, 2005; "Models of Aggregation for Water and Sanitation Provision," Water Supply and Sanitation Working Notes No. 1, World Bank, 2005.

- Sufficient scale for PSP transactions. Some countries have agglomerated utilities to make it feasible to carry out a PSP transaction. This reflects the cost of designing and tendering the transaction, as well as the fact that international bidders have little interest in running individual small utilities.
- Dealing with persistent corruption and civil governance problems. In some cases, national governments and donors have tried valiantly to reduce local government corruption or to strengthen local government capacity to develop local water and sanitation services without achieving positive results. In some of these cases, national governments have decided to centralize service delivery in order to limit the role of local governments.

To give an idea of the frequency of this “agglomeration” trend, here are some examples of countries that have regional or national water and sanitation utilities:

National: Armenia, Azerbaijan, Burkina Faso, Cote d’Ivoire, Guinea, Morocco (only bulk water), Senegal, and Uganda.

Regional: Australia, Chile, Czech Republic, England and Wales, Estonia, Kosovo, Hungary, Macedonia, Lithuania, Poland, Romania, Russia (in some jurisdictions), Scotland, Thailand.