

ADB

Regional and Sustainable Development Department
Sustainable Infrastructure Division

Cooperation Fund for the Water Sector



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I. BACKGROUND

1. On 16 January 2001, the Board of Directors approved the water policy of the Asian Development Bank (ADB), following extensive consultations with stakeholders over several years. The policy focuses on: (i) promoting a national focus on water sector reform, (ii) fostering the integrated management of water resources, (iii) improving and expanding the delivery of water services, (iv) fostering the conservation of water and increase system efficiencies, (v) promoting regional cooperation and increasing the mutually beneficial use of shared water resources within and between countries, (vi) facilitating the exchange of water sector information and experience, and (vii) improving governance.

2. On 10 December 2001, the Board approved the establishment of the Cooperation Fund for the Water Sector (“the Fund”) to promote effective water management policies and practices at the regional, subregional, and country levels, and thereby catalyze the implementation of ADB’s water policy in the Asia and Pacific region. The Fund is a multi-donor umbrella facility that financed a coherent program of activities designed to add value and increase synergy in ADB’S water sector operations through better awareness, knowledge management, capacity building to support reforms, pilot demonstration, water partnerships, regional cooperation, monitoring, and coordination. The activities were targeted at a range of stakeholders in the region, including policy makers, planners, ADB’s decision makers, civil society organizations, the media, the public at large, ADB staff, and development partners.

3. Contributions into the Fund were received from the Governments of Netherlands and Norway. A total of US\$ equivalent of 21,664,765.81 was received (\$19,424,872.97 from the Netherlands and \$2,239,892.84 from Norway).

4. Donor contributions were made in annual tranches and were accessed through a series of regional technical assistance (RETA) on promoting effective water management policies and practices. Five RETAs were processed and all have been completed. The total cost of these five RETAs constitutes about 94% of the Fund resources. The balance of about 6% was provided as direct operations support, including the tsunami assistance to Maldives.

II. MAJOR ACCOMPLISHMENTS

5. The presentation of the Fund’s major accomplishments is based on the following six program components of the Fund:

- Promotion and Public Awareness
- Knowledge Base and Capacity Building
- Pilot and Demonstration Activities
- Water Partnerships
- Regional Events and Initiatives
- Program Coordination, Monitoring and Evaluation

COMPONENT 1: PROMOTION AND PUBLIC AWARENESS

6. This component of the Fund was implemented primarily through the Water Awareness Program (WAP) whose objectives were as follows: (i) increase public awareness and understanding of water issues, and the need for change in public attitude; (ii) disseminate ADB’s

water policy to water stakeholders, experts and decision makers to influence policy decisions; (iii) encourage dialogue among water stakeholders towards a common agenda for water reform; and (iv) provide information and support to journalists from ADB's Developing Member Countries (DMCs) to improve the quantity and quality of press coverage about water issues.

7. The WAP activities were categorized into: (i) public and media relations, (ii) video production and distribution, and (iii) advocacy and promotion.

A. Public and Media Relations

8. This dealt with media activities and covered public and media relations to disseminate WAP products and messages to the target audiences. It included the use of news releases and press briefings at major water events, articles on water issues in major international, regional and national media.

9. The conduct of Water Media Workshops was one of the innovative activities carried out under the Program, targeted at journalists in DMCs. These workshops were conducted in Cambodia, India, Indonesia, Kazakhstan, Malaysia, Thailand, and Vietnam. Close to 200 journalists were trained. In order to ensure that the benefits of these workshops were sustained, efforts were initiated to establish a network of water journalists. Together with Inter Press Service Asia Pacific, ADB launched in 2005 a capacity building support project for media called Asia Water Wire. To this day, journalists continue to link up with ADB for continuing information exchange.

B. Video Production and Distribution

10. The Water Voices documentary series consisting of seven films (see box 1) was a major video production launched in 2004. This series is about people finding local solutions to the worsening water crisis in Asia and the Pacific. The series recognizes the power of good examples and lessons learned to inspire "home grown" solutions to water problems. It was widely distributed through broadcast and non-broadcast media. Broadcast agreements were signed with 16 Asia TV networks, including the Asian Broadcasting Union, and another agreement with TVE (BBC World). Word of mouth created a demand for Water Voices from all over the world. Water Voices on the ADB web has generated a steady demand. The Water Website pioneered the ADB's first attractive, innovative Water Voices web pages with clips from each video.

Box 1 – The Water Voices Documentary Series

1. Waibulabula – Living Waters. Coastal communities, an NGO and a tourist resort work together to save the coral reef and protect water resources in the Fiji Islands.
2. Walking for Water. Village women in Gujarat, India battle drought to increase water supply and bring water closer to home.
3. The Connection. Phnom Penh's public water utility advances towards the goal of providing water for all of the city's residents.
4. Upstream Downstream. Stakeholders resolve conflicts over water use on Thailand's Ping River.
5. Hidden Paradise. Former squatters solve water problems and transform their community in Bacolod, Philippines.
6. Water Tomorrow. Community organizers work to build public awareness to safeguard water resources and the environment in Tonga and Kiribati.
7. Breaking Barriers. A local NGO pioneers an effective scheme to bring clean water to Dhaka's slums.

11. Other videos (see Box 2) were produced thereafter, including an institutional video that documented how ADB's water policy is being implemented.

12. Public service announcements (PSAs) were also prepared using the footage from some of the videos. PSAs are 30 – 60 second videos that communicate key messages to the public and were aired through the Asian Broadcasting Union.

Box 2 – Other Videos Produced

- Water at the Doorstep. Tells the story of how a community-managed water supply and sanitation scheme transformed Punjab, Pakistan and its people.
- Islands and Climate Change. Examines climate change impacts in Pacific Island countries
- Saving Cambodia's Great Lake. Features the Tonle Sap Lake and the communities and people working together to protect the Lake's resources and improve their livelihoods.
- China's Water Challenge. Features water sector problems and developments in Shanghai, Gansu province, and the Yellow River Basin.
- Coming Clean on Sanitation. Showcases stories on the difficulties and actions undertaken by individuals, communities, organizations and government in India, Indonesia, Pakistan, Philippines, PRC, and Viet Nam.

13. The videos and public service announcements were uploaded in 2007 in various video sharing websites such as Youtube, Yahoo videos, Google videos, and Spike/iFilm, among others, and have since gained a broader Internet audience. The Water for All Channel at Youtube has now reached 4,551 channel views and 52,956 upload views. The videos are also featured in the Water for All Facebook group and Water for All blog at Blogger.com, which are capable of reaching wider

audiences. TheWaterChannel website (www.thewaterchannel.tv), a partnership among UNESCO-IHE, MetaMeta Communications, Cap-Net and Nymphaea, also hosts ADB's water videos.

C. Advocacy and Promotion

14. This covered the following: (i) water website, (ii) e-newsletter, (iii) print publications, and (ii) water briefs.

15. **Water Website.** The ADB water website (www.adb.org/water) was launched in 2002, catering to users both within and outside ADB. In comparison with the over 220 sub-sites in ADB's websites, the water website remains consistently the most popular sectoral site and the 10th most popular overall. Using Google Analytics to monitor website statistics which focuses on "page views" rather than "hits" and which reflects more accurately the volume of monthly site usage, the monthly page views from August to December 2009 averaged at 18,496 and peaked at 22,451 in October of that year. Average visit length is at 2:22. An average of 6,450 users visited the site monthly.

16. **Water for All E-Newsletter.** The e-newsletter was launched in October 2003 to provide information on ADB's water sector operations and activities to clients in DMCs, stakeholders, and development partners. It is linked to ADB's Water Website. The unique feature of this e-newsletter is that it showcases water champions who have demonstrated good practices, solutions to problems and other success stories that should be shared and disseminated. Positive feedbacks continue to be received, with some subscribers even requesting the contact details of the champions so they can explore working with them. As of end-2009, 45 issues of the e-newsletter have been circulated. Each issue of the e-newsletter gets to 14,567 subscribers.

17. **Print Publications.** This dealt with the development and dissemination of water sector information and knowledge in a series of ADB water publications (referred to as Water for All Publication Series). The list which now consists of 18 is summarized in Box 3. The last two publications were produced in 2009 and it is intended that more will be added in the future.

- Box 3 – Water for All Publication Series**
- Water and Poverty: Fighting Poverty through Water Management
 - Poverty and Water Security: Understanding How Water Affects the Poor
 - The Water and Poverty Initiative: What We Can Learn and What We Must Do
 - Water and Poverty: The Themes - A Collection of Thematic Papers
 - Water and Poverty: The Realities – Experiences from the Field
 - Water for the Poor: Partnerships for Action – A Strategy Paper on How to Bring Water to the Rural Poor
 - Water and Poverty in the 3rd World Water Forum
 - Bringing Water to the Poor: Selected ADB Case Studies
 - The Impact of Water on the Poor: Summary of an Impact Evaluation Study of Selected ADB Water Supply and Sanitation Projects
 - Water in Asian Cities: Utilities' Performance and Civil Society Views
 - Floods and the Poor: Reducing the Vulnerability of the Poor to the Negative Impacts of Floods
 - Past Experience and Future Challenges: Cooperation in Shared Water Resources in Central Asia
 - Small Piped Water Networks: Helping Local Entrepreneurs to Invest
 - Water Voices Documentaries: Testing Audience Impact in Poor Communities
 - An Agenda for Change: Setting the Rules and Finding the Money (Highlights of ADB Water Week 2004)
 - Dams and Development: A Source of Information, Guidance, and Web Links for Planning and Implementation of Dam Projects
 - Water Rights and Water Allocation: Issues and Challenges for Asia
 - India's Sanitation for All: How to Make it Happen

18. **Water Briefs.** WAP sought to reach a wide variety of audiences while focusing on policy-makers as the greatest priority. While a substantial body of written material is available to give to these audiences, there is a need for a single written product that can serve many different audiences. The Water Briefs series is intended to fill this gap. These are one-page, user-friendly and intellectually robust materials prepared as additional advocacy products. The idea is that the print is only on one side so that it can be distributed easily even by fax. Among the topics dealt with include: nonrevenue water, sanitation and wastewater management, climate change, small scale water providers, integrated water resources management, water and floods, water tariff.

COMPONENT 2: KNOWLEDGE BASE AND CAPACITY BUILDING

19. The major activities under this component included: (i) comparative analysis of water sector reforms in DMCs; (ii) analysis of water supply service delivery in Asian cities, including a study of small scale water providers; (iii) development and application of tools to assist operations department in policy dialogue, assessments, roadmaps, as well as in project preparation, (iv) capacity development for ADB and DMC staff, including the organization of ADB Water Week and other knowledge networking platforms, (v) knowledge product development and dissemination, and (vi) upstream work (pre-PPTA stage), including preparation of communication strategy for potentially contentious projects, and provision of incremental expertise, as needed, during project preparation and implementation.

20. **Comparative Analysis of Water Sector Reforms.** Water sector reform refers to the whole of a country's policies, planning, implementation, and supporting activities to develop and manage its water resources and deliver water services to all users. ADB supports the water sector reform process by assisting countries' efforts in: (i) reviewing or developing comprehensive water policies and laws; (ii) undertaking water sector assessments to ensure

that policy formulation and sector reforms are well grounded; (iii) reducing fragmentation among the planning and implementation functions of various water related institutions; and (iv) developing cross-sector coordination mechanisms that can oversee the policy formulation and sector reform process, e.g. water sector apex bodies.

21. The first phase of the comparative analysis was carried out in 2004. It assessed the progress of reforms in 17 countries against the 40 policy actions espoused by ADB's water policy (see Box 4), using the following four-scale ranking as indicators of progress: (i) little or no progress made, (ii) progress poor or at an early stage, (iii) good progress being made, and (iv) excellent, lasting progress.

22. Data showed that greatest progress has been achieved with the "foundational elements", i.e. introduction of policies and establishment of coordination mechanisms, although adoption of legislation appeared to have lagged behind. The weakest progress appeared to be in putting in place the various mechanisms for achieving improved service delivery. Several of the weak progress were associated with a transfer of responsibility from the traditional lead government agencies to other stakeholders as a result of devolution/decentralization.

23. Because sector reform is crucial to improving the governance of water as a resource that should be managed sustainably and as a service that must be delivered efficiently, ADB continues to prioritize assistance to implementing reform measures under the Water Financing Program 2006-2010, combined with investments and capacity building.

Box 4 - 40 Policy Actions

National Policies and Reforms

1. Development of comprehensive water policies
2. Undertaking of water sector assessments
3. Establishment of cross-sector coordination mechanisms
4. Review and revision of water legislation

Water Resources Management

5. Integrated water resources management in river basins
6. Establishment of river basin organizations
7. Water allocation mechanisms
8. Approach to large water resources projects
9. Environmental and social impact procedures
10. Effects of hydropower projects
11. Management of water quality
12. Wastewater management
13. Protection and rehabilitation of degraded forestlands
14. Wetland conservation and improvement
15. Flood response measures
16. Managing effects of climate change
17. Structural and non-structural approach to flood mitigation
18. Flood management

Improving water services

19. Autonomy and accountability of service providers
20. Public-private partnerships
21. User participation
22. Management of urban water supply
23. Private sector investment
24. Subsidies
25. Rights and responsibilities of stakeholders
26. Performance monitoring and benchmarking

Conserving water

27. Tariff reforms
28. Cost recovery
29. Participation of the poor
30. Establishment of regulatory systems
31. User's education

Promoting regional cooperation

32. Awareness and understanding of water resources issues in riparian countries
33. Joint projects among riparian countries
34. Collaborative frameworks with riparian stakeholders
35. Managing international arrangements for river systems

Fostering Participation

36. Partnerships between governments, private agencies, NGOs, and communities
37. Participation of civil society
38. Mainstreaming gender considerations

Improving Governance

39. Capacity building
40. Networking

24. **Analysis of Water Supply Service Delivery in Asian Cities.** In 2003-2004, an assessment was made of the performance of 18 water utilities in the region focusing on the following essential benchmarking indicators: (i) service level, (ii) service quality, (iii) operational efficiency, and (iv) financial management. Other broader dimensions were also considered such as water resources management, policy and regulation, private sector participation, small scale water service providers, sanitation and wastewater management, and flood management. The assessment also looked into the views of civil society and what it sees as its role in improving water services.

25. This undertaking was a continuation of ADB support for water services in cities of Asia and the Pacific, following on from Water Utilities Data Books published by ADB in 1993 and 1997. The 18 utilities included in the study are listed in Table 1 below:

Table 1 – List of 18 Utilities Included in the Databook

No.	City	Utility
1	Chengdu	Chengdu Municipal Water Supply General Company
2	Colombo	National Water Supply and Drainage Board
3	Delhi	Delhi Jal Board
4	Dhaka	Dhaka Water Supply and Sewerage Authority
5	Ho Chi Minh	Ho Chi Minh City Water Supply Company
6	Hongkong	Water Supplies Department
7	Jakarta	Jakarta Water Supply Enterprise (Pam Jaya)
8	Karachi	Karachi Water and Sewerage Board
9	Kathmandu	Nepal Water Supply Corporation
10	Kuala Lumpur	Selangor Water Management Corporation, Ltd.
11	Manila	Metropolitan Waterworks and Sewerage System (Metro Manila)
12	Osaka	Osaka Municipal Waterworks Bureau
13	Phnom Penh	Phnom Penh Water Supply Authority
14	Seoul	Seoul Metropolitan Government (Office of Waterworks)
15	Shanghai	Shanghai Water Bureau
16	Tashkent	Tashkent State Unitary Enterprise (Suvsoz)
17	Ulaanbaatar	Ulaanbaatar City Water Supply and Sewerage Co., Ltd (USAG)
18	Vientiane	Vientiane Water Supply Company (Nam Papa Vientiane)

26. The main findings, in comparison to the 1997 assessment, were:

- customer satisfaction is up and water resources management has improved,
- human resources management is generally better,
- gains in service coverage and nonrevenue water are minimal,
- overall financial management seems to have worsened, and
- revenues from tariff are still not able to cover operations and maintenance costs, let alone financing costs and capital expenditures.

27. Civil society appreciates the centrality of improved water supplies in reducing urban poverty. And although from this common understanding, the priorities and preferences of civil society diverge enormously, there are many shared positions, notably on the need for demand management and awareness, taking care of the poor first, the role of women and stakeholder participation, involving the media, and getting tough on polluters. Improving governance and

reducing corruption are also important to civil society. The social good versus economic good issue remains highly topical particularly around service tariffs and the role of the private sector.

28. The assessment results were compiled into a 3rd water utilities databook titled: “Water in Asian Cities” (Water for All Publication Series No. 10), designed for easy assessment of the strengths, weaknesses, and potential of utilities and groups of utilities. The book is designed to assist utility managers, local officials, and customer groups in the participating cities, as well as others working for efficient and equitable water markets.

29. **Small Scale Water Providers.** Parallel to the study of water supply in Asian cities, ADB also embarked on a study of small scale water providers (SSWPs). The objectives were to: (i) provide an overview of urban water suppliers beyond formal water utilities, (ii) increase the knowledge about the type of services provided by SSWPs, (iii) define the profile of the most significant SSWPs, and (iv) assess the main constraints and potential for SSWPs.

30. SSWPs are independent small companies, cooperatives, or individuals that supply water to users (see Box 5). They are independent to the extent that they are self-employed entrepreneurs or artisans. Most work without formal recognition from local authorities and are not subcontracted by the main water utility. Unlike in formalized private-public contracts, the small independent operator enters a market freely, takes risks, and invests without the benefit of any agreement with the public. The rise of SSWPs reflects the inability of formal water utilities to adequately provide for the water and sanitation needs of city dwellers.

Box 5 – Types of Small Scale Water Providers

- Cart-pushing water vendor
- Water tanker operator
- Neighbor selling water from his/her well or reselling water from his/her utility connection
- Engineer-turned small piped network operator
- Seller of bottled and barreled water

31. This study specifically looked into the operation of small piped water networks. These are networks operated by entrepreneurs or service-oriented groups that take on the role of a surrogate utility. They step in to fill the void in the community by providing piped water services until the formal utility is able to reach these consumers directly. The study showed that it is the poor who benefit most when local entrepreneurs invest risk capital and build and operate piped networks in unserved urban slums and low-income neighborhoods that have been failed by the city water utility. The study found strongly in favor of small piped networks, as short and medium term interim providers until the city water utility can expand services to the area.

32. The study findings were summarized into a book (Water for All Publication Series No. 13) that offers practical recommendations to city governments and utilities for getting local water network entrepreneurs to invest. These recommendations include the following:

- Small piped water networks should be included in city development strategies;
- Formal utilities should work with small piped network operators;
- Small piped networks should be formalized with licensing and exit strategies and takeout agreements;
- Minimum standards should recognize risk and pay-back requirements;
- Enabling legal and contractual conditions should be created; and
- Small operators should be integrated into the water supply chain to the extent possible

33. These recommendations were tested and further refined through the implementation of pilot projects in India, Philippines and Viet Nam. The results of the pilot were documented into a toolkit to serve as guide for governments, development agencies, utilities, and civil society in putting up or implementing piped water projects using the small piped network concept for urban poor or rural communities without access to piped water systems operated by formal utilities.

34. **Development and Application of Tools for Improved Water Operations.** Through resources from the Fund, ADB was able to develop tools and knowledge products to aid sector dialogues, assessments and other processes for improving ADB-DMC partnerships for investments, reforms and capacity development. These tools include, among others, the model Terms of Reference (TOR) aimed at introducing improvements and innovations in designing water and sanitation projects. They come in two sets: one set is the outline TOR that project officers include in the Technical Assistance (TA) paper and the other one is the comprehensive TOR used for engaging TA Consultants. These model TORs include the following:

- **Diagnostic City Water Market Assessment.** This model TOR provides project preparation technical assistance (PPTA) Consultants an approach and methodology for: (i) surveying all classes of water consumers and all types of water providers, (ii) analyzing survey results, (iii) undertaking stakeholder consultations based on survey findings, (iv) formulating responsive city government policy and ordinances, and (v) organizing civil society (consumer groups) to monitor policy implementation. This provides ADB project officers a powerful tool for revealing the facts about water consumers and money flows in project cities and towns. With the knowledge generated from this exercise, a successful project can be prepared with well-meaning city and utility leaders.

This assessment was pilot tested in Bangladesh’s Dhaka Water Supply and Sewerage Authority to determine: (i) where and how people in Dhaka get water, including informal market sources such as small scale water providers, (ii) reliability, cost, and quality of these water sources, and (iii) amount of water people consume everyday. The findings from this pilot exercise are summarized in Table 2 below.

Table 2 – Findings from Diagnostic Water Market Assessment in Dhaka, Bangladesh

<p><u>Service Coverage and Service Level</u></p> <ul style="list-style-type: none"> • DWASA is presently serving 75% of the 12 million people in Dhaka; 80% through house connections, 7% through standpipes and 0.5% by tankers. • There are 200 bulk connections serving around 100,000 connections, most of which are in slum areas and usually operated by NGOs. The main reason why 20% remains unconnected to the piped system is the absence of pipelines in some areas. • As of 2005, there were 217,451 house connections, 63% of which are metered (and 97% of it are in good working condition). All the 200 bulk connections are metered. The utility has 22 tankers with a combined capacity of 120,000 liters. • Water runs 24 hours daily to 39% and 44% of domestic and non-domestic connections, respectively. The rest get the supply at an average of 15 hours a day.
<p><u>Productivity Ratio</u></p> <ul style="list-style-type: none"> • The utility employs 4000 staff which translates to a ratio of 50 connections per employee.
<p><u>Nonrevenue water (NRW)</u></p>

<ul style="list-style-type: none"> • NRW has been estimated at 40%, 20% of which comes from pipe leakages and the rest, termed "administrative loss," includes under-billing, illegal connections and illegal sale of water.
<p><u>Willingness to Pay</u></p> <ul style="list-style-type: none"> • Out of the 984 domestic and 256 non-domestic water users surveyed, 75% and 64%, respectively, are willing to pay more for better services. In the case of households in slum areas, only 43% are willing to pay more.
<p><u>Other Providers of water services</u></p> <ul style="list-style-type: none"> • There are small-scale private water providers in Dhaka delivering water supply in areas not currently being served by DWASA. These providers include water vendors on tricycles and push carts, small piped water network installed by local entrepreneurs and an NGO. • Bottled water has entered the market after the 1988 flooding that caused a hepatitis outbreak. There are currently 5 major bottled water companies operating in Dhaka.

- **Mainstreaming Small Scale Water Providers.** This model TOR aims to encourage project officers to mainstream or integrate small scale water providers into the design of public and private sector loans because while these groups play a major role in bridging the service gap, their contributions to improving access are not recognized. City officials, water utilities, and local banks are encouraged to work with these service providers to bring water supplies to the poor and disadvantaged immediately on an agreed interim basis until the formal water utility is able to do so.
- **Planning Urban Sanitation and Wastewater Management Improvements.** This model TOR directs the PPTA consultants to review a comprehensive range of sanitation and wastewater management options, including: (i) conventional and low cost, (ii) centralized and decentralized sewerage, (iii) separate and combined industrial and municipal sewerage, (iv) sewage treatment and effluent disposal options, (v) on-site sanitation options, separate programs for schools, (vi) public toilets, (vii) sanitation in slums, and (viii) community-based NGO-supported programs. Consultants and governments are encouraged to consider where ecological sanitation (ecosan) should fit in the sanitation strategy.
- **Implementing Zonal Management Approach to Urban Water Supply.** This model TOR aims to help project officers and utilities address the typical "chicken and egg" situation where people, on the one hand, are not willing to pay more unless the system is improved and the utility, on the other hand, is not able to improve the system unless they are able to increase revenues. The solution that this model TOR offers is to subdivide the network into smaller, more manageable hydraulically isolated zones. This would enable operators to focus resources and efforts within each zone, thereby increasing the chances of improved performance, reduced levels of non-revenue water (NRW), increased water conservation through effective consumer revenue metering, and more. The savings resulting from these service efficiencies could be directed to adjacent zones and the process progressively repeated until the whole network has been covered and overall performance improved.

35. Another tool developed under the Fund is the guideline for water sector roadmap preparation. Roadmaps contain the government's planned policy reform, institutional

development and investment initiatives which guide the planning and design of ADB's water sector investments in the country. Five countries were assisted in preparing such roadmaps. They are Bangladesh, Cambodia, Pakistan, Palau, and Viet Nam.

36. **Capacity development of ADB and DMC staff.** With support from the Fund's resources, a capacity and training needs assessment was carried out in 2002. Some of the findings were: (i) the need to enhance skills mix within ADB in priority areas such as sanitation and wastewater management, (ii) the need to improve capacity of ADB staff in headquarters and resident missions to engage in water policy dialogue and sector reform process. Staff have the tendency to confine their knowledge of issues to projects they are involved in, (iii) lack of capacity in DMCs to lead and undertake sector reforms, including the awareness and appreciation of the need for reforms, and (iv) most DMC agencies continue to focus on subsectoral concerns and fail to address broader water management issues.

37. Results of the assessment guided the formulation of capacity development program for ADB staff and DMC clients which focused on: (i) staff training, (ii) awareness raising, (iii) upgrading and/or expanding skills mix, and (iv) knowledge management in the case of ADB staff. For DMCs, the focus was on: (i) staff training, (ii) awareness raising and advocacy, and (iii) support to critical water sector organizations both through in-country work and through regional cooperation and networking. These sector organizations include national water sector apex bodies, river basin organizations, water utilities, irrigation service providers, and water regulatory bodies.

38. Support to capacity development included organization of ADB Water Week, of which two were conducted. One was held in 2002 with the theme: "Getting ADB's Water Policy to Work". It focused on discussing with ADB staff and client governments ADB's "Water for All" policy approved in 2001. The second water week took place in 2004 with the theme: "Setting the Rules and Finding the Money. It aimed to stimulate knowledge development in the water sector, particularly on the issue of water for the poor and to find answers to questions like: Is there a conspiracy against the poor? Why is it that after concerted efforts spanning decades, many still do not have access to safe drinking water? Have conventional mindsets or vested interests stymied progress in this direction?

39. Following the launch of ADB's Water Financing Program 2006-2010 at the 4th World Water Forum in March 2006 in Mexico, ADB organized a Water Financing Conference in September 2006, in lieu of water week, to engage client governments in discussing how the Program could support their investment requirements for the sector. This conference was attended by high level representatives from governments headed by the ministries of finance and planning. This was followed by in-country dialogues in Viet Nam and Indonesia.

40. With sanitation being a priority focus under the Water Financing Program, a high level ADB-DMC Sanitation Dialogue was convened in March 2009 to facilitate the formulation and adoption of national sanitation plans and strategies for expanding their budget envelop to allow increased sanitation investments and adopt a comprehensive approach "from toilet to river". This was followed by in-country dialogue in Viet Nam.

41. **Knowledge Product Development.** Support was made possible under this component to develop knowledge products on priority topics, including commissioning such work to knowledge partners. Among the major knowledge products developed with partners included:

(i) Economics of Sanitation undertaken with Water and Sanitation Program which looked into the impacts of sanitation investments and the cost-benefit of sanitation options, (ii) Asian Water Development Outlook 2007 and currently under preparation is Asian Water Development Outlook 2010 supported by selected regional water knowledge hubs, and (iii) Asian Sanitation Databook prepared in partnership with CityNet and UN-Habitat. Several other knowledge products developed through the Fund resources are summarized in para. 17 (print publications) and para. 18 (water briefs) above.

42. **Support to Upstream Work.** Under this component, support was provided to allow ADB to more proactively engage in upstream work (pre-PPTA) to further improve quality of project development. Support was provided specifically through the provision of incremental range of expertise under the “water expert services pool”. This facility was meant to provide a quick response mechanism that allowed engagement of additional experts when needs arose during pre-PPTA, project preparation and implementation. This facility, which was introduced in 2006 under the 5th and last RETA financed by the Fund created huge demand in operations department and helped produce good results. Some examples include:

- Engagement of development communication expert to enhance stakeholder consultation and develop a communication plan in preparation for the implementation of Sindh Cities Improvement Investment Program – a \$300 million multitranche financing facility (MFF). The same expert support was extended to Nepal for the West Seti Hydropower Project;
- Engagement of water resources expert for strengthening integrated water resources management (IWRM) in Vu Gia-Thu Bon river basin in Viet Nam to support pre-PPTA work;
- Engagement of IWRM expert for the finalization of State Water Policy and implementation of IWRM in Assam, India to support on-going PPTA;
- Engagement of legal expert to support a PPTA for urban water supply in India (Nagpur, Vijaywada and Gujarat) where PPP options were being explored;
- Engagement of finance structuring specialist to help consolidate the financial packaging of investments emanating from PPTAs for 8 urban water supply and sanitation projects in Viet Nam;
- Initiating support to People’s Republic of China (PRC) in preparing 1st and 2nd tier municipalities for subsovereign lending; and
- Pre-PPTA support to Bangladesh for Chittagong Hill Tracts Rural Development Project Phase 2.

43. **Formulation of the Water Financing Program 2006-2010.** The Fund resources and the lessons learned from implementing Fund-supported activities contributed significantly to the formulation of ADB’s Water Financing Program 2006-2010. This was ADB’s response to the calls by Camdessus Panel and Gurria Task Force for doubling of water investments. ADB was the first multilateral development bank to respond to such call with a specific target to increase investments to well over \$10 billion over five years and specific targeted outcomes of 340 million

people being benefitted by water investments and IWRM introduced in 25 river basins in the region. The program is scheduled to end by 2010 with the target investments expected to be met and the successor program for 2011-2020 is already under preparation which will continue to underpin expanded investments in the sector.

44. **Establishment of the Water Financing Partnership Facility.** The experiences drawn from the Fund activities also inspired and guided the establishment of the Fund successor – the Water Financing Partnership Facility (WFPPF) which seeks to mobilize financial and knowledge resources from financing partners to support the implementation of the Water Financing Program. The program quality support window of WFPPF resembles the type of activities supported under the Fund, notably the facility for pilot and demonstration activities, regional cooperation, and knowledge products and services.

COMPONENT 3: PILOT AND DEMONSTRATION ACTIVITIES

45. Pilot and demonstration activity (PDA) is a small-grants facility—up to \$50,000 per project at a maximum implementation period of 12 months—designed to provide valuable direct assistance, on demand, to regional departments and clients in DMCs to enable the testing of new ideas and the validation of innovative development approaches that are highly replicable and thus adding value to ADB’s water operations. A total of 41 PDAs were approved for funding, two of which were cancelled. Thus, a total 39 PDAs were implemented under the Fund. The list is summarized in Table 3 below and the detailed description of each PDA is provided in Appendix 1.

Table 3: Summary of 39 PDAs Implemented Under the Fund

No.	Country	Title	Date Completed
Central West Regional Department (CWRD)			
1	Tajikistan	Creating an Institutional Framework for Improving Water Systems Management in Rural Areas of Tajikistan	Feb 2008
2	Pakistan	Groundwater Aquifer Rejuvenation Demonstration Pilot Project for Balochistan	April 2007
3	Pakistan	Sustainable Management of Water Resources in Punjab's Barani Areas	Sep 2006
East Asia Regional Department (EARD)			
4	PRC	Preparation and Adoption of a Comprehensive Management Framework for the Hunan Flood Management Sector Project	Oct 2005
5	PRC	Clean River Program for the Urban Poor in Nantai Island, Fuzhou	Sept 2006
6	PRC	Participatory Project Evaluation of Community Action on Hygiene Promotion in Shandong Province	Dec 2007
7	PRC	Pilot Study on Beneficial Use of Sludge	June 2009
Pacific Regional Department (PARD)			
8	Timor Leste	Integrated Water Resources Management and Environmental Impact Study	Oct 2002
9	Samoa	Establishment of Samoa Water Authority Wastewater Division and Associated Private Sector Participation Enabling Conditions	March 2004
10	Solomon/ Vanuatu	Education for Sustainable River and Water Conservation	Nov 2004
11	Kiribati	Designing a Catchment Management Plan for Lake Kutubu	Dec 2008

No.	Country	Title	Date Completed
South Asia Regional Department (SARD)			
12	Nepal	Promoting Gender Equality for Poverty Reduction through Improved Irrigation Management	March 2004
13	Nepal	Operational Research on Decentralized Wastewater Management and its Dissemination	Oct 2005
14	India	Facilitating Irrigation Sector Reform in Chhattisgarh	Sep 2006
15	India	Advocacy for Change: Multistakeholder Platform for Urban Water Reforms	June 2007
16	Nepal	School-Led Gender Sensitive Water Supply and Sanitation in Kapilvastu	Sep 2008
17	India	Demonstrating Sustainable Sanitation Improvement and Management through Community Initiative	Oct 2007
18	Nepal	Developing and Demonstrating Community-Based Water Resources Management Approaches for Hill and Mountain Ecosystems	March 2009
Southeast Asia Regional Department (SERD)			
19	Viet Nam	Poverty Impact of Public Irrigation Expenditures in Viet Nam	May 2004
20	Philippines	Water Management Information Dissemination and Extension for Irrigated Agriculture	Nov 2004
21	Philippines	Rationalizing Tariff for Private Water Utilities under the National Water Resources Board (NWRB)	March 2005
22	Cambodia	Developing and Testing Environmental Education and Awareness Methodologies	April 2005
23	Viet Nam	Development of Pro-Poor Rural Water Actions in Collaboration with NGO-CARE	April 2005
24	Viet Nam	Development of Pro-Poor Rural Water Actions in Collaboration with NGO-World Vision	April 2005
25	Viet Nam	Pilot-Testing the Preparatory Process of Developing a New Subproject Management Model for ADB's Water Resources Project	May 2005
26	Philippines	Sustainable Integrated Water Management and Governance in Baguio City	Aug 2005
27	Philippines	Decentralized Wastewater Treatment Facility for the Lilo-an Public Market	April 2006
28	Thailand	Bang Pakong River Basin Dialogue Initiative	July 2006
29	Viet Nam	Initiating Integrated Water Resources Planning in the Vu-Gia Basin	Dec 2006
30	Indonesia	Development of a Water Quality Management System for the West Tarum Canal of the Citarum River Basin	March 2008
31	Indonesia	Geographic Information System for Integrated Water Resources Management in Cimanuk River Basin	Oct 2007
32	Thailand	Production of Water Filter from Coconut and Palm Oil Shells	May 2008
33	Thailand	Piloting an Adaptive Management Approach to Implementing Integrated Water Resources Management in Yom River Basin	Dec 2008
34	Indonesia	Developing Model for PDAM Collaboration for Improved Raw Water Management	March 2009
35	Philippines	Testing and Demonstrating a Technology to Cope with Debrisflows in Mountain Regions	March 2009
36	Cambodia	Adaptation and Verification of Arsenic Mitigation Technology	Dec 2008
37	Cambodia	Piloting River Basin Approach to Integrated Water Resources Management in Eastern Cambodia	March 2009

No.	Country	Title	Date Completed
38	Viet Nam	Developing Appropriate Sanitation Solutions to Peri-Urban Areas	April 2009
39	Philippines	Pilot Project for the Reduction of Mercury and Heavy Metals Contamination Resulting from Artisanal Gold Refining in Meycauayan Bulacan River System	May 2009

46. PDAs can be related to the management of water resources and/or the delivery of water services and may be categorized into the following themes: (i) policy, legislation and regulatory reforms, (ii) institutional development/institutional arrangements, (iii) public awareness and water education, (iv) appropriate technology, and (v) participation, inclusive approaches and multistakeholder representation. Such diversity of content and ideas allowed the PDA Facility to capture the complexity of water governance and the crosscutting nature of water. Such diversity is demonstrated in the examples of PDAs in Table 4 below.

Table 4: Examples of PDAs (Based on Themes)

Theme	Brief Description
Policy, Legislation and Regulatory Reform	<ul style="list-style-type: none"> • Creating the enabling environment for improved delivery of wastewater management services, including private sector participation, in Samoa • Rationalizing water tariff for private water utilities in the Philippines
Institutional Development/ Institutional Arrangements	<ul style="list-style-type: none"> • Creating an institutional framework for improved water supply delivery in Tajikistan's rural areas • Developing a model for collaboration among PDAMs in Indonesia for improved raw water management
Public Awareness/ Water Education	<ul style="list-style-type: none"> • Education for sustainable river and water conservation in Solomons and Vanuatu • Developing and testing environmental education and awareness methodologies for Cambodia's Tonle Sap Basin
Appropriate Technology	<ul style="list-style-type: none"> • Developing appropriate sanitation solutions for Viet Nam's peri-urban areas • Demonstrating technology to cope with debris flows in mountain regions
Participation, Inclusive Approaches and Multistakeholder Representation	<ul style="list-style-type: none"> • Developing pro-poor rural water actions in Viet Nam through partnership with NGOs • Introducing school-led and gender-sensitive water supply and sanitation in Nepal's rural areas

47. The PDA Facility allowed ADB to investigate, test and validate ideas, approaches, methodologies, and strategies, including technology options. PDAs have, therefore helped answer “what”, “why” and “how” questions on water issues and challenges.

48. **WHAT:** PDAs have provided strategic information to guide knowledge development and provided added value in terms of new and additional information, including technology options, that ADB will otherwise not have access to under its normal business processes. Some examples of the “what” questions that PDAs have helped answer include:

- What institutional framework could improve the sustainability of rural water supply and sanitation facilities in Tajikistan?

- What policy and institutional reforms are required to adopt and implement integrated water resources management in Timor Leste?
- What technology options for wastewater disposal and management are appropriate for Viet Nam’s peri-urban areas?

49. **WHY:** PDAs have presented findings and lessons that provide insights as to why certain approaches or strategies should be adopted and for which specific circumstances. The following examples illustrate how PDAs have helped answer the “why” question:

- Why should collaboration with NGO be adopted as part of pro-poor rural water interventions in Viet Nam?
- Why is increased involvement of women in implementing arsenic mitigation measures in Bangladesh necessary?
- Why should Nepal consider building multifunctional water users associations to enhance its irrigated agriculture?

50. **HOW:** PDAs have helped develop tools, methodologies and approaches that demonstrate how certain things can be done differently or how improvements can be achieved. These “how” questions have been addressed in the examples below:

- How can participatory processes enhance water allocation in Thailand’s Bang Bakong river basin?
- How can Geographic Information System support the implementation of IWRM in Indonesia’s Cimanuk river basin?
- How can drip irrigation in Nepal promote gender equality?

51. PDAs have benefited ADB in terms of (i) direct project support, and (ii) support to overall sector work in-country. In terms of the latter, PDAs have produced outcomes with strategic value to the country and the sector at large. They either helped advance reform measures, improved institutional arrangements, or increased awareness in DMCs on sector issues and challenges. Some examples are presented in boxes 6 and 7 below.

Box 6 – India: Demonstrating Gender- Sensitive Sustainable Sanitation Improvement and Management through Community Initiative

The outcomes of the PDA can be considered overwhelmingly positive considering that open defecation was largely the practice in the pilot area due to lack of sanitary facilities.

- Existing self-help groups were strengthened and empowered to take action as manifested in women taking up loans (as against grants) for the construction of latrines, volunteering in awareness raising activities and agreeing to being members of village sanitation committees.
- Village sanitation committees were formed in pilot communities with significant women representation (a 50–50% ratio of males to females) and gained credibility from communities and government. As a result, the government recognized village sanitation committees as legal statutory bodies for planning, implementing and monitoring the government’s sanitation program—the “Total Sanitation Campaign”.
- Village sanitation committees have been able to mobilize resources from households, state and central governments to finance community-wide sanitation programs.

Box 7 – Philippines: Rationalizing Water Tariff for Private Water Utilities

An immediate outcome of the PDA was the approval in 2005 by the Philippine National Water Resources Board (NWRB) of a new tariff setting methodology. From a sector perspective of the country, the PDA outputs and results have contributed significantly to improving sector governance as follows:

- The key performance indicators for water utilities developed under the PDA were refined and translated into customer service standards approved by NWRB in 2007 and have since been used for benchmarking utility performance.
- Legal recommendations from the PDA on enhancing enforcement of utility regulation were translated into policies approved by NWRB.
- Using PDA as an inspiration, NWRB is currently developing an accreditation process of financial specialists who can assist water utilities in preparing business plans, with the end in view of improving their financial performance.
- NWRB has rolled out a capacity building program on the new tariff setting methodology.

52. Between 2006 to 2007, an outcome evaluation of 6 completed PDAs was carried which put forward the following findings and recommendations.

Findings:

- As a grant facility, the PDA programme was able to support the piloting of 'new' approaches in addressing water sector issues in the context of an area or country with potential value to the sector at the global level and to ADB Operations.
- As a matter of practice, PDAs are developed to address specific problems and issues faced by the project areas which make them highly relevant to the project beneficiaries and the immediate environment. 'Relevance' of PDAs increases with participation of ADB Operations staff to the extent that proposals are enhanced with their access to a large body of knowledge and directed to support ongoing sector work at ADB.
- While replication and mainstreaming of outputs within ADB have been modest so far (based on the projects that were reviewed), and also because normally the process of replication takes time, relevance of the work on current issues and developments in the water sector remains high.
- The outcomes from the PDAs have been found to be positive at the level of the project beneficiaries and stakeholders, and some even yielded unintended positive outcomes. In the process, they have contributed to improvement in the lives and well being of the poor, marginalized sectors of the population. Where these outcomes were perceived to be somewhat constrained, this is mainly due to limited resources and time under the PDA (requires one year implementation with a per project budget of \$50,000) to fully complete the process of engagement for example or where existing capacities of project stakeholders are limited.

- In most cases, funding of \$50,000 per PDA has produced project outcomes with strategic value to the country and the sector at large.
- Sustainability is enhanced with the explicit participation of a government counterpart agency and ADB Operations staff during project implementation. Also, since such an arrangement provides better chances for the project to be replicated and mainstreamed at ADB.

Recommendations to further enhance future PDAs:

- Involvement of Operations staff is strategic in terms of ensuring that interventions are relevant from the perspective of current sector work globally, providing inputs to the design based on their wide exposure in the sector and that they can facilitate replication and mainstreaming at ADB. Having said this, it is imperative that their involvement is solicited at the early stage of project conceptualization and design prior to approval. Where proposals emanate from the Operations staff themselves, these should be reviewed based on the PDA policy of supporting 'additionality'.
- The grant is an effective and efficient means to fund, particularly 'soft' interventions such as institutional development, capacity building, raising public awareness and support for policy reform. Where small scale civil works is deemed necessary to complete the demonstration process, additional funding may be justified.
- While 'appropriate technology' is a theme that is being promoted under PDA, this should be tempered with supporting only technologies that are low cost, indigenous, resulting in services affordable to the poor and sustainable to the mass of the population.
- Because PDAs are intended to be short term (one year implementation) and allow only limited interventions (although with potentially strategic value), a post project survey (after 6 months to one year) is recommended to assess and validate outcomes as well as to assess the need for any further support that may enhance sustainability and replication.

COMPONENT 4 – WATER PARTNERSHIPS

53. With support from the Fund, ADB was able to lead and build several development partnerships in the water sector. Some of the major ones resulted from the 3rd World Water Forum in Kyoto in 2003, such as:

- **Water for the Poor-Partnerships for Action.** This initiative aimed at strengthening ADB-DMC partnership for sharpening the pro-poor focus of water investments, thereby improving the quality of investments in water security for the rural poor in the region. It covered: (i) rural water supply, hygiene promotion, and sanitation, (ii) water for production and sustainable rural livelihoods, including pro-poor irrigation, as well as watershed and ecosystems management, and (iii) prevention and mitigation of water-related disasters in rural areas. The main strategy was to establish partnerships with DMCs and the nature of the partnerships was to:

- follow a participatory and demand-led approach that combines advocacy, capacity building, and community empowerment with pro-poor water investments
- build on policies, development projects, and activities at the local, regional, and national level
- design and prioritize actions with the help of indicators, e.g. Millennium Development Goals, national poverty reduction and rural development strategies

At the 3rd World Water Forum, Viet Nam was the first DMC to sign up for the partnership with an estimated investment partnership valued at \$335 million - about \$75 million to come from Viet Nam and \$180 million from ADB. The partnership focused on mainstreaming poverty reduction effectively in policies, programs and projects in Viet Nam's water sector, working at all levels. At the national level, the partnership executed a national dialogue on water and poverty that brought together all major stakeholders and assisted in developing the national water resources strategy. At the provincial level, the partnership helped prepare provincial water and poverty strategy in six provinces (Thanh Hoa, Quang Bing, Quang Tri, Thua Thien Hue, Quang Ngai and Binh Dinh) which provided upstream support for the Central Region Water Resources Sector Project funded by ADB and the Netherlands. At the local level, two leading NGOs - CARE and World Vision - worked with ADB to identify more effective approaches to community participation. In particular, they focused on the identification, planning and implementation of new water investments. These approaches were intended to be integrated into the design of ADB projects.

Consultations were also carried out in Nepal, Bangladesh, Cambodia, PRC, and Tajikistan to sensitize agencies in these countries to incorporate pro-poor partnership approaches in project design.

- **Gender in Water Partnership.** This was a partnership between ADB and the Gender and Water Alliance to promote gender mainstreaming into ADB and DMC water sector projects and activities. A letter of intent was signed in Kyoto to undertake the following: (i) GenderScan to assess how gender considerations have been mainstreamed in ADB projects, (ii) gender training for ADB staff in headquarters and resident missions and representatives from DMCs, (iii) pilot and demonstration activities, and (iv) joint publication. Also through the Fund resources, a joint collaboration between the Scientific Information Center of the Interstate Commission for Water Coordination (SIC-ICWC) in Central Asia and ADB Resident Mission in Uzbekistan was forged, which made possible the establishment of Gender and Water Network (GWANET) in Central Asia with membership of 70 major water stakeholders from Kyrgyz Republic, Water User Association (WUA) and farms in Uzbekistan, Tajikistan, Turkmenistan and Kazakhstan. This collaboration also facilitated: (i) provision of capacity development support to water sector organizations on mainstreaming gender into the decision making process, (ii) development of a knowledge base consisting of 89 different normative documents in two

languages (English and Russian) in the field of Gender and Development (GAD), 200 leaflets and articles published and disseminated in different republican periodicals, 80 newsletters produced and disseminated monthly to 62 subscribers through the GWANET mailing list, (iii) maintaining a bilingual web site <<http://www.gender.cawater-info.net>>, and (iv) convening a gender forum. This collaboration was completed in April 2008.

- **Network of Asian River Basin Organizations (NARBO).** ADB, ADB Institute and Japan Water Agency jointly established NARBO in 2004 with the objectives of: (i) exchanging information and experience among river basin organizations (RBOs) in Asia, and (ii) strengthening RBO capacity in promoting IWRM and improving water governance. It currently has 65 member institutions as follows:

• River basin organizations	-	22
• Government organizations	-	17
• Regional knowledge partners	-	17
• Inter Regional Knowledge Partners	-	8
• Development Cooperation Agency	-	1

Since its inception, NARBO has held series of training workshops on IWRM, thematic workshops on water allocation and water rights issues in Asia, and other priority topics, and supported twinning partnerships.

NARBO also embarked on performance benchmarking as one of the priority activities under the Framework for NARBO Action Plans (2004-2005). The relatively rapid adoption of River Basin Organizations (RBO) as the key institutional element supporting the adoption and implementation of IWRM in Asian river basins has created a need for systematic methods for identification of best practices in basin management and service delivery by newly formed and well established organizations alike. The NARBO-supported RBO Performance Benchmarking is designed to provide a flexible framework of performance indicators and a supporting system to enable participating organizations to implement benchmarking and peer review amongst comparable organizations with the objective of achieving high performance organizations responsible for management of river basins. Given the dynamic environment in which water governance is evolving and the rapid expansion in the numbers of basin organizations with expanding roles being adopted, the NARBO performance initiative is based on the concepts of peer group benchmarking and continuing improvement processes. The performance benchmarking was piloted in 4 countries and has since been adopted by Indonesia where it is now being mainstreamed.

- **Water for Asian Cities Program.** This partnership between ADB and UN-Habitat was aimed at: (i) expanding and improving water supply and sanitation services to the urban poor in Asia, (ii) building the capacity of Asian cities to secure and manage pro-poor investments, and (iii) helping the region meet the MDG target for safe drinking water and basic sanitation. The Memorandum of Understanding (MOU) signed at the 3rd World Water Forum in 2003 committed each of the two parties to the following areas of

collaboration at an amount of \$10 million – with each party providing \$5.0 million and additional \$500,000 worth of ADB investment projects in urban water supply and sanitation projects:

Phase 1 – Capacity Building. Creating the enabling environment and building the necessary capacity for the Program. Its key activities include:

- advocacy to promote policy, regulatory and tariff reforms
- strengthening of regional, country and city-level governance and capacities
- benchmarking of utility performance
- monitoring of progress towards the achievement of MDG targets

Phase 2 – Project Preparation. Identification, development, and preparation of investment projects for the Program. These projects should be bankable, responsive to consumer demands, and technically, economically and financially feasible. They should also be socially, institutionally and environmentally sustainable

Phase 3 – Investment. Mobilizing financial resources to implement the projects developed in Phase 2. Policy reforms, capacity building and institutional strengthening measures undertaken in earlier phases will also be continued in this phase.

A second MOU was signed in 2007 providing an enhanced framework for action to pursue the partnership's earlier goals and create greater synergy for ADB's Water Financing Program.

54. Other major partnerships and regional cooperation that were established in the course of implementing the Fund-supported activities include the following:

- **Asia Pacific Water Forum (APWF).** Established in 2006 at an official launching ceremony in ADB, APWF aims to: (i) provide countries and organizations in the Asia-Pacific region with a common platform for articulating the region's strategies and promoting its achievements in solving water problems, and (ii) showcase leadership in decision-making, excellence in practice and innovation, and concrete results that have had a substantial impact at grassroots level. APWF adopted the following key result areas:

Developing knowledge and lessons

- Building a network of water knowledge hubs
- Coordinating capacity development programs
- Providing guidance on water policies

Increasing local capacity

- Supporting peer learning (including cities/mayors)
- Empowering civil society, gender and youth

- Fostering (sub)regional cooperation

Increasing public outreach

- Developing regional water advocacy
- Supporting in-country water awareness programs
- Presenting regional awards for excellence

Monitoring investments and results

- Monitoring public and private investments
- Monitoring reforms and trends
- Monitoring MDG achievement

Supporting Forum and Summit

- Maintaining an interactive website
- Supporting the APWF Executive Committee
- Organizing the Asia-Pacific Water Summits

- **APWF Regional Water Knowledge Hubs.** Launched in 2008, the APWF regional water knowledge hubs was established through a cooperation agreement among ADB, UNESCO-IHE Institute for Water Education and Singapore's Public Utilities Board. Knowledge hubs are centers of excellence promoting knowledge exchange and capacity development on priority water topics to help project clients find and implement better solutions. To date, 17 knowledge hubs have been confirmed as follows:

Priority Topics	Organization
Urban water management	Public Utilities Board (PUB), Singapore
Disaster risk reduction and flood management	International Centre for Water and Hazard Risk Management (ICHARM), Japan
Water and climate change adaptation in Southeast Asia	National Hydraulic Research Institute of Malaysia (NAHRIM), Malaysia
River basin organizations and management	Center for River Basin Organizations and Management (CRBOM), Indonesia
Water quality management in river basins	Korea Water Resources Corporation (K-water), Korea
Decision support systems for river basin management (hydroinformatics)	Center for Hydroinformatics in River Basins (CHIRB), PRC
Water governance	Institute of Water Policy (IWP), Lee Kuan Yew School of Public Policy (LKYSPP), Singapore
Irrigation service reforms	International Water Management Institute, Sri Lanka
Integrated water resources management in Central Asia	Central Asia IWRM Resources Center, Uzbekistan
Integrated water resources management in the Pacific	Pacific IWRM Resource Center, Fiji Islands
Erosion and sedimentation in river basins	International Research and Training Center on Erosion and Sedimentation (IRTCES), PRC

Priority Topics	Organization
Healthy rivers and aquatic systems	International Water Center (IWC), Australia
Water resources management in mountainous areas	International Center for Integrated Mountain Development (ICIMOD), Nepal
Groundwater management	Institute for Global Environmental Strategies (IGES), Japan
Sanitation	A consortium of Japan Environmental Sanitation Center, Japan Sewerage Works Association, and the Sewerage Business Management Center, Japan
Transboundary water resources management	Mekong River Commission Secretariat (MRCS), Lao PDR
Water and climate change adaptation in South Asia	The Energy and Resources Institute (TERI), India

- **Water Operators Partnerships (WOPs) Program.** A collaboration between ADB and the Global Water Partnership, this program works to enable water utilities to improve service coverage and delivery, financial sustainability, and other aspects of their performance. It is part of the Hashimoto Action Plan announced by the United Nations Secretary General's Advisory Board (UNSGAB) that called for breakthroughs in six key areas: (i) water operators partnerships, (ii) financing, (iii) sanitation, (iv) monitoring and reports, (v) IWRM, and (vi) water disaster.

ADB was the first multilateral development bank to implement a WOPs Program through a dedicated TA financed by the Japan Special Fund and approved in April 2007. Prior to this TA, initial activities were supported by the Fund, including the start-up meetings with utilities in South Asia and Central Asia which later resulted in the formation of South Asia Water Utilities Network (SAWUN) and Central Asia and South Caucasus Water Utilities Association (CASCWUA). Prior to WOPs Program, the Fund already provided support to the Southeast Asia Water Utilities Network (SEAWUN), particularly the initial operation of the secretariat and the conduct of training programs for member-utilities.

ADB's WOPs Program has four components: (i) formation of water utilities networks, (ii) continuous improvement and benchmarking, (iii) twinning of water utilities, and (iv) technical training. With respect to twinning program, eleven (11) twinning partnerships have been established. These partnerships have resulted in tangible improvements and encouraging results and outcomes, such as in the area of nonrevenue water reduction. While several have been completed, others are just commencing and more will be developed in the coming months.

- **Regional Cooperation Among National Water Sector Apex Bodies.** ADB regards the national water sector apex bodies as critical institutions to improve governance of water and advance sector reforms. In 2004, ADB convened the very first meeting of apex bodies in the region which resulted in a regional cooperation to pursue the following: (i) information sharing, (ii) peer review and benchmarking, (iii) joint training programs and workshops, (iv) cross visits and regional exchanges to raise awareness, and (v) strengthening public relations. One of the major programs pursued with support from Fund resources was the peer review and benchmarking. The exercise was carried out in the Philippines and Thailand while preparatory work began in Viet Nam and Malaysia.

In view of climate change, there is a renewed interest from several DMCs to continue this networking with ADB support.

- ADB-GWP Cooperation. A partnership agreement was signed in 2006 between ADB and GWP aimed at fast tracking developments in Asia-Pacific's water sector. The areas of collaboration include: (i) implementation of the Hashimoto Action Plan under which WOPs is a key initiative, (ii) implementation of IWRM, (iii) support to Asia Pacific Water Forum, and (iv) support to ADB's Water Financing Program. In November 2009, ADB met with GWP in New Delhi, India to review activities under the 2006 agreement and design a new framework for future collaboration. The principal elements of the new framework are: (i) an exchange of contact details of relevant GWP and ADB staff to facilitate dialogue on possible joint work. It is expected that ADB and GWP would work on selected country water sector reviews, sector analysis, and project and/or program preparatory work; (ii) engagement with the GWP Technical Committee (GWP-TEC) to identify the potential for a joint knowledge development program; and (iii) joint work on:
 - a proposed Asian Water Information System,
 - a regional IWRM capacity building initiative,
 - a specific IWRM capacity building program for ADB staff,
 - the proposed ADB Water Event in October 2010,
 - continued cooperation on water operators partnerships at regional level, and
 - a technical staff secondment from GWP to ADB.

COMPONENT 5 – REGIONAL EVENTS AND INITIATIVES

55. Activities under this component supported participation by project clients and ADB staff to contribute to key water events and initiatives to promote and catalyze the implementation of ADB's water policy in the region. Among these key events include the following:

- World Water Forum, in particular the 3rd World Water Forum in 2003 in Kyoto where ADB played a major role, including in regional consultations leading to the Forum on the following topics: (i) water and poverty, (ii) water in cities, (iii) water in small island countries, (iv) regional cooperation for shared water resources management, and (v) flood management. At the Forum, ADB organized the World Development Partners Panel to facilitate dialogue among leaders of development financing institutions, including ADB, and Forum stakeholders on the subject of water and poverty reduction.
- Stockholm World Water Week in which ADB has, for two years now (2008 and 2009) organized an Asia Day
- Southeast Asia Water Forum which began in 2004 and has since been convened every two years with support from ADB as one of the major partners
- Singapore International Water Week which had its inauguration in 2008 and will have ADB as strategic partner from 2010 to 2012.
- World Toilet Summit and Expo where ADB's participation as partner began in 2008

- International River Symposium in which ADB and DMCs participate as speakers and resources persons

56. The Fund also made possible the organization by ADB of major water events such as the ADB Water Week in 2002 and 2004 referred to in para 38 above, the Water Financing Program Conference in 2006, the high level ADB-DMC Sanitation Dialogue, and other conferences and workshops such as those supporting climate change, regional water knowledge hubs, and others.

COMPONENT 6 – PROGRAM COORDINATION, MONITORING AND EVALUATION

57. This component supported the monitoring and reporting on the Fund, including evaluation of specific Fund-supported initiatives such as the outcome evaluation of completed PDAs in 2006. A monitoring system was established for the Program of activities, covering inputs, outputs, outcomes and financial management which was used as basis in preparing the six-monthly reports to donors. Reports on the Fund were posted on ADB's water website.

58. In 2005, the Netherlands Ministry of Foreign Affairs, the Fund's major contributor, evaluated progress on the use of the Fund. Their findings point to the Fund's positive influence on the water sector as follows:

- **Water flows to the poor.** The 2005 review confirmed that the Fund directly led to poverty reduction and the betterment of the lives of the poor, most notably through the PDAs. From demonstrating the potential of drip irrigation for improving livelihoods in rural Nepal, to promoting participatory irrigation management in poor agricultural communities in Viet Nam, to mobilizing Pacific rural communities as agents for water quality monitoring and hygiene education, the Fund's projects enabled specific segments of Asia's poor to gain access to, and better manage, their water resources and services.
- **Reaching out to decision makers.** The review noted that the Fund reached a wide audience of policymakers, decision makers, managers, practicing professionals, journalists, and others with key messages on policies and good practice. The television documentaries on community actions to resolve water issues were broadcast over local channels all over the region, as well as internationally through the BBC and Living Asia, reaching hundreds of millions of viewers. More than 400 journalists joined the Fund's media workshops, going on to write more, and better informed, articles on water challenges in their countries, thereby contributing to a more informed public. The booming activity on ADB's water website reflects the growing interest in water issues and ADB's water projects in the region. The website significantly increased its readership from a monthly average of 16,000 hits in 2003 to well over 200,000 monthly hits in 2006.
- **Working in partnerships.** The review also found that the Funds activities sparked more interest among water stakeholders for collective action. Journalist-participants of the Fund's media workshops organized an informal media network and collaborated to establish Asia Water Wire, an online resource of water stories, which also receives support from the Fund. Organizations that are critical to good water governance—among them river basin organizations, national water sector apex bodies, and water utilities—used the Fund's support to form networks, participate in training programs,

develop benchmarking systems and use a peer review process to help improve their performance. Government agencies, the private sector, civil society organizations, and communities joined in the PDAs with strong replication and scaling-up potential. Of the 27 activities undertaken, covering a wide range of topics and countries,¹⁵ already delivered quality outputs, and the review found that these projects were implemented with care.

- **Making knowledge work.** The Fund effectively supported the exchange of good practices among ADB and country stakeholders, and expanded sector-related knowledge, according to the review. The Fund activities cover a wide range of topics, among them: (i) linkages between poverty, water, health, and education; (ii) performance benchmarking for water utilities; (iii) river basin organizations and apex bodies; (iv) tariff setting, and (v) flood management. The Fund's knowledge products include publications, model terms of reference for water projects, short articles on water issues, roadmaps on a country's water sector, and more. Many of them offer new knowledge; others offer an update on existing knowledge. ADB staff and country stakeholders highly acknowledge the quality of these products and the support they provide in the stakeholders' operational work.

59. It is also under this component that the following major evaluation activities were carried out:

- **Interim Review of ADB's Water Policy Implementation.** Carried out in 2003, this review was aimed at assessing the extent to which the water policy has been integrated into ADB's water operations and stimulate improvements in ADB project design and implementation. The scope of the review included: (i) water assessments and policy dialogue in DMCs, (ii) design of loan and technical assistance projects, (iii) response to ADB's poverty reduction strategy, (iv) progress of regional cooperation, (v) internal ADB actions, (vi) impact of ADB's 2002 reorganization on policy implementation, and (vii) impact of the Fund on ADB's water operations. In terms of incorporating the elements of water policy into water projects, the main findings were:
 - **Encouraging progress** was achieved in terms of: (i) improving and expanding water services, (ii) conserving water, (iii) fostering participation, and (iv) improving governance.
 - There was **modest progress** in: (i) fostering the integrated management of water resources, and (ii) promoting regional cooperation.
 - **Limited progress** was achieved in promoting a national focus on water sector reform

In summary, the major findings from the review were:

- ADB and its DMC clients connected many of Asia's poor to water services while stimulating water conservation among suppliers and users.
- Governments experienced positive results when they involved stakeholders in their bids to reform and improve the governance of their respective water sectors.

- Introducing integrated management of water resources and fostering transboundary water resources cooperation remained a challenge. Major water and land resources are generally treated as distinct and unrelated resources, although most DMCs have started viewing them within a river basin context.
- The policy's principal challenge was in getting DMCs to develop national water policies, laws, and other reforms that link water to national development goals.
- Of the water loans approved after the water policy's adoption, 54 percent were found to be consistent with the water policy, compared with just 10 percent of the water loans approved in the three-year period leading up to the policy's adoption.

This interim review also highlighted the need to revise the policy provision for large water resources projects involving dams. The policy called for all stakeholders to agree on the justification for such projects. The review noted that expecting all stakeholders to agree is impractical. The revised provision now reads: *“ADB will adopt a cautious approach to large water resources projects – particularly those involving dams and storage – given the record of environmental and social hazards with such projects. All such projects will need to be justified in the public interest and stakeholders must be provided with the opportunity to comment on the justification with their views considered. ADB will promote the informed participation of government, civil society, and other stakeholders in the country in an open and inclusive manner towards this end.”*

➤ **Comprehensive External Review of ADB’s Water Policy Implementation.** ADB’s water policy stipulates the conduct of a comprehensive review of the policy’s implementation 5 years after its approval. The policy further stipulates that said review be conducted by an expert group comprising ADB staff, advisers drawn from developing member countries (DMCs), other external support agencies, and international specialists. The 2005 comprehensive review provided ADB and its stakeholders with an assessment of progress regarding the implementation of the water policy, as well as recommendations to improve ADB’s water investments and operations. The process involved the following components:

- **External Review Panel.** ADB commissioned a 6-member review panel comprising experts from DMCs, civil society, donors and the private sector.
- **Consultations.** ADB organized a series of consultations to generate feedback on policy implementation experience and other inputs to the review.
- **Water Conferences.** ADB participated in several regional events to secure feedback of participants through surveys.
- **Staff Workshop and Feedback.** ADB organized in-house workshops involving ADB’s water operations staff and consultants.
- **Client and Stakeholders Survey.** ADB circulated surveys to various stakeholders at conferences and meetings.

The Review Panel submitted its Report in April 2006 which was presented during the 2006 ADB Annual Meeting. The recommendations and ADB's initial response at that time were as follows:

Panel Recommendations	ADB's Response
<p>Increase ADB's commitments and develop ADB's capacities: This will require increased investments, staff realignment and development, and providing leadership in the region to prioritize water.</p>	<p>Drawing on the panel's work, ADB has prioritized water as a core business area under its medium-term strategy. Under the Water Financing Program (WFP) 2006-2010, ADB decided to double its investments to well over \$10 billion over 5 years. These investments focus on expanding long-term rural, urban, and basin water programs.</p>
<p>Develop long-term partnerships with DMC stakeholders and donors: This will require policy dialogue, sector assessments, training, and promoting programmatic or policy-based lending approaches to raise status of water, strengthen institutional frameworks, improve water governance, develop capacities, and improve donor harmonization and aid effectiveness in the DMCs.</p>	<p>ADB has made good progress in this area in several countries through water sector assessments conducted, and with support of the Cooperation Fund for the Water Sector provided by the governments of the Netherlands and Norway. ADB recognized the need to do more and pursued this under WFP.</p>
<p>Focus the implementation of IWRM on stakeholder needs and ownership: This will require supporting IWRM planning and implementation, increasing knowledge on IWRM in DMCs and at ADB, and developing and improving assessment tools for benchmarking, monitoring and evaluation.</p>	<p>The water policy fosters IWRM at the river basin level, and ADB recognizes that the foundation for this lies in developing capable river basin organizations, and inclusive and efficient processes for stakeholder participation at all stages of basin planning, project preparation, and implementation. Under WFP, ADB is help to introduce IWRM in 25 river basins with the participation of stakeholders.</p>
<p>Promote "business unusual:" This will require leveraging innovations to increase access, affordability, efficiency and cost-effectiveness, including nuanced guidance on subsidy use, promoting PPPs, alternative financing modalities under IEI, robust O & M arrangements, and scaling up of alternative technologies.</p>	<p>The water policy targets to improve and expand the delivery of water services, in water supply and sanitation, and in irrigation and drainage. To increase access, affordability, efficiency, and cost effectiveness of water services, ADB has started using innovative products and services such as multi-tranche financing and sub-sovereign lending, and work to develop effective public-private partnerships in urban water services.</p>
<p>Improve processes to ensure effective policy implementation: This will require improving ADB's internal communications and procedures, coordination with DMCs on CSP/U process and national planning, and monitoring and evaluation efforts to mitigate social and environmental impacts of ADB projects.</p>	<p>WFP has driven the further implementation of the water policy. ADB has enhanced its collaboration with civil society organizations to help create a stronger enabling environment for water reforms and investments. Improving donor harmonization and development effectiveness was already on ADB's corporate agenda, and further opportunities for co-financing are explored at country and regional, and global levels.</p>

III. DIRECT OPERATIONS/TOP-UP SUPPORT

60. In 2005, the Fund donors agreed to provide \$2.4 million direct operations/top-up support including the tsunami assistance to Maldives. These funds were allocated to 19 TAs, of which 15 have been completed and 4 will be completed beyond closing date of the Fund. However, resources from the Fund for the 4 remaining TAs have been spent as of end 2009. These 19 TAs are summarized in Table 5 below while a comprehensive list that provides description of each TA is presented in Appendix 2.

Table 5 – List of 19 TAs supported by the Fund under Direct Operations/Top-Up Support

TA Type and No.	TA Title
PPTA 4651	Dhaka Water Supply
PPTA 4863	2 nd Urban Governance and Infrastructure Improvement (Sector)
PPTA 4678	North Eastern Region Urban Development (Phase II)
PPTA 4779	Project Implementation and Urban Management in the North Eastern Region (Phase 1)
PPTA 4815	Orissa Integrated Irrigated Agriculture and Water Management
PPTA 4896	North Eastern Integrated Flood and Riverbank Erosion Management
AOTA 4614	Promoting Sound Environmental Management in the Aftermath of the Tsunami Disaster
PPTA 4893	Kathmandu Valley Water Distribution, Sewerage and Urban Development
PPTA 4642	Punjab Irrigated Agriculture Development Sector
PPTA 4534	Sindh Basic Urban Services Project
PPTA 4586	Guiyang Integrated Water Resources Management
AOTA 4327	Flood Management Strategy Study
AOTA 4604	Nanjing Water Utility Long-Term Capital Finance in Commercial Markets
PPTA 4971	Songhua River Basin Pollution Control and Management Project
AOTA 4049	Strengthening the Regulatory Framework for Water Supply and Sanitation
PPTA 4853	Small Towns and Rural Arid Areas Water Supply and Sanitation
AOTA 7078	Institutional Strengthening for Decentralized Service Delivery in the Water Sector
AOTA 3528	Capacity Building for Water Resources Management
RETA 6285	Strengthening Country Safeguard Systems

IV. FINANCIAL SUMMARY

61. The final financial report is expected to be submitted by end of June 2010 upon closure of all contracts financed from the Fund. At the time of preparation of this Final Report, the total amount yet to be disbursed for outstanding contracts is about \$281,000. All these activities have been completed as of end-2009 and only await payments and liquidation.

62. Table 6 below presents the actual utilization of Fund resources for the 4 RETAs that have been financially closed.

Table 6 – Actual Fund Utilization for RETA Phases 1-4

TAs	Amount Allocated	Amount Utilized	Financial Closing
RETA 6031: Promoting Effective Water Management Policies and Practices Phase 1	\$4,000,000.00	3,774,185.00	11 Aug. 2006

TAs	Amount Allocated	Amount Utilized	Financial Closing
RETA 6093: Promoting Effective Water Management Policies and Practices Phase 2	1,000,000.00	903,373.08	31 Aug. 2005
RETA 6123: Promoting Effective Water Management Policies and Practices Phase 3	4,300,000.00	4,120,819.22	30 Sep. 2008
RETA 6219: Promoting Effective Water Management Policies and Practices Phase 4	5,600,000.00	5,086,942.88	31 Jul 2009

63. RETA 6325: Promoting Effective Water Management Policies and Practices Phase 5 has an allocated amount of \$6,002,000.00. Out of this allocation, the total contracted amount is \$5,974,508.29 (99%).

64. Table 7 below summarizes the actual utilization of funds allocated to direct operations/top-up support.

Table 7 – Actual Fund Utilization for Direct Operations/Top-Up Support

TA Type and No.	TA Title	Actual Disbursed	Status
Bangladesh			
PPTA 4651	Dhaka Water Supply	75,012.09	Completed on 30 November 2008
PPTA 4863	2 nd Urban Governance and Infrastructure Improvement (Sector)	100,000.00	Completed on 30 April 2009
India			
PPTA 4678	North Eastern Region Urban Development (Phase II)	152,964.93	Completed on 13 January 2009
PPTA 4779	Project Implementation and Urban Management in the North Eastern Region (Phase 1)	120,000.00	Completed on 31 December 2009
PPTA 4815	Orissa Integrated Irrigated Agriculture and Water Management	73,498.97	Completed on 10 July 2008
PPTA 4896	North Eastern Integrated Flood and Riverbank Erosion Management	43,633.75	Completed on 30 April 2009
Maldives			
AOTA 4614	Promoting Sound Environmental Management in the Aftermath of the Tsunami Disaster	361,719.90	Completed on 30 August 2007
Nepal			
PPTA 4893	Kathmandu Valley Water Distribution, Sewerage and Urban Development	160,000.00	CFWS funds already fully disbursed but TA completion date is Sept. 2010 yet
Pakistan			
PPTA 4642	Punjab Irrigated Agriculture Development Sector	87,869.21	Completed on 31 March 2008

TA Type and No.	TA Title	Actual Disbursed	Status
PPTA 4534	Sindh Basic Urban Services Project	79,117.28	Completed on 24 Nov. 2009
People's Republic of China			
PPTA 4586	Guiyang Integrated Water Resources Management	159,451.37	Completed on 30 June 2009
AOTA 4327	Flood Management Strategy Study	43,398.00	Completed on 11 September 2006
AOTA 4604	Nanjing Water Utility Long-Term Capital Finance in Commercial Markets	107,638.29	Completed on 30 April 2008
PPTA 4971	Songhua River Basin Pollution Control and Management Project	196,000.00	CFWS funds already fully disbursed but TA completion date is in June 2010 yet
Sri Lanka			
AOTA 4049	Strengthening the Regulatory Framework for Water Supply and Sanitation	40,000.00	Completed on 30 April 2008
PPTA 4853	Small Towns and Rural Arid Areas Water Supply and Sanitation	110,625.19	Completed on 31 January 2009
AOTA 7078	Institutional Strengthening for Decentralized Service Delivery in the Water Sector	50,000.00	CFWS funds already fully disbursed but TA completion date is in Mar 2010 yet
Viet Nam			
AOTA 3528	Capacity Building for Water Resources Management	124,624.51	Completed on 29 February 2008
Regional			
RETA 6285	Strengthening Country Safeguard Systems	99,331.00	CFWS funds already fully disbursed but TA completion date is in April 2010 yet
Total		2,184,884.49	

V. CONCLUSION AND RECOMMENDATION

65. The establishment of the Fund in December 2001, shortly after the approval of ADB's Water for All policy in January 2001, was a significant achievement of collaboration between the Government of the Netherlands and ADB (The Government of Norway joined the Fund later). The resources made available from the Fund between 2001 and 2009 have made a tremendous difference in catalyzing the implementation of the Water for All policy in the region. The level of awareness and understanding of the challenges and issues confronting the water sector has been raised significantly, and a wide range of innovative approaches have been tested, and good practices have been developed and disseminated. The profile of water sector in the Asia-Pacific region was raised considerably, and the Fund has also helped ADB to create greater synergy in its own efforts for its clients and partners. Several innovations catalyzed by the Fund have also had international significance in the global water community.

66. The Fund has helped ADB and its clients to respond to major challenges in the water sector, including in launching a major initiative such as the Water Financing Program to respond to calls for increasing water investments. The formulation of ADB's Water Financing Program greatly benefited from the sector work that the Fund has financed over the years. The Fund has also served as a solid foundation upon which ADB built the Water Financing Partnership Facility (WFPPF) as the successor of the Fund. Not only does this Facility have both the Fund's donors - Netherlands and Norway - as financing partners, it also builds on, and expands from the work that the Fund has supported. ADB and its partners have continued their work to support water investments, reforms and capacity development, and the need for more and better partnerships is increasing rather than decreasing. The WFPPF offers an effective and flexible instrument for that, to make additional resources available to clients to develop and demonstrate innovative approaches towards water security for all.

**Cooperation Fund for the Water Sector
PILOT AND DEMONSTRATION ACTIVITIES (PDAs)**

List of 39 Completed PDAs

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
Central West Regional Department (CWRD)					
1	Tajikistan	Rural Water/ Institutional Development	<p>Creating an Institutional Framework for Improving Water Systems Management in Rural Areas of Tajikistan</p> <p>The objective of the PDA was to develop a new institutional framework that will create Water Consumer Protection Committees (WCPC) at village level and are recognized by government as a valuable resource and respectable counterpart in the design, expansion and maintenance of rural water supply systems. This is targeted at improving consumer participation in the operation and maintenance of installed water systems, thus ensuring their sustainability.</p>	February 2008	<p>WCPC formed in 3 villages of Jomi district</p> <p>Rehabilitation works in target villages undertaken within the timeframe of the PDA resulting in: (i) water supply service resumed at 5 hours supply daily, (ii) increased pressure in the system (iii) increased volume of water sales from 0 to 16 cubic meters per hour, and (iv) increased number of connections (additional taps installed).</p> <p>Plan of Action agreed for improvement of water supply services and its timetable</p> <p>Tariff structure enhanced to cover full O&M costs and eventually to slowly move towards full cost recovery.</p>
2	Pakistan	Basin Water / Appropriate Technology	<p>Groundwater Aquifer Rejuvenation Demonstration Pilot Project for Balochistan</p> <p>This PDA was aimed at demonstrating appropriate and</p>	April 2007	<p>The PDA was able to immediately demonstrate the increased recharge in shallow aquifers.</p> <p>Increased understanding of recharge mechanism and technology among policy makers,</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			innovative technologies for enabling the water stored at existing delay action dams to be put into shallow aquifers and enabling these delay action dams to effectively recharge aquifers. The larger need is to change the design and construction approach of the Irrigation Department to make any future dam perform as effective recharge structure.		planners and engineering community in both government and private. The PDA has helped changed the mindset of practitioners about the use of dam – apart from its use as storage of water, it can be used solely for facilitating recharge of aquifer.
3	Pakistan	Basin Water/ Appropriate Technology	Sustainable Management of Water Resources in Punjab's Barani Areas This PDA was envisaged as a combination of field-based research and demonstration with the following as its objectives: (i) to evaluate and disseminate rainwater harvesting techniques in water scarce areas to combat water shortage, and (ii) introduce efficient water management techniques and utilize available water using high efficiency irrigation systems for socio-economic uplift.	September 2006	The PDA uncovered issues impeding improvement in irrigation efficiency resulting from poor soil and water management practices, and put forward recommendations for addressing them. It facilitated the demonstration of a package of technologies to cushion the impact of water scarcity: (i) pressurized irrigation system using small-scale sprinkler and drip irrigation techniques, (ii) use of water conveyance network suitable to the topography of Barani area, (iii) use of water harvesting techniques recharging groundwater aquifer and direct use for irrigating small gardens and watering lawns.
East Asia Regional Department (EARD)					
4	PRC	Basin Management/ Institutional Development	Preparation and Adoption of a Comprehensive Management Framework for the Hunan Flood Management Sector Project The PDA was designed to: (i) assist the Provincial Water	October 2005	Helped design a comprehensive management framework to improve the annual management, monitoring and reporting system of the Hunan Flood Management Sector Project Paved the way for the improvement

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			Resources Department in designing a comprehensive management framework to improve the annual management, monitoring and reporting system of the Hunan Flood Management Sector Project, and (ii) use the improved annual management system as the unified system for managing the implementation of the Hunan Flood Management Sector Project at the provincial and local government levels, that is also in line with the flood management policies of the Ministry of Water Resources.		of Hunan Flood Management Sector Project's annual management system in line with the Ministry of Water Resources flood management policies Strengthened the management capacity of Provincial Project Management Officers (PPMOs) and Local Project Management Officers (LPMOs)
5	PRC	Urban Water/ Public Awareness	Clean River Program for the Urban Poor in Nantai Island, Fuzhou The PDA was designed to support new approaches in addressing public hygiene and environment protection management in ADB's investment projects and technical assistance in PRC. It also sought to empower community to take ownership of water supply and sanitation projects to ensure their sustainable operation and management, thus promoting community-driven development (CDD)	September 2006	A CDD model was developed and implemented in the context of water supply and sanitation, specifically in improving hygiene and environment protection practices at the community level. The PDA resulted in improved awareness of the community about their roles and responsibilities in keeping the river clean. The CDD model developed under the PDA is now proposed to be replicated in the cities of Hebei, Shanxi and Liaoning under the Small Cities and Towns Development Demonstration Project.
6	PRC	Urban Water/ Public Awareness	Participatory Project Evaluation of Community Action in Hygiene	December 2007	Helped residents and villagers recognize the importance of the

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			<p>Promotion in Shandong Province</p> <p>Demonstrating the impact of hygiene promotion on public health and environmental improvement may be both time-consuming and costly, but addressing this is critical to optimize the impact of investment in water and sanitation. This was the rationale why this PDA was conceived. It sought to improve environmental hygiene practice to realize the health benefits from the implementation of ADB's Shandong Hai River Basin Pollution Control Project.</p>		<p>government's Hai River Basin Pollution Control Project in protecting the environment and their community</p> <p>Raised awareness among residents and villagers on the importance of better hygiene practices, including being informed of the causes, symptoms, ways of transmission and prevention, and treatment of water-borne diseases, including infectious diseases such as bird flu, AIDS, hepatitis, and venereal diseases.</p> <p>The PDA also provided initial capacity development support to government agencies in incorporating hygiene promotion in project design and implementation.</p>
7	PRC	Urban Water/Wastewater Services/ Appropriate Technology	<p>Pilot Study on Beneficial Use of Sludge</p> <p>The main objective of the proposed program is to conduct pilot-scale study following the bench-scale study on the extraction of protein from sludge that showed reduction of water content in the sludge from 80% to 45%. This pilot scale study is also aimed at further determining the financial viability and environmental sustainability of utilizing sludge for beneficial uses such as for gardening and landscaping, brick production, etc.</p>	June 2009	<p>Beneficial uses of sludge determined; financial viability and environmental sustainability assessed</p> <p>Enhanced management capacity of Wuhan Urban Drainage Development Company for ensuring improved provision of more efficient and reliable wastewater and sludge management services; and effective protection of environment in Wuhan city.</p> <p>Improved and cleaner environment in Wuhan City as a result of improved wastewater management.</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
Pacific Department (PARD)					
8	Timor Leste	Basin Water/ Institutional Development	<p>Integrated Water Resources Management and Environmental Impact Study</p> <p>This PDA was conceived at the time that the second of the two water and sanitation projects was being implemented by ADB under the Trust Fund for East Timor. To support this reconstruction effort, it was considered essential to assist the country in formulating an integrated water resources management (IWRM) policy and institutional reforms to coordinate and guide sub-sector development. The objective of the PDA was to assist the government in developing a cross-subsectoral plan for IWRM and determine the required follow-up assistance to develop the capacity to implement and monitor the proposed plan.</p>	October 2002	The PDA findings and recommendations provided real-time feedback and valuable strategic inputs to the preparation of the ADB TA for Timor Leste on IWRM approved in November 2002. The TA was designed to help create the national water policy that will lead to the adoption and progressive implementation of IWRM in Timor Leste.
9	Samoa	Urban Water/ Policy Reforms	<p>Establishment of Samoa Water Authority Wastewater Division and Associated Private Sector Participation Enabling Conditions</p> <p>This PDA was designed to put in place the enabling conditions for Samoa Wastewater Authority to be a successful wastewater management services provider with established systems for involving the private sector in</p>	March 2004	<p>Demonstrated utility-managed sanitation and wastewater collection and treatment systems, and private sector participation in the water sector which were new concepts for Samoa and for most Pacific Island countries.</p> <p>Created the enabling conditions for the implementation of ADB's Samoa Sanitation and Drainage Project.</p> <p>Helped the Samoa Water Authority</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			service provision.		<p>in establishing and managing a new Sanitation Division.</p> <p>Resulted in a strategy paper featuring a conceptual framework for integrating wastewater management and private sector participation in small-scale water projects.</p>
10	Solomon and Vanuatu	Basin Water/ Public Awareness	<p>Education for Sustainable River and Water Conservation</p> <p>This PDA sought to develop an innovative education/learning process to increase community/youth participation, mobilization for sustainable water management, and poverty reduction.</p>	November 2004	<p>Developed and demonstrated innovative and participatory environmental education methods such as Participatory Learning Circles and Participatory Water Quality Monitoring System.</p> <p>Produced customer-made Water Testing Kits, Participatory Learning Circles and Participatory Water Quality Monitoring handbooks and visual aids.</p> <p>The Participatory Learning Circles method is now being used in the health sector to convey messages that facilitate action on HIV/AIDS and domestic violence. At the regional level. This method is now being used in Papua New Guinea and Fiji to resolve conflicts over natural resources and promote good community-based governance of resources.</p> <p>The method has also been introduced in ADB-support projects and activities,</p>
11	Kiribati	Basin Water/ Institutional and	<p>Designing a Catchment Management Plan for Lake</p>	December 2008	<p>This PDA helped prepare biological and socio-economic information on</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
		Policy Development	<p>Kutubu</p> <p>The PDA objective was to assist the government and local stakeholders to develop an integrated catchment management framework for the Lake Kutubu Basin to protect the biological diversity and ecological processes while promoting the sustainable management of natural resources supported by properly implemented catchment management policy.</p>		<p>the Lake Kutubu catchment to be used in developing an Integrated Catchment Management Plan. It also strengthened the capacity of institutions at the national and local levels to manage the catchment.</p> <p>Through stakeholder consultations, the creation of the Lake Kutubu Catchment Management Forum, and other activities, this PDA helped develop the Lake Kutubu Catchment Management Plan, which would bring integrated catchment management in the river basin.</p> <p>The Catchment Management Plan is expected to have statutory status and serve as guide for all responsible Lake Kutubu stakeholders.</p>
South Asia Department (SARD)					
12	Nepal	Rural Water/ Appropriate Technology	<p>Promoting Gender Equality for Poverty Reduction through Improved Irrigation Management</p> <p>The objectives of this PDA were to: (i) document the impact of sprinkler/drip irrigation from a gender perspective, (ii) analyze factors promoting/impeding its adoption and diffusion, and (iii) undertake trial innovations with women farmers to increase productivity.</p>	March 2004	<p>Prompted the Government of Nepal and ADB to agree on a US\$600,000 drip irrigation project, complimenting another project on the development of a Community-Managed Agriculture and Irrigation Sector</p> <p>Demonstrated the potential of drip irrigation technology in water scarce hilly and mountainous areas for improving rural livelihoods</p> <p>Showed the appropriateness of drip irrigation to women farmers as it is built on women's traditional farming practices</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
13	Nepal	Urban Water/ Wastewater Management/ Appropriate Technology	<p>Operational Research on Decentralized Wastewater Management and Its Dissemination</p> <p>This PDA sought to: (i) demonstrate appropriate technologies for managing domestic wastewater, recycling the nutrient, and optimizing water at household level, (ii) improve environmental and health conditions, especially of the urban poor, (iii) reduce pollution of the natural environment, and (iv) provide opportunities for generating economic benefits from reuse and recycling.</p>	October 2005	<p>Successfully demonstrated water optimizing techniques, such as rainwater harvesting techniques, reed bed treatment systems, and proper use of Ecosan toilets. These techniques help to reduce water demands. A model reed bed treatment system was developed for Thimi.</p> <p>Increased awareness on water optimization: (i) Agencies such as the Department of Urban Development and Building Construction (DUDBC) and the Nepal Water Supply Corporation (NWSC) have installed their own rainwater harvesting system, and (ii) Nepal Water Supply Corporation (NWSC) produced an informational flyer on the rainwater harvesting system and sent it with the water bill to every household.</p> <p>Propelled rainwater harvesting into the national agenda</p> <p>Produced public awareness and education materials, including “Jalpari”—a short film on water optimization which aired on Nepal Television. The film received a lot of coverage from the Nepalese press and a private company has proposed to market the film</p> <p>Developed a new Ecosan toilet design which has now gained</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
					popularity in Siddhipur
14	India	Rural Water/ Policy and Institutional Reform	<p>Facilitating Irrigation Sector Reform in Chhattisgarh</p> <p>The PDA sought to: (i) expose senior officials of the Water Resources Department, policy makers, and current water users association leaders to irrigation reform and institutional strengthening efforts in other states in India as well as to international experience, (ii) provide a forum for dialogue regarding the improvement of policy and institutional framework for irrigation and water resources in Chhattisgarh, and (iii) support the generation of policy documents, including an irrigation sector reform strategy, a strategic plan for the Water Resources Department, and revision to the Participatory Irrigation Management Act for discussion and eventual introduction to parliament.</p>	September 2006	<p>Raised awareness regarding on urgent irrigation sector issues and facilitated development of political support for the reform process to be initiated under the ADB project Chhattisgarh Irrigation Development Sector Project.</p> <p>Directly contributed to the development of concrete policy documents for the reform of the irrigation sector and Water Resources Department as well as to the development of legislation (a new PIM Act) strengthening the policy framework for the irrigation sector.</p>
15	India	Urban Water/Institutional Reforms	<p>Advocacy for Change: Multistakeholder Platform for Urban Water Reforms</p> <p>This PDA was designed to explore methodology for instituting democratic governance of urban water supply, sanitation and wastewater management. The objective is to institutionalize a structured involvement of</p>	June 2007	<p>This PDA put in place a multi-stakeholder dialogue process to advance urban water supply reforms.</p> <p>The choice of Gwalior City as pilot site was based, among others, on it being a recipient of large infrastructure projects financed by ADB and would therefore benefit from such reform measures.</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			stakeholders in the delivery of water supply and sanitation services and constitute a forum for dialogue between service providers and diverse categories of consumers.		<p>Real-time feedback from the PDA implementation to the ADB project team was achieved which provided a platform for a more structured dialogue between ADB and project stakeholders.</p> <p>This platform for dialogue is expected to be mainstreamed in the way projects will be designed and implemented in India not only by ADB but other donors as well.</p>
16	Nepal	Rural Water/ Institutional Development	<p>School-Led Gender Sensitive Water Supply and Sanitation in Kapilvastu</p> <p>This PDA was aimed at introducing gender sensitive sanitation and hygiene practices in schools to complement ADB's Community-Based Water Supply and Sanitation Project which aims to improve rural water supply and sanitation services and provide income opportunities to about 1,200 rural communities in Nepal.</p>	September 2008	<p>10 schools provided with safe sanitation and drinking water facilities</p> <p>3,000 students in 10 schools with improved hygiene and sanitation behavior and extended those practices within their families and communities</p> <p>Existing self-help groups were strengthened and empowered to take action as manifested in women taking up loans (as against grants) for the construction of latrines, volunteering in awareness raising activities and agreeing to being members of village sanitation committees.</p> <p>Village sanitation committees were formed in pilot communities with significant women representation (a 50–50% ratio of males to females)</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
					and gained credibility from communities and government. As a result, the government recognized village sanitation committees as legal statutory bodies for planning, implementing and monitoring the government's sanitation program—the "Total Sanitation Campaign". Village sanitation committees have been able to mobilize resources from households, state and central governments to finance community-wide sanitation programs.
17	India	Rural Services/ Institutional Development	Demonstrating Sustainable Sanitation Improvement and Management Through Community Initiative This PDA sought to: (i) demonstrate a sustainable sanitation program model implemented and managed collectively by community stakeholders, and (ii) ensure the availability of a practical process-based manual on implementing the sanitation program	October 2007	Helped women establish and strengthen 12 Self-Help Groups (SHGs) to manage sustainable sanitation programs in their communities Trained women volunteers, including female youth volunteers, in conducting awareness-raising programs in the communities; 15 women volunteers now conduct monthly meetings and family visits Provided loans to women for constructing latrines; 80 latrines were constructed from these loans Empowered women to participate in 3 Village Sanitation Committees (VSCs); 22 women representatives have been elected to the VSCs
18	Nepal	Basin Water/ Institutional Development	Developing and Demonstrating Community-Based Water Resources Management	March 2009	Approaches to empowering communities for improved water resource management in hill and

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			<p>Approaches for Hill and Mountain Ecosystems in Nepal The objective of the PDA was to develop and demonstrate approaches for community-based water resources management that will respond to the specific conditions of hill and mountain ecosystems in Nepal and in other similarly situated DMCs in the region. The end goal is to have better informed and more empowered communities involved in water resources management whose impacts greatly affect their livelihoods</p>		<p>mountain ecosystems developed, tested and ready for replication and scaling up under the ADB's Community-Managed Irrigated Agriculture Project</p> <p>Livelihood opportunities identified for the benefit of participating farmers in selected project sites</p>
Southeast Asia Regional Department (SERD)					
19	Viet Nam	Rural Water/ Policy Reforms	<p>Poverty Impact of Public Irrigation Expenditures in Viet Nam The PDA sought to: (i) help improve the strategy for rural transformation, one of the key themes of Viet Nam's Comprehensive Poverty Reduction and Growth Strategy (CPRGS), (ii) assess the impacts of public investments toward irrigation infrastructure, and (iii) compare the impacts and efficiency of irrigation investments among three scenarios: rehabilitated infrastructure, improved management, and combination of both.</p>	May 2004	<p>Provided valuable inputs for use by planners and decision makers in developing a country's irrigation sector action plan.</p> <p>Increased understanding of government and donors about the links between government expenditure on irrigation and poverty reduction, thus supporting efforts to align government and donors resource allocation with the Comprehensive Poverty Reduction and Growth Strategy.</p>
20	Philippines	Rural Water/ Institutional	<p>Water Management Information Dissemination and Extension</p>	November 2004	<p>Training modules for using water-saving technologies developed and</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
		Development	for Irrigated Agriculture. This PDA was designed to develop and implement a training course on water-saving technologies and knowledge transfer, aimed at irrigation system managers, extension officers, leaders of irrigator associations, and water user groups.		<p>tested for use by the International Rice Research Institute (IRRI)</p> <p>Materials compiled and modules developed into training manuals for use by trainers and extension officers</p> <p>The training course on IRRI's water saving technologies has been replicated among members of IRRI's network. Appropriate adjustments to local conditions have been made to suit training-specific needs.</p> <p>Materials disseminated to ADB staff for their use</p>
21	Philippines	Urban Water/ Policy Reforms	<p>Rationalizing Tariff for Private Water Utilities under the National Water Resources Board (NWRB)</p> <p>This PDA was aimed at: (i) reviewing and identifying issues relating to the current regulatory arrangement, particularly the tariff setting and supervision and monitoring by the NWRB of subdivision water operators, (ii) identifying ways to improve the NWRB rate setting methodology and prepare guidelines on tariff setting, (iii) identifying ways to enhance governance through transparency/ accountability in the performance monitoring system for subdivision water operators, (iv) encouraging stakeholder participation in problem analysis</p>	March 2005	<p>An immediate outcome of the PDA was the approval in 2005 by the Philippine National Water Resources Board (NWRB) of a new tariff setting methodology. From a sector perspective of the country, the PDA outputs and results have contributed significantly to improving sector governance as follows:</p> <ul style="list-style-type: none"> ➤ The key performance indicators (KPIs) for water utilities developed under the PDA were refined and translated into customer service standards approved by NWRB in 2007 and have since been used for benchmarking utility performance. ➤ Legal recommendations from the

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			and formulation of recommendations, (v) introducing institutional reforms in order to strengthen the capacity of NWRB as the economic regulator in the water sector, and (vi) assessing various institutional options, determine preferred options and develop appropriate proposals for implementable arrangements		<p>PDA on enhancing enforcement of utility regulation were translated into policies approved by NWRB.</p> <ul style="list-style-type: none"> ➤ Using PDA as an inspiration, NWRB is currently developing an accreditation process of financial specialists who can assist water utilities in preparing business plans, with the end in view of improving their financial performance. ➤ NWRB has rolled out a capacity building program on the new tariff setting methodology.
22	Cambodia	Basin Water/ Public Awareness	<p>Developing and Testing Environmental Education and Awareness Methodologies</p> <p>This PDA sought to develop and test innovative environmental education and awareness methodologies and tools in support of the formulation and implementation of the national environmental education and awareness campaigns, aimed at strengthening the natural resources coordination and planning for the Tonle Sap.</p>	April 2005	<p>A mini strategy for integrating environmental education and awareness methodologies and tools in the context of the Tonle Sap Basin Strategy was formulated.</p> <p>Results of the PDA facilitated the development and publication of: "Building a Sustainable Future: A Strategic Approach to Environmental Education in the Tonle Sap Region".</p> <p>The PDA's environmental education methodologies were incorporated in ADB's Tonle Sap Initiative and in the ADB Project on Promoting Sound Environmental Management in the Aftermath of the Tsunami Disaster in Malaysia.</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
23	Viet Nam	Rural Water/ Institutional Development	<p>Development of Pro-Poor Rural Water Actions in Collaboration with NGO-CARE</p> <p>This PDA was born out of the Water for the Poor: Partnerships for Action that ADB launched at the 2003 World Water Forum in Kyoto with Viet Nam signing a Letter of Intent to be the first DMC to implement a Rural Water and Poverty Initiative. The objective of this initiative is to sharpen the pro-poor focus of water projects.</p> <p>The PDA was designed to establish a partnership with CARE that develops pro-poor rural water interventions. The objective is to ensure better access to water for health and livelihoods, complementing but fully integrated in the Central Region Water Resources Sector Project.</p>	April 2005	<p>This PDA demonstrated the use of participatory approaches and participatory rural appraisal which are relatively new methodologies in Viet Nam.</p> <p>The PDA made possible the development and publication of a "Manual for Participation in Irrigation Development in Viet Nam" featuring methodologies and procedures.</p> <p>Design of pro-poor rural water interventions developed and fully integrated in the design of Central Region Water Resources Sector Project</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
24	Viet Nam	Rural Water/ Institutional Development	<p>Development of Pro-Poor Rural Water Actions in Collaboration with NGO-World Vision</p> <p>This PDA was born out of the Water for the Poor: Partnerships for Action that ADB launched at the 2003 World Water Forum in Kyoto with Viet Nam signing a Letter of Intent to be the first DMC to implement a Rural Water and Poverty Initiative. The objective of this initiative is to sharpen the pro-poor focus of water projects.</p> <p>The PDA was designed to establish a partnership with World Vision that develops pro-poor rural water interventions. The objective is to ensure better access to water for health and livelihoods, complementing but fully integrated in the Central Region Water Resources Sector Project.</p>	April 2005	<p>This PDA demonstrated the use of participatory approaches and participatory rural appraisal which are relatively new methodologies in Viet Nam.</p> <p>The PDA made possible the development and publication of a "Manual for Participation in Irrigation Development in Viet Nam" featuring methodologies and procedures.</p> <p>Design of pro-poor rural water interventions developed and fully integrated in the design of Central Region Water Resources Sector Project</p>
25	Viet Nam	Rural Water/ Institutional Development	<p>Pilot-Test the Preparatory Process of Developing a New Subproject Management Model for ADB's Water Resources Project</p> <p>This PDA was designed to help prepare a project component for the loan being developed at the time: the Central Region Water Resources Project (CRWRP). The activities of the PDA were based on the policy initiatives promulgated by the government</p>	May 2005	<p>This PDA demonstrated participatory processes in developing a model design for operation and maintenance of irrigation systems as a component of the CRWRP.</p> <p>The PDA facilitated the development of project component design that is in tune with the government's policy statement on irrigation O&M, and has the endorsement and support of the provincial governments, and is thus ready for implementation under</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			after the PPDA was completed. Specifically, the objective of the PDA was to firm up and elaborate the design of CRWRP, particularly the component dealing with operation and maintenance of irrigation systems.		CRWRP.
26	Philippines	Urban Water/ Institutional Development	<p>Sustainable Integrated Water Management and Governance in Baguio</p> <p>The overall goal of the PDA was to strengthen the city government's mechanism for integrating, coordinating and managing water resources and related water operations in the city, and driving the different sectors involved to treat water resource in an integrated manner. The specific objectives were: (i) to strengthen the institutional role and capacity of the City Planning and Development Office, (ii) to enable the Public Utilities Sector Office of the city government to craft and carry out a cost-recovery plan for its existing water treatment facility financed by a JICA grant, and (iii) to raise stakeholder awareness within the city government towards an integrated management of water resources, and scale-up the lessons learned from this project</p>	August 2005	<p>The PDA facilitated the formation and design of a multi-sectoral, multi-functional, and multi-lateral City Water Governance Committee (CWGC) for better and sustainable water governance in Baguio City</p> <p>An Integrated Medium-Term Local Water Operational Plan and Investment Priorities of Baguio City was formulated through the PDA.</p> <p>Paved the way for the formulation of a Cost-Recovery/Sustainability Plan for the City's Water Treatment Facility</p> <p>The PDA received an incentive prize from the Asia Pacific Forum for Environment and Development's Awards for Good Practices</p>
27	Philippines	Urban Water/ Appropriate Technology	<p>Decentralized Wastewater Treatment Facility for the Lilo-an Public Market</p>	April 2006	A sludge management system installed and operation of a sludge filter press commenced

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			<p>The PDA sought to test and demonstrate a decentralized technology for treating and disposing of wastewater from the municipal public market and improving hygiene condition by facilitating installation of toilets. It also sought to recommend an institutional arrangement for ensuring sustainable operation and maintenance of the wastewater treatment facility, utilizing the market vendors cooperative.</p>		<p>Developed capacities of the cooperative for proper bookkeeping and financial management</p> <p>Established new sources of income generation for the cooperative via collection of fees for trainings conducted at new center sale of WTF sludge as compost to farmers in the mountains</p> <p>Demonstration of successful operation and maintenance of a wastewater treatment facility by a cooperative</p> <p>Enhanced public awareness on water quality and wastewater treatment technologies</p> <p>Increased public participation in wastewater treatment</p> <p>Increased willingness to pay for sanitation</p> <p>Revival of local tourism</p> <p>Dissemination of low-cost decentralized WTF in other places</p>
28	Thailand	Basin Water/ Institutional Development	<p>Bang Pakong River Basin Dialogue Initiative</p> <p>This PDA was aimed at: (i) strengthening the implementation of integrated water resources management in the river basin, and (ii) increasing the capacity of</p>	July 2006	<p>The impact of the PDA is vast - deepening stakeholders understanding of water management and the need for closely working together in deciding the future of the river basin. It implanted the dialogue culture to</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			<p>river basin committee in fulfilling its mandate to reduce conflicts within the river basin.</p> <p>This PDA was conceived to address the increasing conflict in the basin because of the absence of an acceptable water allocation mechanism.</p>		<p>local stakeholders and it changed their behavior to have more patience and discuss among themselves the problematic situations with back-up information in order to find the right solution to conflicts.</p> <p>It has led to a widening of awareness of government agencies concerned in coordinating with local stakeholders to solve some problems related to water management.</p> <p>The outcome of this PDA in terms of improved water allocation system supports the implementation of ADB's water policy that seeks to improve the governance of water as a resource.</p>
29	Viet Nam	Basin Water/ Institutional Development	<p>Initiating Integrated Water Resources Planning in the Vu Gia Basin</p> <p>This PDA reflects initial discussions on the concept of establishing a Water Resources Review Committee for the Vu Gia Basin in Vietnam. The committee aims to promote integrated water resources management. The project has received positive feedback from both the People's Committee of Quang Nam Province and ADB. The objectives of the PDA were to: (i) introduce to relevant government agencies and community</p>	December 2006	<p>The PDA results facilitated discussions of a proposed two-phased PPTA that would have as its outputs the following: (i) Phase 1: Preparation of Basin Perspective Plan, with identified priority development and management investments, and (ii) Phase 2: Feasibility studies for a number of subprojects</p> <p>Increased awareness of IWRM principles at provincial level</p> <p>Implications of potential changes due to hydropower development assessed</p> <p>Committee for the Management and</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			representatives the principles of IWRM and the importance of coordination among sectors to enable effective water allocation, land use and social environmental considerations; (ii) provide a forum for considering alternative operation modalities of the proposed hydropower projects; and (iii) develop recommendations for operationalizing IWRM within the basin.		Control of Integrated Water Resources (CMCIWR) of the Vu Gia Basin formally established by Quang Nam Provincial Peoples Committee Dialogue initiated with Da Nang Peoples Committee on issues of mutual interest
30	Indonesia	Basin Water/ Institutional Development	<p>Development of a Water Quality Management System for the West Tarum Canal of the Citarum River Basin</p> <p>The aim of this PDA was to pilot an approach that would address the need for: (i) adequate database development through systematic monitoring of water quality, and (ii) a system to support better water quality management in the context of integrated water resources management (IWRM) of the Citarum River Basin.</p>	March 2008	<p>Developed a comprehensive water quality monitoring network for the West Tarum Canal (WTC) of the Citarum river basin. Fourteen existing monitoring locations adequately represented the general condition of water quality in the WTC. Additional monitoring points have been put in place</p> <p>Successfully conducted water quality monitoring and institutional capacity building and introduced better resources management practices to the top management groups of water</p> <p>Established Best Management Practices (BMP) for the sustainable management of environmental and water resources in the Citarum River Basin. A well-established BMP through the systematic water quality monitoring and modeling system can provide an appropriate strategy in establishing IWRM in the Citarum</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
					River Basin as well as other river basins in Indonesia.
31	Indonesia	Basin Water/ Institutional Development	<p>Geographic Information System for Integrated Water Resources Management in Cimanuk River Basin</p> <p>The objective of the PDA was to help government develop a geographic information system for water resources management to support senior decision makers at central, provincial and district levels in formulating policies and strategies for integrated management of water resources, including allocation and conservation of raw water, asset management and regeneration of upper catchment areas.</p> <p>The Cimanuk is one of the river basins identified for immediate attention under Indonesia's National Action Program for Partnership in Water Conservation.</p>	October 2007	<p>The PDA facilitated the installation and operationalization of a geographic information system for Cimanuk river basin.</p> <p>In developing and installing such system, the following lessons were drawn which need to be considered if similar system is to be replicated other river basins in Indonesia and elsewhere:</p> <ul style="list-style-type: none"> • Development of GIS is a multi-year undertaking. Because PDA allows only a maximum period of 12 months, inadequacy of time to develop the system posed a challenge. • A coordinating body should be installed to ensure data sharing • Need for a nationwide standard approach and operational procedure for asset management • Participatory land use mapping and water quality surveys need to be introduced
32	Thailand	Rural Services/ Appropriate Technology	<p>Production of Water Filter from Coconut and Palm Oil Shells</p> <p>The objectives of the PDA were to:</p> <p>(i) determine the feasibility of an "activated carbon manufacturing factory" to produce activated carbon from coconut and palm oil shells that can be used for industrial water pollution control and low-cost water filters, and (ii)</p>	May 2008	<p>The PDA determined and analyzed the legal, institutional, technical, economic, and environmental issues related to the establishment of an activated carbon plant in Tap Sakae District, Prachaub Khiri Khan Province, for producing activated carbon from coconut and palm oil shells that can be used for industrial water pollution control and low-cost</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			define appropriate public private partnership business models in implementing a project of this nature.		<p>water filters</p> <p>The scope of work completed under the PDA and the analysis made provide solid basis to proceed with project preparation should ADB or any funding agency be interested in implementing at least a pilot project. An appropriate public-private partnership business model involving various stakeholders for operating and maintaining the activated carbon plant was also assessed under the PDA.</p>
33	Thailand	Basin Water/ Institutional Arrangement	<p>Piloting an Adaptive Management Approach to Implementing Integrated Water Resources Management in Yom River Basin</p> <p>The objectives of the PDA we to: test the application of adaptive management approaches to assist local government administrations, including Yom River Basin Committee, and civil society to implement the principles of integrated water resources management (IWRM) in Yom River; and (ii) foster a consultative process where the relevant agencies are able to cooperate and pool their resources to support IWRM initiatives sponsored by the basin and sub-basin committees.</p>	December 2008	<p>The PDA achieved its objective based on the following positive changes that have been observed: (i) increased knowledge among key stakeholders regarding water resources issues in the Yom River, (ii) increased understanding of IWRM concepts and approaches on the part of both key agency staff and local leadership, (iii) an increasing awareness of the potential for local communities to have impacts on water resource issues, and (iv) the creation of a forum for improved consultation among government agencies and with community leaders regarding basin water management decisions.</p> <p>The PDA developed an effective Yom River Network with national and local government agencies and community based organizations including temples, schools and civil</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
					society groups. The basin communities have moved from a position of strong opposition to proposed water sector investments to one of encouraging participatory planning and management of development proposals.
34	Indonesia	Basin water/ Institutional Development	<p>Developing Model for PDAM Collaboration for Improved Raw Water Management</p> <p>The objective of this PDA was to identify and formulate the technical, financial and institutional components for a formal collaboration of 4 Water utilities (PDAMs) in Bandung region, to facilitate better conservation and improved management of raw water sources.</p> <p>Specifically, the PDA sought to test the viability of 4 PDAMs collaborating to create a (legal) entity which could be involved in the following programs: (i) facilitating water resources protection and management of the combined raw water supply, (ii) strong collaboration with government (local, provincial, national), civil society organizations and donor agencies for operational support and additional financing.</p>	March 2009	<p>Data on raw water demand, supply and protection scheme prepared and expected to improve management of water resources in the Greater Bandung Catchment Area.</p> <p>Current institutions, laws, regulations and possible political obstacles analyzed</p> <p>Possible legal setup defined for the new entity which will take responsibility for improving and managing Greater Bandung's raw water sources with roles and responsibilities agreed by all stakeholders</p> <p>Follow-up action plan, including financial sources and TOR formulated to guide government and ADB in taking the next steps</p>
35	Philippines	Basin Water/ Appropriate Technology	<p>Testing and Demonstrating a Technology to Cope with Debrisflows in Mountain</p>	March 2009	Increased awareness on the risks from debris flows and on the importance of safety preparedness

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			<p>Regions</p> <p>The objective of this PDA was to demonstrate the following: (i) the dehydration effect is the key to brake debrisflows, (ii) the dehydration effect can be achieved by setting up horizontal screens on a torrent bed, (iii) Debrisflow Brakers are low cost and easy to build and maintain, (iv) the technology is applicable to debrisflow-prone sites all over the world.</p> <p>Protection of human lives, livelihood activities, and economic, social and cultural assets from the threat of devastating debris flows in mountainous regions is the ultimate goal that this PDA hopes to help achieve.</p>		<p>against debris flows disasters</p> <p>Capacity building and training of local practitioners and local implementing agencies in road management provided under the PDA and it is envisioned that road management program will eventually mainstream the use of this technology, thus protecting road networks, water system and other basic infrastructures from destruction resulting from debrisflow-related disasters.</p>
36	Cambodia	Rural Water/ Appropriate Technology	<p>Adaptation and Verification of Arsenic Mitigation Technology</p> <p>There are two main objectives of this PDA. The first objective is to verify the performance and suitability of the Kanchan Arsenic Filter (KAF) as an arsenic mitigation option for Cambodia's rural areas. This will be achieved by field technical research and pilot demonstration. A secondary objective is to extract the lessons learned in the KAF verification process to establish a general technology verification procedure,</p>	December 2008	<p>Kanchan Arsenic Filter adopted for arsenic mitigation by the Ministry of Rural Development</p> <p>Increased capacity within the Ministry of Rural Development for testing arsenic mitigation technologies</p> <p>Increased public awareness on the use of KAF</p> <p>Improved quality of water</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			which may be used to evaluate other water treatment technologies in the future.		
37	Cambodia	Basin Water/ Institutional Development	<p>Piloting River Basin Approach to Integrated Water Resources Management (IWRM) in Eastern Cambodia</p> <p>Through the Global Water Partnership, a demonstration IWRM project was implemented in Cambodia that resulted in the establishment of a Functional Water Partnership for four sub-basins in the Kratie Province. This project aimed at assessing the potential for a river basin approach to IWRM.</p> <p>This PDA seeks to build on the results of that earlier project by: (i) developing and creating provincial, district and other local government institutional arrangements for addressing IWRM issues, (ii) ensuring community participation and implementing awareness raising programs on water-related issues at the river basin level and the importance of adopting a basin-wide approach, (iii) make preliminary assessments, with community input, of the resource issues and constraints and the problems experienced at local level and (iv) collate information on water resources development projects and priorities of district</p>	April 2009	<p>A set of river basin institutional arrangements, including operating guidelines, agreed upon by the stakeholders early on and piloted in the river basin</p> <p>Increased awareness on key IWRM issues facing stakeholders</p> <p>Demonstrated public participation modalities</p> <p>A preliminary assessment of relevant issues, opportunities, constraints, and scenarios for development possibilities</p> <p>An agreed set of resource protection issues and action plan, including investment priorities</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			<p>level administrations and have the pilot basin institutional arrangements debate these as a means of capacity building.</p> <p>The PDA will contribute to the objectives of the Mekong Water Resources Partnership Programme (MWARP) of ADB and the World Bank in the key area of strengthening the Cambodian capacity in all aspects of IWRM – namely in this case in coordinating Cambodia National Mekong Commission and Ministry of Water Resources and Meteorology to commence a river basin approach across two provinces.</p>		
38	Viet Nam	Urban Water/ Appropriate Technology	<p>Developing Appropriate Sanitation Solutions for Peri-Urban Areas</p> <p>This PDA seeks to call attention of government to the expected worsening of sanitation issues as a result of increased water supply. The objective is to develop a sanitation model for peri-urban areas of Viet Nam, applicable to other part of Southeast Asia based on a combined research and surveys, along with the implementation of one package treatment plant, through a bottom-up approach in Kieu Ky commune. Specifically, the PDA aims to: (i) select appropriate domestic wastewater collection and</p>	April 2009	<p>Domestic and industrial wastewater management needs in Kieu Ky assessed</p> <p>Determined that a decentralized wastewater treatment systems (DEWATS), combining a Baffled Anaerobic Septic Tank and Anaerobic Filters (BASTAF) and Constructed Wetlands (CW), as one of the preferred sanitation solutions for Kieu Ky</p> <p>Constructed a pilot plant to test the DEWATS technology</p>

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			treatment systems, (ii) select appropriate wastewater collection and treatment systems for crafts workshops, and (iii) implement a pilot package wastewater treatment plant.		
39	Philippines	Basin Water/ Appropriate Technology	<p>Pilot Project for the Reduction of Mercury and Heavy Metals Contamination Resulting from Artisanal Gold Refining in Meycauayan, Bulacan River System</p> <p>This PDA is designed to pilot test the use of locally-fabricated cost-effective technologies to reduce mercury and other heavy metals in the river system. Specifically, the PDA will support: (i) collection of baseline data to determine extent of mercury and other heavy metal pollution; assess gold and precious metals refining practices, community and occupational health risks and socio-economic factors related to gold refining in the municipality of Meycauayan, Bulacan, (ii) awareness raising among those directly and indirectly affected by the heavy metal pollution from the artisanal gold and precious metals refining industry, (iii) the Department of Environment and Natural Resources and local governments, through the</p>	May 2009	<p>Conducted a comprehensive study on heavy metal pollution in the Meycauayan River</p> <p>Established structural and political reforms to institutionalize mechanisms for ensuring sustained action on the river system's pollution</p> <p>Established harmonious collaboration among key players to address the key concerns of each sector, such as:</p> <ul style="list-style-type: none"> ➤ cost-effective technologies for the industries ➤ information and education of the labor force and the general public on the hazards of heavy metal exposure ➤ increased capacity of health care workers in curing heavy metal contamination ➤ organized political body for implementing reforms ➤ healthier river system for the Bulacan province.

No.	Country	Theme	Title and Brief Description	Date Completed	Outcomes and Lessons Learned
			<p>stakeholder group, in developing innovative policy instruments to encourage support and compliance to environmental laws, specifically targeting industries/sectors using mercury and other toxic heavy metals, (iv)strengthening of existing stakeholder group involved in addressing the pollution problem caused by the artisanal gold and precious metals refining industry, (v) exploring the possibility of transforming the stakeholder group into Water Quality Management Board provided for in the Clean Water Act.</p>		

**Cooperation Fund for the Water Sector
TOP-UP FACILITY/DIRECT OPERATION SUPPORT**

List of 19 TAs Funded

Region	Country	Nature of TA and Number	Brief Description	Status	Actual Amount Utilized
Central and West Asia	Pakistan	PPTA 4642	<p><u>Punjab Irrigated Agriculture Sector Development</u>: The TA will prepare an investment project with the following interrelated objectives: (i) to improve water resources management at all levels in Lower Bari Doab Canal, (ii) to strengthen capacity and institutional frameworks to manage irrigated agriculture and water resources for improved productivity and enhanced environmental sustainability, (iii) to rehabilitate and modernize irrigation and water resources infrastructure and stimulate sustainable O&M, and (iv) to enhance the enabling environment for improved agricultural productivity.</p> <p>Due to the large size of the loan (\$170 million), a substantial amount of the PPTA was required for technical preparations. Additional funding from CFWS was requested to address the participatory institutional reforms and in-depth poverty analysis and development of poverty reduction options by providing for the needed expertise in the areas of (i) WUAs and irrigation institutional reform, and (ii) social and poverty assessment, including gender.</p>	Completed	\$ 87,869.21
	Pakistan	PPTA 4534	<p><u>Sindh Basic Urban Services</u>. The objective of this TA is to assist the Government in preparing a project to improve basic urban infrastructure and services in a participatory manner in selected low-income communities in Sindh's urban centers in Sindh. The TA's outputs consisted of (i) a sector and institutional analysis review and data collection study, (ii) a participatory framework for community participation leading to the formulation of priority infrastructure and institutional arrangements, and (iii) a feasibility study suitable for ADB financing.</p> <p>Top-up funding from CFWS was requested to develop the project into Multitranches Financing Facility (MFF) and pursue institutional reform through a two-stage reform strategy: (i) establishing a professionalized municipal services corporation (North Sindh Urban</p>	Completed	79,117.28

Region	Country	Nature of TA and Number	Brief Description	Status	Actual Amount Utilized
			Services Corporation), and (ii) phased introduction of management contracting modality.		
East Asia	PRC	PPTA 4586	<p><u>Guiyang Integrated Water Resources Project</u>: First ADB assisted IWRM project at municipality level, the Project is aimed at ensuring establishment of a long-term comprehensive water sector development plan that can be implemented within Guiyang Municipal Government's (GMG) capabilities and the policy framework for the sector. The TA helped GMG develop an investment proposal to contribute to development of the water sector within the context of a long-term, comprehensive plan to establish an IWRM system. The main TA output was an investment proposal suitable for ADB Financing.</p> <p>Additional funding from CFWS was required to deepen the analysis of the challenges of municipality level IWRM, not just in the specific context of Guiyang, but in a form that is readily applicable to many other cities and provinces, together with specific recommendations on institutional and legal aspects related to IWRM of smaller river basins.</p>	Completed	159,451.37
	PRC	ADTA 4604	<p><u>Nanjing Water Utility Long-term Capital Finance in Commercial Markets</u>: This advisory TA helped develop sustainable access of Nanjing utilities to private long-term capital finance markets through: (i) assistance in management structuring, development of corporate governance best practices, and overall capacity building for Nanjing Water Services Group Ltd. (NWSG) as a newly formed integrated water utility; (ii) support in the development of NWSG's accounting and auditing practices consistent with best international practices; (iii) assistance to NWSG in developing a management, planning, and financial information documentation system necessary for initial and ongoing interface with credit rating agencies; (iv) increase in the transparency of approval procedures for future utility bond issuers through ongoing dialogue between Nanjing bond issuer and central Government agencies; and (v) structure a utility bond issuance for distribution to a multiple and diversified private investor base. The TA also supported the financial management and overall capacity of Nanjing Urban Construction Investment Holding/Nanjing Public Utilities Company. The TA built on the experience of work in Shanghai by Shanghai Water Assets Operation and Development Commission, particularly in its development of a long-term capital financing strategy including utility revenue bond issuance.</p>	Completed	107,638.29

Region	Country	Nature of TA and Number	Brief Description	Status	Actual Amount Utilized
			The CFWS funding was sought to cofinance the TA, this being considered a pilot project.		
	PRC	ADTA 4327	<p>PRC: National Flood Management Strategy Study: The advisory TA was supporting PRC's Ministry of Water Resources to develop an integrated flood management strategy. Examples of integration of flood management with natural resources include conservation of wet lands and lakes, maintenance of river flow conditions for aquatic and riparian habitat, restoration of flood storage and flushing of waterways to improve water quality.</p> <p>However, means by which floodwater can be managed to mitigate broader water resource issues was not included in the TOR of the ongoing study. The CFWS funding was requested to support the study on the linkage between flood and water management and to identify ways that flood waters can be used productively.</p>	Completed	43,398.00
	PRC	PPTA 4971	<p><u>Songhua River Basin Water Pollution Control and Management Project</u>. The TA is (i) evaluating the project in the context of strategic long-term development plans, the 11th FYP, the Songhua River Basin Water Pollution Prevention and Control Plan, alternative strategies for wastewater management, water supply capacity development, and solid waste management, to meet the project cities' increasing demand; (ii) identified sector investment priorities in each city; (iii) review and assess the feasibility of the selected subprojects based on technical, institutional, environmental, social, economic, and financial assessments; (iv) developed an institutional strengthening component, based on a needs assessment for the implementing agencies (Ias) of the subprojects in each city; and (v) designed a corporate development plan for the Ias, based on a financial management assessment. Household surveys are conducted to address issues of public awareness and preference, willingness to pay, and affordability. The TA is identifying stakeholders and developing a participatory strategy for project preparation, design, construction, and operation. Consultation workshops and tripartite meetings are scheduled strategically during the implementation of the TA.</p> <p>CFWS funding was sought to cofinance the TA.</p>	On-going (but CFWS funds already disbursed)	196,000.00

Region	Country	Nature of TA and Number	Brief Description	Status	Actual Amount Utilized
South Asia	Bangladesh	PPTA 4651	<p><u>Dhaka Water Supply Project:</u> The TA prepared the investment project for supporting the Dhaka Water Supply and Sewerage Authority (DWASA) improve safe water supplies, and develop its management for effective and sustainable delivery of services. Additional funding support from CFWS was requested to support the following activities/outputs:</p> <p>pilot testing electronic metering technology – output: up to 20 electronic meters of several manufacturers and related remote-sensing equipment procured, installed and monitored over several months</p> <p>demonstrating the effectiveness and benefits of trenchless technologies for rehabilitating the piped network – output: key senior staff of DWASA exposed and educated on trenchless technologies that can potentially be utilized in Dhaka carrying out a comprehensive stakeholder consultation and consensus building process on institutional reforms – output: professionally facilitated consensus process involving all key stakeholders, including individual consultations and workshops completed carrying out a hands-on training program for DWASA plumbers – output: 500 plumbers currently working with DWASA trained and certified developing media strategy for a comprehensive public awareness campaign – output: a professional and comprehensive media strategy for public awareness campaign developed and ready for production/launch</p>	Completed	75,012.09
	Bangladesh	PPTA 4863	<p><u>Urban Governance and Infrastructure Improvement II:</u> The TA assisted the Government to prepare the Urban Governance and Infrastructure Improvement Sector Project (UGIIP-2) that, with the use of the performance-based approach adopted by UGIIP-1, will improve the welfare of municipal residents including the urban poor, and enhance the quality of the urban environment of 25–35 secondary towns or pourashavas¹² that are not receiving support from UGIIP-1. The TA will also develop effective measures to improve urban governance at both national and local levels and recommend suitable modalities for supporting necessary policy and institutional changes in the administrative, legal, and financial systems in pourashavas.</p> <p>CFWS funding was requested to cofinance the TA.</p>	Completed	100,000.00
	India	PPTA	<u>North Eastern Region Urban Development Project (Phase II).</u> The TA	Completed	152,964.93

Region	Country	Nature of TA and Number	Brief Description	Status	Actual Amount Utilized
		4678	<p>was to prepare an investment project to help achieve the goal of sustainable urban development and poverty reduction in the Northeast Region by upgrading urban infrastructure in four project cities (Dibrugarh, Guwahati, Imphal, and Itanagar).</p> <p>CFWS funding was requested to cofinance the TA by specifically supporting the measurement of the extent of Unaccounted-for Water (UFW) with the participation of end-users in selected project cities.</p>		
	India	AOTA 4779	<p><u>Project Implementation and Urban Management in the Northeast Region.</u> The objective of the TA is to strengthen project management and institutional capabilities, and improve overall readiness for project implementation of the states and Urban Local Bodies (ULBs) s expected to be responsible for implementing the North East Region Urban Development Project (NERUDP) Phase I. The TA is assisting the project states and ULBs, which include Agartala, Aizwal, Gangtok, Kohima, and Shillong, to efficiently and effectively manage, coordinate, implement, and monitor the Project, including the institutional and financial reform initiatives under the Project.</p> <p>CFWS funding was requested to cofinance the TA and specifically support the continuation of the measurement of the extent of Unaccounted-for Water (UFW) with the participation of end-users in other project cities based on experience of the pilot study in one selected project city under the ongoing implementation of the PPTA for NERUDP (Ph I).</p>	On-Going (but CWFS funds already disbursed)	120,000.00
	India	PPTA 4815	<p><u>Orissa Integrated Irrigated Agriculture and Water Development.</u> The TA assisted the State Government in preparing an investment project that will (i) enhance productivity and sustainability of existing irrigation systems with increased state revenues; and (ii) strengthen institutions including Department of Water Resources in delivering accountable irrigation services, Water Users Associations fulfilling specified O&M tasks, other agencies providing sound support services, and Water Resources Board and River Basin Organizations carrying out IWRM functions.</p> <p>CFWS funding was requested to cofinance the TA and make available additional funding to support upstream works prior to doing feasibility studies, in particular the sector profiling and policy and institutional diagnostic analysis for the selected state(s) to identify</p>	Completed	73,498.97

Region	Country	Nature of TA and Number	Brief Description	Status	Actual Amount Utilized
			policy dialogue agendas and actions.		
	India	PPTA 4896	<p><u>Northeastern Integrated Flood and Riverbank Erosion Management.</u> The project helped prepare an investment project to (i) reduce flood damage and riverbank erosion in critical areas of Assam state's economic interest, thereby enhancing economic growth and poverty reduction, and (ii) strengthen the policy and institutional basis to support effective flood and riverbank erosion management.</p> <p>The additional funding from CFWS was requested to support participatory, poverty and gender dimensions of project preparation through more intensive social assessments and stakeholder consultation. The incremental outputs from CFWS support include (a) more detailed socio-economic profile of the subproject population with due consultation, including focus group discussions with vulnerable groups, (b) social development strategy supported by the said profile and consultation, and (c) specific programs and their design to enhance the benefit to the poor segment of the beneficiary population. State-level consultation would also be supported to develop a long-term partnership to expand cooperation to other important reform agenda such as IWRM.</p>	Completed	43,633.75
	Maldives	AOTA 4614	<p><u>Promoting Sound Environmental Management in the Aftermath of Tsunami Disaster.</u> The TA helped develop and test on tsunami-affected islands an environmental management program that focuses predominantly but not solely on environmental health and awareness by (i) formulating a strategy for rehabilitating and reconstructing the water and sanitation sector; (ii) building capacity for environmental assessment; (iii) testing and promoting innovative environmental education and public awareness programs in environmental health and environmental management; and (iv) promoting community mobilization and organization for community-based management and O&M of sanitation and solid waste management systems.</p>	Completed	361,719.90
	Nepal	PPTA 4893	<p><u>Kathmandu Valley Water Distribution, Sewerage, and Urban Development.</u> The TA is assisting in preparing an investment project that will build on existing and past ADB projects, in particular, the Melamchi Water Supply Project, the Kathmandu Valley Water Supply and Sanitation Development Project, the Kathmandu Urban Development Project,⁹ and the Urban and Environment Improvement Project,¹⁰ by topping up physical investment in key urban sectors</p>	On-going (but CFWS funds already disbursed)	160,000.00

Region	Country	Nature of TA and Number	Brief Description	Status	Actual Amount Utilized
			(water supply and wastewater system improvement and solid waste management) The government is reluctant to use the PPTA funds for anything other than straightforward project preparation activities. Top-up funding from CFWS was requested to support participatory preparation of the prospective project by involving stakeholders and NGOs concerned, which could be difficult otherwise.		
	Sri Lanka	AOTA 4049	<u>Strengthening the Regulatory Framework for Water Supply and Sanitation in Sri Lanka.</u> The TA aims to develop and disseminate regulations for the water sector within the framework of the Public Utilities Commission (PUC) to facilitate credible, independent, autonomous, accountable and transparent regulation for WSS in Sri Lanka. CFWS funding was requested to finance the following activities: (i) preparation of service standards and customer service code, and (ii) updating existing tariff methodology for water and sewerage	Completed	40,000.00
	Sri Lanka	PPTA 4853	<u>Small Towns and Rural Arid Areas Water and Sanitation Project (Project No. 37381-01).</u> The objective of the TA was to prepare an investment that will improve basic water supply and sanitation infrastructure and services in dry zone districts of Sri Lanka. It consisted of two components: one is to prepare the investment project and the other component is to will help the National Water Supply and Drainage Board (NWSDB) institutionalize post project completion sustainability measures in community-based schemes. For this purpose, the TA supported NWSDB in (i) conducting consultations with provincial councils and local authorities and developing understanding on the proposed by-laws enabling CBOs to exist as legal entities and on the Development Fund for Water Supply and Sanitation, which will ensure CBOs' access to credit facilities; and (ii) preparing and delivering a basic accounting, budgeting, and overall financial management training component for CBOs and CBOs' district offices. CFWS funding was requested to cofinance the TA..	Completed	110,625.19
	Sri Lanka	AOTA 7078	<u>Institutional Strengthening for Decentralized Service Delivery in the Water Sector.</u> The TA supports Government and NWSDB efforts to improve water sector utilities' management, especially financial	On-Going (but CFWS funds already	50,000.00

Region	Country	Nature of TA and Number	Brief Description	Status	Actual Amount Utilized
			<p>management, and regional operations within the context of recent sector reforms and policies, including operationalization of credible regulation. Consequently, the impact of the TA is defined as improved operating efficiency and management performance in the water sector. Its outcomes are (i) NWSDB service delivery functions decentralized and (ii) NWSDB internal monitoring and regulatory systems operationalized. The TA is divided into two components, each supporting one of the expected TA outcomes. The TA is to deliver four specific outputs: (i) regional benchmarking and regional business development plans, (ii) a capacity development program for decentralized service delivery, (iii) a 5-year asset management plan for NWSDB, and (iv) a program to facilitate internal monitoring and regulation in NWSDB.</p> <p>CFWS funding was requested to cofinance the TA.</p>	disbursed)	
Southeast Asia	Viet Nam	AOTA 3528	<p><u>Capacity Building for Water Resources Management (TA Cluster):</u> This objective of the TA was to build capacity at the national, river basin, and provincial levels to introduce water resources management in accordance with the Water Resources Law, as part of the Government's emerging capacity building program for water resources management. The TA is designed to contribute to poverty reduction and environmental protection in the central region of Viet Nam by formulating an investment strategy for water resources management in that region in the context of the Government's emerging rural development strategy and national poverty reduction program.</p> <p>CFWs funding was requested to provide support for bridging financing to ensure that the significant gains achieved under the TA are continued, particularly in support of then ongoing joint donor-government Water Sector Review.</p>	Completed	124,624.51
Inter-regional	Various DMCs	RETA 6285	<p><u>Strengthening Country Safeguard System.</u> The RETA aims to develop an approach and methodology for assessing country safeguard systems in DMCs and to identify areas requiring capacity development to strengthen countries safeguard systems, in line with ADB's ongoing safeguard policies update. Additional activities to be undertaken with funding from CFWS included: (a) carrying out an analysis clearly defining assessment scope and safeguard elements</p>	On-going (but CFWS funds already disbursed)	99,331.00

Region	Country	Nature of TA and Number	Brief Description	Status	Actual Amount Utilized
			of water sector operations; and (b) exploring institutional arrangements and capacities to address safeguard measures adequately through IWRM. These will provide insights on how to enhance sustainable water resource management and informing the RETA in formulating relevant safeguard policy principles and capacity development needs of CSSs in the water sector.		