Asia-Pacific Regional Document of the 4th World Water Forum

FINAL REPORT

Part I
Asia-Pacific Regional Synthesis

Part I: Asia- Pacific Regional Synthesis

Section 1: Regional Synthesis – common issues, challenges and priority targets in the Asia-Pacific Region

In light of the issues and challenges common to the Asia-Pacific region, the participants of the Asia-Pacific *Regional Preparatory Process* of the 4th World Water Forum collectively call for concrete actions and commitments that will lead to achievement of results in the following three targets:

1. **To increase targeted "1.7" investments: "1" for water and sanitation infrastructure and "0.7" for human resources development**
2. **To drastically reduce the vulnerability of human populations to water-related disasters**
3. **To conserve and restore land-water interfaces for the improvement of water productivity**

Introduction

The Asia and Pacific is, by far, the largest and most populated of the five focus regions at the 4th World Water Forum. The area spreads out from the western highlands of the Himalayan plateau to the low-lying atolls of the central Pacific in the east, and from the northern steppes of Mongolia to the southern coast of Australia and Tasmania. The incredible physical diversity in the region is matched, if not surpassed, by even greater levels of cultural and economic diversity. This is why the Asia-Pacific Regional Committee chose to divide region into five sub-regions: Northeast, Southeast, South, Central Asia and the Pacific. The subsequent sections of this report highlight the key issues and messages from each of these sub-regions.

However, as the various stakeholders proceeded to work together during the *Regional Preparatory Process* leading up to the 4th World Water Forum, it became clear that there was a set of water-related issues and challenges that were common across the entire Asia-Pacific region. Furthermore, participants quickly learned that the region's diversity was not an obstacle but rather an asset to identifying and adopting solutions to specific water problems. Having faced water related issues for thousands of years, the region has a rich history of experience in dealing with water as a fundamental part of the human existence. The following section describes the main water issues and challenges common to the region and elaborates upon the three specific targets that have been deemed essential in meeting these challenges.

1. To increase targeted "1.7" investments: "1" for water and sanitation infrastructure and "0.7" for human resources development

Meeting the targets for water supply and sanitation is central to the achievement of all MDGs (poverty, health, hunger, education, environment, etc.). It is therefore essential that existing funding sources be expanded and that efforts be made to attract new sources and develop innovative financial mechanisms. It is also widely recognized that public participation and the broadening of stakeholder involvement in water management and development is essential to improve the situation across all environmental sectors, particularly water. It follows that priority should be given to programs that invest in capacity development for people and institutions and build self-reliance. Indeed, multistakeholder partnerships can and should serve as the driving force in society's activities towards ensuring the survival of mankind.

Although accounting for only 27% of the world's total area,[1] the Asia-Pacific region is home to 58% of the world's total population[2] and 57% of the world's slum population.[3] Along with poverty, gender inequity and the lack of access to basic services remain critical problems in the Asia-Pacific region, especially in the South and the Southeast. It is estimated that 678 million people (63% of the world total) living in Asia are still without improved drinking water and over 1.9 billion people in the region (74% of the world total) live without access to improved sanitation.[4] Despite some progress made since the last World Water Forum in 2003, several countries remain off track in their quest to meet the different Millennium Development Goals. For example, current trends suggest over half the countries in the Asia-Pacific region will fail to meet the MDG indicators for rural water supply and urban sanitation.[5] Improving the development and management of water for agriculture is also necessary to meet the growing and changing demand for food, alleviate poverty and sustain economic growth. Finally, the experience of several Asian countries has underlined the importance of good water *governance* (scrupulous, transparent, participatory, honest and gender sensitive) as critical to creating an enabling environment for IWRM and the effective development of water infrastructure.

Although many parts of the region are already serviced by substantial water and sanitation infrastructure (a unique feature to the region), much of the existing infrastructure will need to be improved and new infrastructure will be needed in order to meet the increasing demands of rapid population growth and industrial

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[1] faostat

[2] Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects

[3] United Nations HABITAT Millennium Development Goals

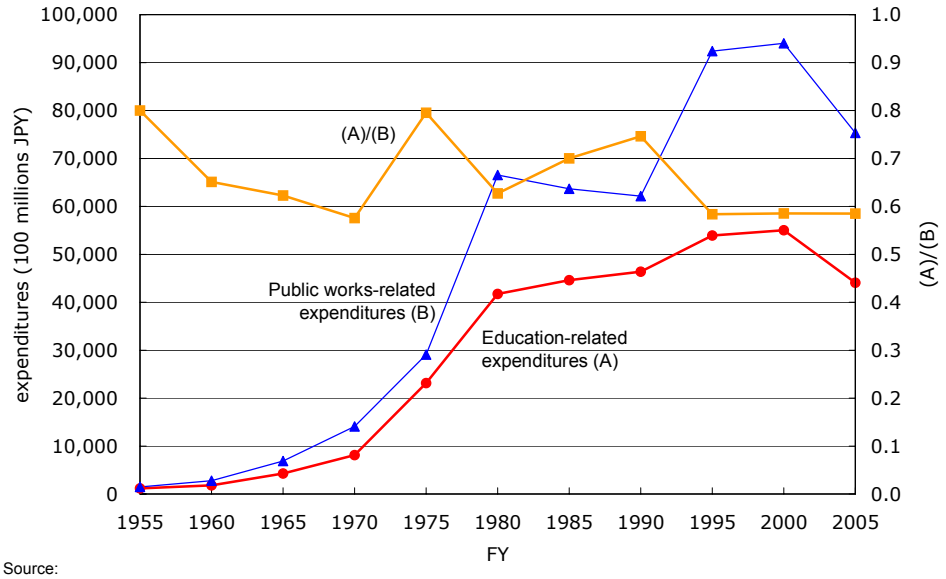
[4] UNICEF, WHO: Meeting the MDG Water & Sanitation target : A Mid-Term Assessment of Progress

[5] Ibid. (The report states that 57.4% and 64.3% of the total population are off track for rural water supply and urban sanitation respectively)

development. However, investing in infrastructure alone will not be effective unless coupled with investments in education to build the capacity required to ensure the proper maintenance and operation of the systems. Meeting this need will require a significant shift in ODA where, despite seeing a constant increase since 1970 overall, the proportion of education-related ODA has continuously decreased.

With several of its countries in transitional economies, the Asia-Pacific region is expecting unprecedented economic development over the coming decades. When combined with population growth, the development of emerging national economies is likely to increase pressure on already stressed water resources. However, if supported by the necessary political will and institutional frameworks, the anticipated growth can provide opportunities for financing water related infrastructure and human capacity development. Greater investments will be required in education to improve operation and maintenance, and in further improvement of existing infrastructures. Furthermore, new infrastructure should be invested in parallel with education to enable people to use these at full value. Japan has already undertaken this strategy over the past 50 years, where the proportion of education-related expenditure represents the "0.7" of pubic works-related (infrastructure) expenditure.

Expenditures in Japan

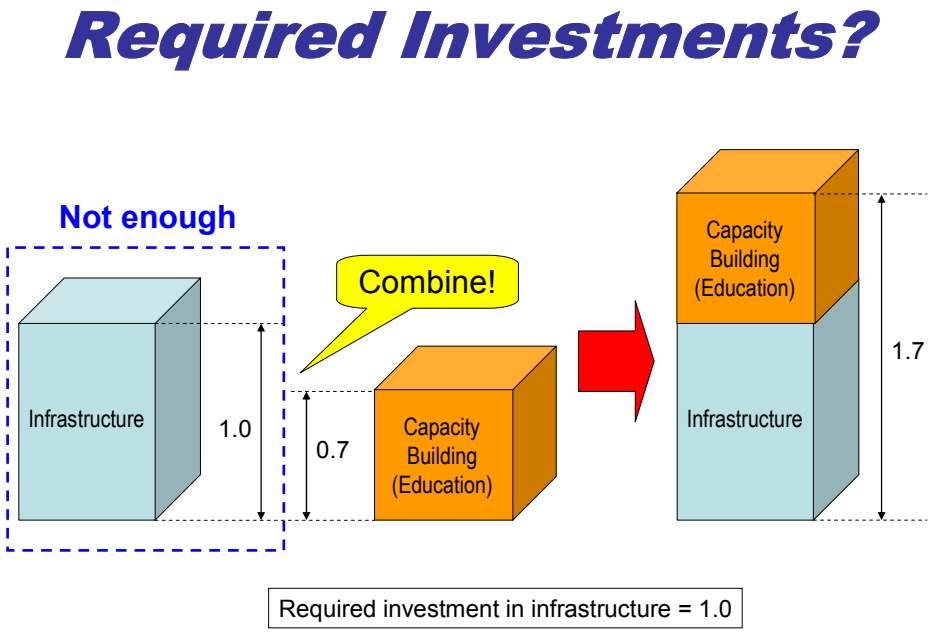


Source:
Japan's Education at a Glance, 2004

In the Asia-Pacific region, it is estimated that a $60 billion investment for water and sanitation infrastructure is needed to meet MDG Target 10.[6] According to the "1 +

[6]Estimated based on 1) UN Millennium Project: Task Force on Water and Sanitation: Achieving the Millennium Development Goals for water and Sanitation: What will it take? Interim Full Report, 2005 and 2) WSSCC (Water Supply and Sanitation Collaborative Council 1 : Vision 21: Water for People−A Shared Vision for Hygiene, Water Supply and Sanitation & a Framework for Action, 2000

0.7 = 1.7" strategy, it will be necessary to add an additional $40 billion for education, bringing to $100 billion the total investment required for the region to meet Target 10 by 2015[7] and ultimately lead to the formation of modern states and rapid economic growth in the region.



2. To drastically reduce the vulnerability of human populations to water-related disasters

The plea from the Hyogo Framework for Action 2005-2015[8], to halve the number of deaths caused by water-related disasters, should be adopted as an additional MDG. Enhancing preparedness, through better early warning systems, strengthening regional co-operation, increased awareness and community involvement throughout the region are central to achieving this target. The increasing risks that climate change poses on the ever-growing regional population make action all the more urgent.

The tsunami of December 2004 deeply affected several coastal areas across the Asia-Pacific region and resulted in the loss of hundreds of thousands of lives. Extreme

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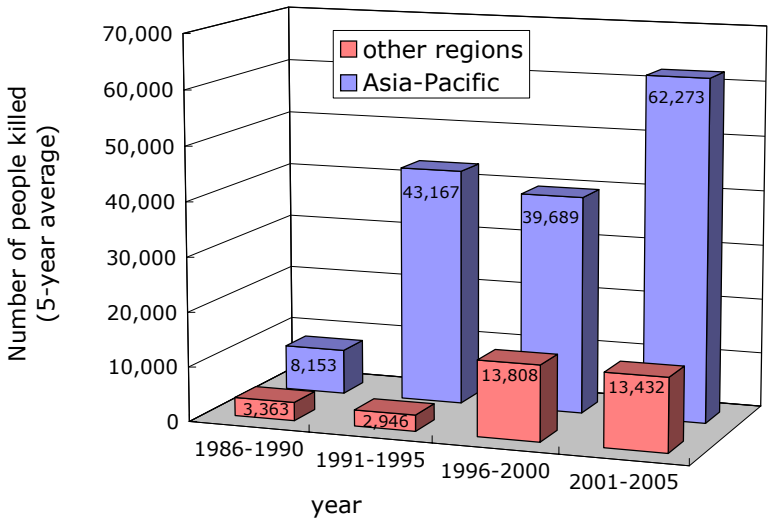
[7] In other words, the total "1.7" investments ($100 billion), a proportion of "1.0" ($60 billion) should be earmarked for water and sanitation infrastructure and a proportion of "0.7" ($40 billion) should be earmarked for education and capacity building.

[8] Adopted at the 9th plenary meeting of the World Conference on Disaster Reduction.

events of such magnitude, although uncommon, illustrate the region's vulnerability to natural – and man made – disasters. And the vast majority of the disasters that occur in this highly populated region are water-related. In 2001-2005, 62,273 people were killed annually by water related disasters in the Asia-Pacific region, in comparison with 13,432 people killed in other four regions. Vulnerability to water-related disasters remains high across the region, from flash floods and landslides in mountainous areas to monsoon-related flooding in deltas.

Number of people killed by water-related disasters

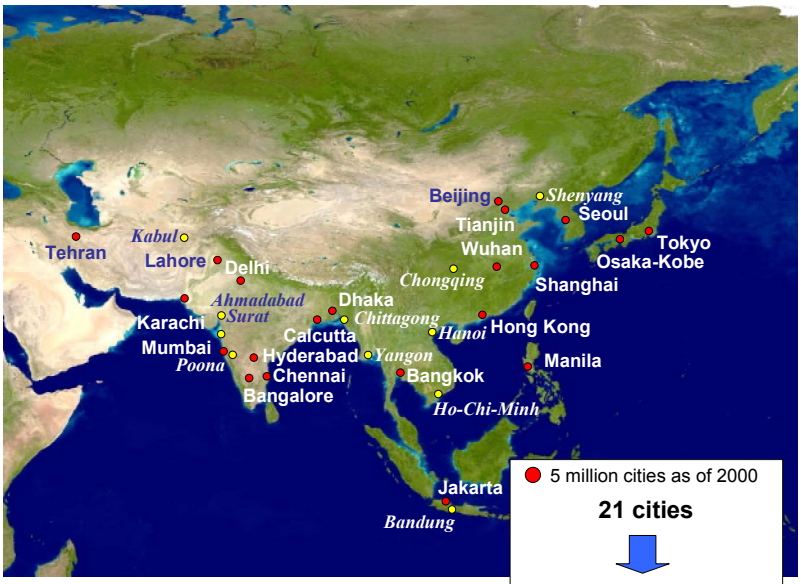


Source:
EM-DAT, The OFDA/CRED International Disaster Database

Why is the Asia-Pacific region is so vulnerable to water-related disasters? It is because most major cities in the region are located along the coasts, which can be easily affected by two kinds of disasters: one from land (flood) and the other from sea (high tide). The number of cities in the region with populations exceeding 5 million grew 3 times as fast as in the rest of the world over the past 50 years (1950-2000). [9] There were 21 cities in 2000 and the number is expected to increase to 32 cities in 2015, most of which are along the coast.

[9] Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2002 Revision and World Urbanization Prospects: The 2003 Revision

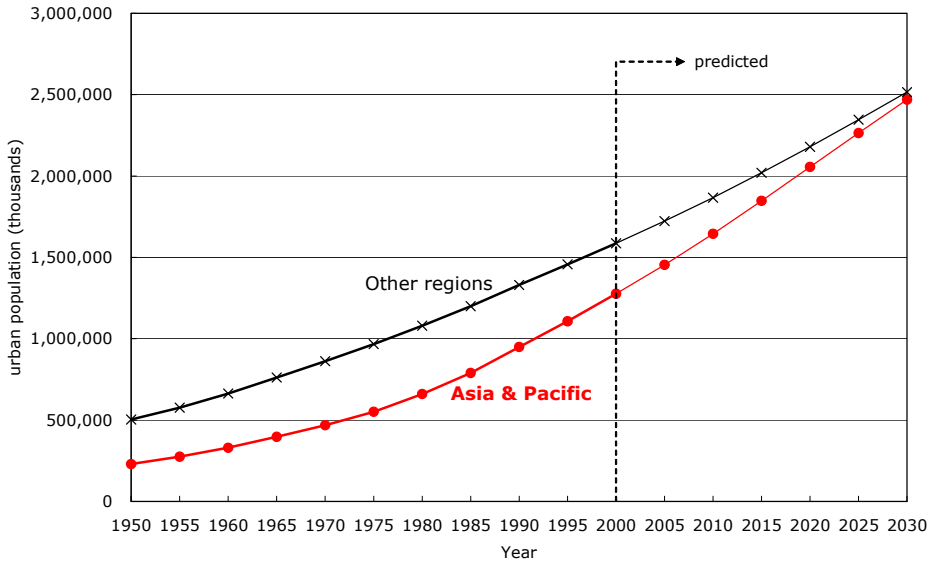
Asian and Pacific cities of 5 million or more



Source:
Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2002 Revision and World Urbanization Prospects: The 2003 Revision

Growing urban populations in the region also increase vulnerability to water-related disasters, as large cities, which act as magnet for the poor, concentrate along the coast. Those who are hit hardest are the poor who have no choice but to say there, even if they know those areas are vulnerable to disasters. And such devastating damage leaves them that much poorer, thus leading to a vicious cycle of poverty. Furthermore, small island states, especially in the Pacific, are highly vulnerable to climate extremes and overall climate variability. Pre-emptive efforts are needed to build resilience within communities and protect the livelihoods of the most vulnerable, including women and children.

Growth of urban population in Asia and Pacific



Source:
Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2002 Revision and World Urbanization Prospects: The 2003 Revision

Developing and improving appropriate structural measures to reduce damage from water-related disasters is a lengthy and expensive process. However, over the long term, a precautionary approach whereby funds are allocated preemptively would significantly offset the funds currently required for recovery activities. Of course, structural measures are not always infallible, and when extreme events exceed the design criteria of the structures, human casualties remain probable. Therefore, we must look beyond coping with the hazard and also pay attention to reducing vulnerability, and the key to reducing vulnerability lies in increasing preparedness through preemptive activities: early warning systems, raising awareness and evacuation planning. Coordinates efforts to adopt these and other measures would go a very long way towards dramatically decreasing the number of deaths caused by water-related disasters – a key priority for the region

3. To conserve and restore land-water interfaces for the improvement of water productivity

Healthy aquatic ecosystems provide tangible economic and social benefits. They improve water quality through natural purification and contribute to maintaining biodiversity. Protecting zones at the land-water interface like mangroves, paddy fields, wetlands, and forests not only increases ecosystem health, but may also provide extra protection against some disasters and saline intrusion, help groundwater recharge, and improves quality of life.

Water resources are finite and availability can vary dramatically over time and space. Improving water productivity across all uses will have positive repercussions for social and economic development, and on human and environmental health. In the Asia-Pacific region, the importance of "natural water" as part of the environment has been embraced by many cultures throughout history. Living with water has brought life to people and has allowed civilizations to grow. Agriculture accounts for the vast majority of water withdrawals in the Asia-Pacific region, accounting for up to 95% of all uses in some countries. Therefore, improving the efficiency of irrigation systems would free a significant volume of water for other uses. When combined with leak detection, rainwater harvesting, wastewater reuse, and other conservation measures, water savings from diversions out of irrigated agriculture would go a long way towards enhancing overall water productivity in the region.

Unfortunately, through the course of human history, far too many water courses have been dramatically "denaturalized". However, as evidenced by the case of restoration of the Cheong-Gye Cheon (River) in Seoul,[10] it is possible to reverse this situation. Surface water restoration is not only good for the environment and the integrity of the water resources themselves, it can have tangible social benefits as well, from reducing flood vulnerability to increasing the overall quality of life of all the people who live in or frequent the area by providing them with new areas of natural beauty for recreation and relaxation. Furthermore, to conserve and restore land-water interfaces is important not only in developed countries, but also in developing countries. Historically, many of the region's land-water interfaces have been ruined, but it is not necessary to repeat those failures. What should be learned from these lessons is that to protect land-water interfaces is to protect life.

Meeting the region's ever increasing demand for freshwater resources in general, and improving access to improved water and sanitation in particular, requires the implementation of technical solutions in combination with managerial tools (e.g., conjunctive uses, reallocation) and increased awareness among decision-makers and the end users themselves. Greater participation, integrated across different sectors, and the promotion of hydrosolidarity through partnership building and networking throughout the region are considered efficient and cost-effective. In the pursuit of IWRM, holistic approaches to rural and urban development can contribute to the goal of water augmentation and should be given greater value throughout the planning

[10] The restoration of the Cheong-Gye Cheon River in Seoul was completed in October 2005. The project has dramatically increased the quality of life for hundreds of thousands of citizens by creating restoring a "natural" water environment to the city. The temperature in summer marked a 3 ℃ drop and average wind speed around the River increased by 50 % comparing to the previous year's data. More detailed information on the wedsite:
http://www.shibuyagawa.net/english/w02_message_nho.html

process. The protection of freshwater ecosystems should not be seen as an extra burden but as an opportunity to enhance water quality, biodiversity and quality of life.

Next Step

The Asia-Pacific region should work in complete solidarities to identify and adopt solutions to priority targets above.

Section 2: Summary Position Paper of the Central Asia Sub-region

CHALLENGES AND ACTIONS FOR INTEGRATED APPROACHES[11]

Introduction

Central Asia covers the territory of five countries: Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan. It is situated in the heart of the Eurasian continent with the total area of 3,882,000km^2 with a population over 53 million (2004), of which over 82 % live in the Aral Sea Basin. It borders Afghanistan and Iran in the south, China in the east and Russia in the west and north.

The collaboration among five states around water resources in Central Asia is a unique example not only of joint planning towards achievement of MDGs, exchange of information, but also of cooperation in real-time management (operation and monitoring) of transboundary water sources and infrastructure.

An analysis of the water management situation in the region has revealed the following generally destabilizing factors:

- Demographic growth and a permanently large proportion of rural population;
- Lack of consideration of environmental demand in current basin water use and conservation master-plans;
- Different national priorities concerning joint use and exchange of water and power;
- Absence of procedures for coordination among the riparian countries design and construction of the new water infrastructure exerting transboundary impacts;
- Uncertainties related to global climate warming;
- Lack of conflict resolution mechanisms and procedures to recover economic losses due to the breaching of water sharing agreements;
- Insufficient information interchange among riparian countries, specifically hydro-meteorological data and forecasts of water availability;
- Lack of policies and programmes for regional economic integration and insufficient co-operation to improve the productivity of irrigated farming on the basis of the model that enables optimizing the differentiation of labor in the region; and
- Vagueness at the regional level such as the prospects of water use by neighboring countries.

Taking into account these factors, the water society – with public involvement – have built up a set of activities to meet challenges and avoid future problems. Collaboration,

[11] More detailed information on the web-site: www.cawater-info.net/4wwf/

in form of interstate cooperation between ICWC, GWP and other stakeholders, has already begun. The most important is cooperation around the two main local actions described below.

1. Test of practices to implement IWRM principles in Central Asia in terms of pilot projects.

Based on the on-going pilot project outputs (including organizational, institutional, technical and other measures under condition of satisfactory funding and capacity building) the real progress can be achieved in reforming water sector over the Central Asian region, particularly aiming the following:

- To assist countries to meet MDGs related to water.
- Achievement of stable water availability; even and equitable water distribution by sub-basins along with significant reduction of unproductive losses.
- Introduction of democratic water governance principles by involvement of all concerned parties into water management process, including gender aspects.
- Partial solution of social problems connected with access to water and equitable water supply.
- Solution of ecological issues connected with human activity.
- Increase of water and land productivity.

To sustain these ongoing processes, the following actions are needed in coming future:

- Development of national IWRM plans for all countries in the region. Norwegian funds, allocated through GWP and UNDP, allowed Kazakhstan to start this activity that will serve as a good example for other countries in the region. The main task of national plans is to generate a clear understanding of IWRM implementation, its objectives, effects, stages and scope of work.
- Increased political support to water issues and IWRM implementation.
- Public participation at all hierarchic levels.
- Capacity development and training activity.
- Juridical and financial support to water sector.
- Technical measures (managerial tools dissemination).

Multilateral dialogue on ways for future development of water sector in Central Asia

Important outcomes can be reached as a result of the actions described above: scenarios of future development for each country – and the region as a whole – with proper consideration to natural water availability; even and equitable distribution of water resources over sub-basins in combination with significant reduction of unproductive losses; introduction of principles of democratic water resources governance through all concerned parties; solution of social issues connected with equitable water distribution, particularly drinking water; solution of ecologic issues

connected with economic activity; and finally, increases in water and land resources productivity.

The outputs of the regional consultations and local actions summarized in this report are aimed at the broad circle of the water society, including decision makers determining water policy and reforms in water governance and management. The report is also intended for civil society representatives interested in the realization of proper reforms. Readers should realize that human-being already faced serious water-related problems not only at the regional level, but over the globe. Everybody should understand that these problems could not be actually resolved by traditional methods. We believe that this document is a one more step forward towards resolving the problem.

Also, it would be worth to mention that after the 3rd World Water Forum in Kyoto (March 2003), Central Asian countries facilitated a smooth transition from the "command" style of water management to a new and more democratic water collaboration with the following main results:

- Severe conflicts in water management, operation, and allocation among the countries of the region have been avoided.
- A range of important legal, financial, and institutional proposals have been prepared for submission to the governments of the states, defining the principles of interaction on water issues.
- Practical measures for broad IWRM implementation were accepted by Water Authorities and Governmental Agencies in all countries.

Section 3: Summary Position Paper of the Northeast Asia Sub-region

1. Basic characteristics

Though there are several definitions for the Northeast Asia, in this Report Northeast Asia is defined as the geographical sphere encompassing five countries: China, Democratic People's Republic of Korea, Japan, Mongolia and Republic of Korea.

The basic characteristics of the appropriate countries are as follows. China possesses 2800 billion m³ of water resources; the water resource per capita in China is only 2200m³, no more than 1/3 of world average, which means low water resources per capita. In Democratic People's Republic of Korea, most of rivers have mountainous river characteristics. It rains a lot from June to September, including tropical cyclone and typhoon. Japan has generally moderate climate. The average annual precipitation is approximately 1,700mm, nearly double the world's average. The potential quantity of water resources of Japan per capita is 3,300m³. The precipitation concentrates in the typhoon season and rainy season, June, September and October. In Mongolia, the annual mean precipitation is 224mm. About 85-90% of total precipitation falls in summer months as rain. The climate is harsh continental, high annual and diurnal fluctuations, and low rainfall. The annual average precipitation of Republic of Korea is 1,283mm. The precipitation per capita is 2,705m³ and the time distribution of precipitation concentrates in summer season, from June to September.

2. Main challenges regarding water issues

The main challenges common to the region include water shortages, frequent flooding, water quality issues and governance. Other important issues are related to soil erosion and water pollution, increasing damages from floods and landslides during heavy rainfall events, decreasing forest cover, declining water supplies due to climate change and the increasing demands for water for irrigation.

3. Strategies that have been implemented to face water issues

CHINA

Since 1998, China has put forward new development strategies in two major categories. The first focused on the construction of large-scale infrastructure which increased supply as well as raising capabilities for disaster mitigation. In parallel, Chinese has been promoting the sustainable use of water resources by attaching great importance to water resources management, especially emphasizing allocation, saving and protection of water resources.

DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA (DPRK)

The DPRK strategies focused on education, research that lead to the establishment of an operating system for flood and drought forecasting, and capacity building. Large, medium and small-scale power stations, reservoirs and irrigation systems were constructed and the capacity needed to manage these systems was developed.

Specifically, the DPRK established a flood and drought early warning system, a decision making system and a water resources information system.

JAPAN
The five ministries involved in water administration formed an inter-ministerial commission which defined and established a sound hydrological cycle system of management. Comprehensive flood control measures have been implemented since the 1980's and forests are properly improved and protected to enable them to perform their diverse functions continuously. Concerning food and agriculture, the new master plan specifies the need of establishing measures for the appropriate protection of properties.

MONGOLIA
Since the 1990's water resources management has been fragmented among different institutions and ministries. The Water Law adopted in 1995 was amended in 2004. The Mongolian Government also ratified the National Action Plan on Water in 1999. Since then, the National Government and Parliament of Mongolia have approved 23 laws for regulating environmental protection and management of nature resources.

REPUBLIC OF KOREA (ROK)
Since the 1960's, Korea constructed a number of multipurpose dams and reservoirs. Flood forecasting and early warning systems were established in 1974 and major river channels have been improved by straightening the embankment works along the shorelines. Water management measures for irrigation have been strengthened and expanded integrate rural water development with agriculture.

4. Successful experiences and local actions carried out in the countries
CHINA
Two major actions were carried out. First was the construction of water projects which intensified water management planning and increased investment. Secondly, the water resources management plan was implemented. With the establishment of a water project construction fund and the development of new management mechanism, progress in regional river basin planning would become recognized as a key achievement in local areas of China.

DPRK
The DPRK constructed many lock gates, reservoirs, dikes and other measures for water control and disaster preventing. A reforestation policy was also implemented. The flood and drought forecasting operation system has been improved and, in the SRI, a GIS-based flood hazard mapping, flood warning and decision making system has been established.

JAPAN

Japan's main actions focused on increasing public involvement, public-private partnerships, networks and the foundation of JWF (Japan water forum). Public involvement included the Environmental Impact Assessment Law, participatory irrigation management and the reflection of public opinions in river improvement plans. The networks were formed with the Japanese government serving as the secretariat following the 3rd World Water Forum.

MONGOLIA
The first hydropower project was realized in 1959. Today Mongolia has six small size hydropower plants (150-2000 KW). Lakes Terkhiin Tsagaan and Ugii were registered in "The International Network of the Northeastern Asia to Protect the Birds of Goose and Duck Families". The monitoring system now includes 56 bio-monitoring stations and 142 of water quality monitoring stations.

ROK
The experiences and local actions in Korea include the establishment of flood-resistance in land reform, a new comprehensive long-term water resources plan that addresses environmental concerns, a water information system and a new dam policy carried out. These measures have resulted in a more stable supply of clean water.

5. Conclusions, learned lessons and future perspectives
CHINA
China will continue to emphasize dam construction and to improve flood-control capacity by speeding up the construction of flood storage infrastructure, reinforcing reservoirs and retention basins. The government will accelerate the construction of hydraulic facilities, promote a "water-saving society" and will strive to clarify water rights, particularly among rural residents. More efforts will be put on water resources protection and environmentally friendly construction.

DPRK
Historically, water management projects were either focused on meeting the water demands of specific economic sectors or on reducing disaster risks in particular regions. It is now important to introduce aspects and approaches of integrated water resource management and establish IWRM plans in order to begin solving the other challenges related to water.

JAPAN
Japan makes efforts to promote a sound hydrological cycle system to facilitate the implementation of IWRM. In Japan, disaster prevention must be regarded as a core national policy and must be promoted jointly with the residents. Although the development of water supply systems contributed to the improvement of public health conditions, calls for "safer and more good-tasting water" have been rising and advanced water treatment has been actively introduced.

MONGOLIA

Achieving IWRM in selected river basins, improved coordination among existing institutions is necessary. Furthermore, the extension of surface and groundwater monitoring networks is important, as is the use of modern techniques for water resources studies and management, including Environmental Impact Assessments. Water balance studies and isotope hydrology will be the focus of forthcoming research in the country.

ROK

The sustainable development and management of water resources in Korea is still given on the securing plentiful and clean water resources to meet the future demand. More sustainable multipurpose dams are under planning stage. Integrated agriculture and rural water development and Management measures should be strengthened. To support IWRM, ROK Government launched 10 years National Water Resources Research Program in near 2001 and also has a plan to start new big research project.

Section 4: Summary Position Paper of the South Asia Sub-region

A Problem Region?

South Asia, the most populous sub-region in the Asia Pacific Region with 1400Mn people (22% of world population in 2003, increasing to 25% in 2025), is plagued by natural disasters, low literacy and social stratification and consequently high incidences of chronic poverty (36% below poverty line) and pervasive social disparities. Declining ratios of arable land availability, forcing the poor to the margins, unplanned urbanization and unregulated industrialization is causing long term environmental problems in both rural and urban settings, that exacerbate the conditions of the poor, further limiting their access to resources and services.

A Region of Promise!

Yet the Region with long traditions of learning, and creativity, vibrant democracies and a responsive media, and strong institutions, is set to achieve high levels of economic development and influence in the coming decade. Steady rates of economic growth, greater political stability and regional co-operation and the emergence of knowledge bases. Societies seem to demand a change of direction in investments and strategies for a cleaner environment focused on livelihoods that could pull large segments of society out of poverty and -hence new strategies for IWRM.

Vision 2025

In formulating the Water Vision 2025 and Framework for Action(2000), GWP – South Asia was unique in articulating its overarching goal as:

"Poverty in South Asia will be eradicated and the living conditions of all people will be uplifted to sustainable levels of comfort, health and well being through coordinated and integrated development and management of the region"

It is acknowledged that water being both a cause and effect of poverty, plays a pivotal role in transforming the livelihoods of the poor; it has emerged as a key instrument for achieving the twin goals of poverty reduction and equitable economic development. It is further acknowledged that conventional forms of policy making and management should give way to innovative strategies and partnership approaches that are people and livelihood centred.

During 2000-2005 GWP – South Asia has led the way in identifying Regional themes, establishing strong and unique partnerships at Country (CWPs) and local (AWPs) levels and championing the cause of IWRM for local action. CWPs have collaborated closely with governments in policy setting and preparation of IWRM strategies. CWPs and AWPs have earned a name for catalyzing and facilitating multi-stakeholder multi-functional forums to dialogue on water issues in the pursuit of MDG and PRSP targets; the level of awareness created especially at local level and the local action spin-offs are considered truly unique.

Inducting a new generation of water professionals has been a vital element in the South Asia Water Vision, and this is being pursued vigorously via Capnet South Asia and national Capnets as post graduate level courses in IWRM have now developed into a regional program. SASNET-RBO (South Asia Network of River Basin Organisations) has been linked to NARBO (Network of Asian River Basin Organizations) while GWP South Asia is collaborating with the ADB led National Water Sector Apex Bodies program for water sector policy making and reforms. South Asia's strength today rests on its strong and resilient links between national and local level actions in water and water related fields.

All countries in South Asia have adopted the MDGs and are vigorously pursuing the goals for poverty reduction focused especially on providing access to water supply and sanitation to the large mass of poor people currently without access; these are operational both in rural areas and the rapidly expanding urban centers. Nevertheless there is a great deal of concern as to whether the MDGs can be achieved without further effort on the part of both public and private sectors as well as of civil society. It is here that GWP institutions at sub regional and local level can play a major catalytic role. .The Dhaka Declaration issued at the end of the South Asia Water Forum (SAWAF) III has identified several priority areas for urgent attention by all stakeholders. 4WWF therefore provides an opportunity to better articulate the needs and the potential of the sub-region for the way forward and also contribute to the goals and efforts of the Asia –Pacific Region.

A Joint Forum

A joint forum is being created to a) deliberate and agree on the content of the Regional Program and create synergies supported by strategic alliances (with governments, regional bodies, water-related networks, donors) and b) identify the South Asia sub- regional issues, actions and best practices that will feed into the Asia Pacific Region Position Paper for 4WWF via the preparatory meeting held in Colombo Sri Lanka in October 2005. A new Regional Strategy will be articulated based upon these outcomes, with South Asian CWPs and governments acting as lead partners in this exercise.

The Joint Forum seeks to

- Synthesize up to date national and local experiences on reducing poverty through strategic water interventions.
- Draw generic lessons to feed in to the regional themes with poverty reduction as the goal for achieving sustainable development with IWRM as the vehicle.
- Make use of GWP's comparative advantage in forging multi level partnerships and alliances as forums for consultation, participatory action and outreach.
- Reach agreement on Regional Program priorities, approaches and inputs to the WWF4 Paper

Five critical themes linked to water productivity, disaster management, health and environment, IWRM in a RBM context and building multi-level partnerships were developed in a highly participatory mode by multi-country core teams made up of national policy makers, knowledge centres, practitioners, civil society representatives and champions of IWRM with guidance from an eminent Regional Review Panel.

Forum Outcomes

The Forum identified five thrust areas for the region to pursue via:

- Improving Water productivity overall for Food security and Water Security
- Investments in Water Supply and Sanitation focused on improved Hygiene
- Incorporating Disaster Management in IWRM
- Environment conservation for Health of Eco-systems
- Exploring Innovative Financing mechanisms

The Forum fully endorsed

- the need for building multi-level and multi-functional partnerships and
- the criticality of local action to promote and upscale IWRM

The thrust areas are fully in sync with the priorities identified for the Asia- Pacific region and provides opportunities for collaboration at multi levels to address the challenges of reducing poverty to meet the MDGs through IWRM approaches. Additionally since South Asia's comparative advantage lies in the strength and resilience of its community led local actions AWPs- they have the potential firstly to promote IWRM and by extension natural resources management and environmental protection at the local level and secondly to upscale best practices to the regional and national levels.

Strategy and Program

The above thrust areas are now being translated to a five year Strategy (2006-2010) and to Annual Programs to be implemented at 'sub-regional', national and sub-national levels by building Partnerships, forging Strategic Alliances and joining Networks.

National Governments in South Asia have made strong commitments to achieving the MDGs through massive investments of financial and human resources in the water sector. Novel institutional forms with local government and community involvement are emerging through out South Asia. Capacity building and ensuring transparency and accountability at local levels are key to ensuring optimum outputs and impacts to achieve the goal of reducing poverty through IWRM. GWP has the potential to play a pivotal role in helping to achieve water related MDGs, given its multi-level links and coalitions. The Strategy 2006-2010 provides for vigorous pursuit of these goals through local level actions, national programs, knowledge sharing and policy round tables. 4WWF is seen as an opportunity for sharing ideas and experiences to further fine tune the strategies and to secure firm commitments to move forward steadily

towards the South Asia goal of Poverty Reduction through IWRM and Partnership Building in an Asia-Pacific Regional context.

Section 5: Summary Position Paper of the Southeast Asia Sub-region

Background

The Southeast Asia (SEA) region is geographically divided into two regions, namely, continental Southeast Asia consisting of Laos PDR, Cambodia, Vietnam, Thailand and Myanmar, while maritime Southeast Asia consists of the Malaysia, Brunei, Philippines, Singapore and Indonesia. The population of the region which is more than 500 million, is expected to increase by 50% by year 2025. The average population density of the region of 1.2 persons per hectare in 1997 is expected to increase to 1.8 persons per hectare after 25 years. The per capita natural water availability will drop from 11,000 m3/capita/year to 7,300 m3/capita/year in 25 years. In daily per capita values, natural water availability will decrease from 30 to 20 m^3 per person per day (GWP SEATAC, 2000). With an average annual water resource of about 6,476 km^3, SEA has 15% of the world's total volume. Given the importance of water resources in the region, it is important to address water management issues at various levels. Among such issues are the escalating demands on water resources brought about by rapid urbanization and industrialization, and the resulting water stress, indicated by reduced water quantity, low water quality, low reliability of supply, high cost of water and more.

Main Challenges

Southeast Asia has among the richest ecosystems, biodiversity and water resources in the world but these resources and their potentials are being reduced at an alarming rate. Pressure arising from human activities is one of the main challenges in many areas in the SEA countries. About 90% of the abstracted water is used for agricultural purposes, leaving very little for other consumptive uses. Water stress exists in many places of SEA resulting in serious water shortages and damage to the environmental ecosystems. Although industries and households are among the lowest water users, they are unfortunately the highest contributors to direct water pollution. Many of the SEA countries have already suffered from poor water quality and shortage of water. Others may have adequate water resources, but are unevenly distributed both in terms of space and time. Water stress exists in the SEA region has resulted in serious water shortages and damages to the environmental ecosystems.

Regional Priority Issues

(a) Access to safe water and sanitation

Rapid development has created gaps in the prevention of pollution and the highly dense population in urban centres has converted rivers into open sewers. River water quality has been degraded by sewage, municipal wastewater, industrial effluent that are not fully treated and sediments from land clearance and solid wastes. The farming communities add on to the pollution with residuals from fertilizers and pesticides and untreated animal wastes. Addressing the water pollution issue opens the dimension of the importance of public health, sanitation and hygiene. Communities suffering from

inadequate access to water and sanitation facilities have and will suffered from poor health leading to loss of incomes and opportunities to work.

(b) Water governance requirements

Another critical issue is the apparent lack of appropriate institutional frameworks to adequately address the development and management of water and related land resources in an integrated manner. Fragmented water resources management and development are carried out by many and varied agencies. Major issues arising from weak water governance include inadequate information on the status of water resources, inequitable water distribution, lack of enabling environment for sustainable water resources management, inadequate mechanisms and incentives for private sector involvement, inadequate participation of stakeholders and inadequate knowledge, understanding and awareness of the values and benefits of water.

*(c) Challenges at the local level*s

Results of surveys from Indonesia, Malaysia, Myanmar, Philippines and Thailand indicated that the main challenges at the country and local levels are poor integration & coordination among implementing agencies. Following closely are the lack of integrated institutional frameworks for water and land development and management, insufficient capital expenditures to meet estimated investment requirements, and lack of effective cost recovery mechanism for sustainable water resources development. Water shortages, governance and inadequate skills and resources are also major concerns. Other challenges include floods and pollution

Strategies on sustainable water management

As a result of the challenges faced, countries in the region have developed specific strategies to meet their individual needs. Cambodia for example, is looking at developing an enabling environment through legislation, adequate policies and financing. Indonesia has come out with the National Institutional Frame Work for Reform and established the National Team for Coordination of Water Resources Management. Laos has established the Water Resources Coordination Committee. Myanmar looks at the adoption of an integrated approach through improvement in existing mechanism as well as facilitation and formulation of related laws and regulations. In Malaysia, an overarching national IWRM policy has been developed and incorporated in the development initiatives. Malaysia has also reengineered its ministries into resource and service managements. The Philippines looks at creation of RBOs/Water Resources Regional Councils within the water resources regions, implementation of a rationalized raw water pricing mechanism, and revisions in the Rules & Regulations of the Philippine Water Code. While Thailand looks at solutions for drought relieved, flooding, wastewater treatment and management of groundwater, Vietnam formulated her Water Law and formed the Ministry of Natural Resources and Environment.

Local Actions

To this end, local actions and programs were planned and successfully implemented in the countries of SEA. Besides the strategies of the governments of SEA countries, the NGOs and the community groups within the region also have their own programs in promoting the implementation of IWRM.

Lessons Learned

Some of the lessons learned include that Century-old water laws can be reviewed for a basis for a unified water resources law. Water reforms take a long time but in the mean time other local actions can be implemented. Effective implementation can only be achieved through community participation. Huge investments needed to improve the water sector may not be forthcoming and innovative financing schemes need to be developed to bridge funding gaps. There is also the importance of knowledge & information and the need to ensure its dissemination.

Conclusions

Problems relating to water and environment are expected to intensify in the SEA region in the future and water resources need to be managed in an integrated and holistic manner. Political & administrative framework and commitment are vital to ensure success. Continuous support is needed in the multi functioning of the water economy. There are opportunities to work together, and sharing of experiences is vital. There is a need for comprehensive and integrated legislations for managing water resources and the strengthening of the legal aspects of IWRM in order to efficiently implement the new concepts through local administration.

Section 6: Summary Position Paper of the Pacific Sub-region

Introduction

Pacific island countries are no different from other countries in that freshwater is essential to human existence and a major requirement in agricultural and other commercial production systems. The economic and social well-being of Pacific island countries are dependent upon the quality and quantity of their water. However, the ability of the island countries to effectively manage the water sector is unique to SIDS, whereby constrained by their small size, fragility, natural vulnerability, and limited human and financial resource base.

The challenges of sustainable water resources management in Pacific Island Countries were categorized into three broad thematic areas at the regional consultation on Water in Small Island Countries held in preparation of the 3rd World Water Forum in Kyoto 2003. These are:

1) Small island countries have uniquely fragile water resources due to their small size, lack of natural storage and competing land use, vulnerability to natural and anthropogenic hazards, including drought, cyclones and urban pollution. This requires detailed water resources monitoring and management and improving collaboration with meteorological forecasting services;

2) Water service providers face challenging constraints to sustaining water and wastewater provision due to the lack of both human and financial resource bases, which restrict the availability of experienced staff and investment, and effectiveness of cost-recovery. Future action is required in human resources development, water demand management and improving cost-recovery; and

3) Water governance is highly complex due to the specific socio-political and cultural structures relating to traditional community, tribal and inter-island practices, rights and interests. These are all interwoven with past colonial and 'modern' practices and instruments. These require programmes to develop awareness, advocacy, and political will, at all levels to create a framework for integrated water resources management.

These issues have all been addressed through the development of the Pacific Regional Action Plan on Sustainable Water Management (Pacific RAP). Endorsed by 18 countries, 16 at Heads of State level, the Pacific RAP not only provides a coordinated and agreed approach but has significantly driven water up the national and regional agenda. This has been seen to varying degrees in the initiatives taken by countries on water resource management and the increased political support given by governments since 2003.

The Pacific Regional Action Plan consists of six thematic categories as follows:

Theme 1:	Water Resources Management - Water Resources Assessment and Monitoring; Rural Water Supply and Sanitation; IWRM and Catchment Management
Theme 2:	Island Vulnerability - Disaster Preparedness; Dialogue on Water and Climate
Theme 3:	Awareness - Advocacy; Political Will; Community Participation; Environmental Understanding; Gender
Theme 4:	Technology - Appropriate Technologies; Demand Management and Conservation; Human Resources
Theme 5:	Institutional Arrangements - Institutional Strengthening; Policy, Planning and Legislation
Theme 6:	Financing - Costs and Tariffs; Alternative Models; Role of Donor Organizations and Financing Institutes

Action Implementation

The Pacific Partnership Initiative on Sustainable Water Management set up as a main outcome of the World Summit on Sustainable Development, aims to facilitate the implementation of all listed actions in the Pacific RAP on a national, regional and international level. The Pacific paper for the 4WWF is focused on reviewing the implementation and identifying future needs and perspectives based on progress and continuing challenges.

Since its development, this coordinated approach has already proved successful in implementing projects or providing technical assistance to Pacific Island Countries. Many of the partnership activities have also resulted in increased donor collaboration and harmonization on in-country action plans and strategies.

The level of intervention by the partnership through regional programmes is largely restricted to capacity building, advocacy and awareness targeted at the key counterpart government departments in Pacific Island Countries. This not only impacts on the macro level of water resources management but creates the enabling environment for the implementation of water and sanitation actions at the national, local and community levels. The success of the Pacific RAP, and its sister action plans on Wastewater and Drinking Water Quality and Health, ultimately results in longer-term changes in the health of Pacific Island people and the environment.

Within this framework it can also be seen that progress is being made on the six global SIDS agreed priority actions which are in various stages of development and implementation (Water resources management using HYCOS, Water demand management, Water quality monitoring, Water governance, Regional and Inter-

regional Partnership). The Pacific Partnership coordination unit has developed a detailed matrix of all known local, national and regional actions under each Theme of the Pacific RAP with an indication of the status of each action and the partners involved.

The development and subsequent endorsement of a proposal to the Global Environment Facility (GEF) for a Programme on Sustainable Integrated Water Resources Management in Pacific Island Countries will see the implementation of a project that will encompass all priority actions of the Pacific RAP by SOPAC in association with UNDP and UNEP.

The European Union's African Caribbean Pacific (ACP) Water Facility aims at reducing poverty and at promoting sustainable development through the achievement of the water related MDGs and WSSD water and sanitation targets in ACP countries. This effort also provides an excellent opportunity to assist Pacific Island Countries in the implementation of the RAP. On behalf of the Pacific ACP countries, the Pacific Hydrological Cycle Observation System (HYCOS) project as well as a programme on Integrated Water Resources Management and Water Use Efficiency have been submitted by SOPAC to the ACP-EU Water Facility for their consideration. These proposed actions will complement the support currently being provided to the region by the European Union through their Programme on Water Governance developed under the EU Water Initiative.

Collaboration between the two facilities (GEF and ACP-EU WF) would provide an unprecedented opportunity to allow the harmonisation of two global funding mechanisms.

Future Needs and Perspectives

The Pacific Island Countries and territories whilst recording significant progress since the 3WWF acknowledge there are critical areas and issues which continue to impede and often stifle progress in the implementation of the Pacific RAP. By reviewing progress over the past two years and through a process of consultation various perspectives have been presented and identification of future needs has been made. The record of this process provides a yardstick against which the Pacific might gauge progress whilst at the same time identify at all levels areas for action and opportunities for further intervention.

An overriding universal concern is the selective implementation and adherence to the principles of IWRM in countries throughout the Pacific. The reasons for this are numerous and include amongst others the lack of political will, legal instruments, financial resources and human capacity to make the change. A great many of the needs of the Pacific can be addressed through the implementation of IWRM and will only be achieved through a concerted effort by nations, partners, regional and

multilateral agencies.

Many of the small island economies of the Pacific continue to be dependent on external assistance for the survival of the water sector. To effect change, ensure improvements and promote sustainability then true partnership by all parties must prevail. Incentives must be established to ensure the promotion of IWRM, sustainable development plans and implementation strategies. Assistance with establishing appropriate institutions and their enabling instruments of governance must be pursued.

However, without additional financial and human resources, national and regional activities in this sector cannot continue, thus endangering achieving the water and sanitation targets by the end of the Water for Life Decade.