

# PLAN OF ACTION ON WATER RESOURCES MANAGEMENT IN SOUTHEAST ASIA

## 1. Water for Sustainable Development

Water is vital as a basic human need. A necessity for survival and central to enhancing the health, productivity and quality of life in both rural and urban areas. It is a fundamental part of all ecosystems, and a requirement for the integrity and sustainability of the environment and biodiversity. Water is also an essential factor in all sectors of economic and social development. It also provides the necessary input for all types of economic activity and livelihood practices. Adequate, reliable water availability is a prerequisite for investment, growth and poverty alleviation.

The allocation of water across different uses, and the policies and practices that are used to manage, deliver and finance water create incentives and disincentives for specific economic activities in particular geographical areas. These incentives influence the structure of the economy, reinforce and induce specific spatial pattern of growth, which in turn, have an overall impact on national development, local economic growth, distributive equity and environmental transformation. These broad ranging impacts of water management and the value of the contribution of water to all aspects of development should be recognized by the whole government.

Concerted and concrete measures are required at all levels to enable ASEAN countries to achieve their sustainable development goals. The following Action Plan is proposed to commensurate with their respective level of development.

Plan of Actions in Water for Sustainable Development (WSD) include:

**POA WSD 1:** Enhance attainment of the understanding of the contribution of water related service, i.e., domestic and industrial water supply,

irrigation and drainage, energy generation, flood protection, navigation and recreation, etc to national, regional and local economic and social development;

**POA WSD 2:** Provide at least minimum level of investment in water infrastructure needed to trigger and sustain social and economic development;

**POA WSD 3:** Promote of environmental and conservation concerns in decision making and implementation of water related projects;

**POA WSD 4:** Promote actions aimed at convincing politicians, parliamentarians and local authorities to prioritize investments in water related services; and

**POA WSD 5:** Provide support for local initiatives aimed at the efficient and sustainable water resources management especially exploitation of groundwater.

## 2. Implementation of the Integrated Water Resources Management (IWRM)

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Water is a finite resource essential for all humanity endeavors, survival and sustaining life on Earth. This situation frequently implies constant trade-offs and conflict among users, uses, development and environmental goals. This has driven the quest for solutions such as integrated, comprehensive and sustainable management of water resources. IWRM is a conceptual framework that involves an implementation process, which seeks to enable the coordinated and cost-effective management of water and other related natural resources with the overall objective of pursuing sustainable development. Governments present at the World Summit on Sustainable Development (WSSD-2002) adopted a target to develop IWRM plans and strategies by the 2005. An assessment of this process should start by reflecting on how countries perceive their approach in the implementation of IWRM commensurate with their needs and

requirements. Importance to examine the conditions (when, where, and how) that IWRM brings to local, regional and national sustainable development. Actions are needed to measure progress towards its implementation and to define steps – at international, national and local level- can be taken to facilitate reaching this WSSD target.

Plan of Actions in support of the Integrated Water Resources Management (IWRM) include:

## **International**

**POA IWRM 1:** Advance progressive implementation of IWRM by using “learning by doing” approach and best practices including providing mechanism to implement them, among others, in parallel with technical and institutional capacity building efforts, taking into account country specific conditions and national objectives.

**POA IWRM 2:** Recognizing that the 2005 target on IWRM will not be met by many countries, accelerating the provision of technical and financial assistance to developing countries in preparing IWRM and water efficiency plans tailored to country –specific needs, and their subsequent implementation, with a focus on technical and institutional capacity building, require the approaches below:

- (a) Improving water governance through strengthening of institutional capacity and innovation;
- (b) Establish adequate, effective policies for sustainable surface water and groundwater management;
- (c) Forging public-public and public-private partnership;
- (d) Facilitating information exchange and knowledge sharing, including indigenous and local knowledge;
- (e) Mitigating risk and disaster reduction;
- (f) Protection and rehabilitation of catchments areas and critical ecosystems;

- (g) Supporting the use of education to increase awareness of the importance of water use efficiency and conservation; and
- (h) Involving women, youth and local communities in water management.

**POA IWRM 3:** Strengthening the capacities of developing countries for controlling and monitoring, on a voluntary basis, the quantity, quality and use of surface and groundwater resources and for measuring progress toward internationally agreed goals and targets.

### **Local / Regional**

**POA IWRM 4:** Undertake measures to address situations where fragmented, disjointed water policy-making is no longer adequate for water management;

**POA IWRM 5:** Implement program for the identification and understanding of the condition, political, social, economic, financial, cultural and technological, where IWRM is relevant to addressing water management challenges through local transitions;

**POA IWRM 6:** Implement program for the identification and facilitation of cross cutting issues and synergies between water issues and other policy sectors, including the integration of macro-economic concerns in water policy making;

**POA IWRM 7:** Promote and facilitate the advancement of local mechanisms for effective, efficient water allocation among competing water uses with priority to the provision of Raw Water for growing cities and agriculture.

**POA IWRM 8:** Develop approaches and mechanisms for coordinated actions and water policy development, including institutions and processes for inter-policy coordination and multi-stakeholder role and inputs;

**POA IWRM 9:** Examine the success and failure and take necessary improvement measures in the application of water right, instruments and mechanisms for conflict resolution, avoiding opportunistic behavior, trans-boundary water resources management, joint surface and groundwater management, fresh and coastal waters management, basin wide water quality management, etc .

**POA IWRM 10:** Recognizing that no “one-size-fits-all” approach can be adopted, countries should formulate and adopt policy options and practical measures, as appropriate and in accordance with their respective national priorities, circumstances and regulations. Improvement of land and water resources management in rural areas, especially in the agricultural sector, could be undertaken by:

- (a) Promoting measure for further develop capacities of water user associations through training programs in efficient water use, among other, and access to rural economic resources;
- (b) Promoting and facilitating the uses of efficient irrigation and rain water harvesting technologies;
- (c) Implementing irrigation projects / schemes with focus on the poor;
- (d) Promoting an integrated approach that protects the environment, raises production and sustain rural livelihoods; and
- (e) Modernizing irrigation systems by using new and traditional technologies, as appropriate.

**POA IWRM 11:** Develop national monitoring systems on the quantity, quality and use of surface and groundwater resources and for measuring

progress towards internationally agreed goals and targets, as appropriate, through the following actions:

- (a) Establishing and managing water information systems;
- (b) Strengthening networks for monitoring water resources quantity and quality;
- (c) Standardizing methodologies and developing monitoring indicators; Transferring monitoring technologies adaptable to local conditions;
- (d) Exchanging information with all stakeholders; and
- (e) Exchanging visits among the IWRM practitioners.

**POA IWRM 12:** Provide technical and management support to local authorities and community based organizations to improve water resources management within national policy frameworks, ensuring effective co-ordination among water related decision-making and implementing bodies at all levels.

### 3. Water Supply and Sanitation for All

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Regardless of the efforts made, there are still many places where water is only available at remote locations or intermittently at standpipes, bore wells and public fountains. Frequently, this water is of poor quality. Insufficient safe water and sanitation expose people- especially children- to water-related diseases. It is widely recognized that deficiencies in water supply and sanitation hinder people's well- being in a multifold manner.

The constraints on expanding and improving water supply and sanitation for urban and rural environments need to be overcome. It is imperative to understand and face the political, financial, regulatory, organizational, cultural and technological challenges hindering the provision of water supply and sanitation. Concerted and concrete actions are required at all levels to enable ASEAN's countries to achieve their WSSD targets related to water and sanitation.

Plan of Actions in Water Supply and Sanitation (WSS) include:

- POA WSS 1:** Implement program to improve water quality and expanding access to safe drinking water supply and sanitation for the urban and rural poor, and adoption of enabling strategies and mechanisms for central and local governments;
- POA WSS 2:** Establish financing and governance instruments for meeting the MDGs in the provision of water supply and sanitation (i.e., innovative financing, decentralization, private sector participation in water and sanitation utilities, public-private partnership, small-scale providers and civil society organizations, regulation, benchmarking, monitoring and information schemes);
- POA WSS 3:** Develop measures to evolve role of national and local government, the lending agencies, the private sector and other stakeholders in the governance of water supply and sanitation provision;
- POA WSS 4:** Measure the impact of the provision of water and sanitation on local, regional and national development and poverty alleviation strategies and goals;
- POA WSS 5:** Take into account voices of end users' perspective regarding the underlying causes of deficiencies and inefficiencies in water supply and sanitation provision in urban and rural areas;
- POA WSS 6:** Establish the assurance of sufficient quantity and quality of Raw Water to meet minimum standard for Water Supply and Sanitation.
- POA WSS 7:** Measures to establish complementarities in supply and demand-side management strategies (tariff setting, cross and direct subsidies, awareness campaigns and education, etc)

**POA WSS 8:** Promote initiatives to confront the challenges for water supply and sanitation in megalopolis and the peri-urban interface; and

**POA WSS 9:** Implement measures to protect surface water and groundwater as sources of drinking water from over-exploitation and pollution.

#### 4. Water Management for Food Security

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Integrated agriculture is the largest consumer of water in the world with close to 70% of fresh water withdrawals. Water for food for a growing population is becoming an important challenge due to increasing competition and conflict experienced between different uses and the environment. It is necessary to achieve greater irrigation efficiency and water productivity in agriculture with due consideration for safeguarding the environment. Synergies between water and agriculture policies need to be reinforced in order to enhance sector benefits and support rural livelihoods. Securing water quantity and quality for livestock, fisheries and aquaculture, while maintaining ecosystem functions, is also very important for poverty alleviation and environmental protection strategies. Concerted and concrete actions are required at all levels to enable ASEAN's countries to achieve their WSSD targets related to food production, poverty alleviation and environment.

Plan of Actions on Water Management for Food Security (WMFS) include:

**POA WMFS 1:** Develop and promote innovative financing to support more efficient irrigation scheme, including small scale farming and marginal groups, and community-based actions;

**POA WMFS 2:** Develop and promote initiatives facing the challenges and opportunities in operating and maintaining irrigation system in participatory manner for farmer and water user associations;

**POA WMFS 3:** Develop measures to strengthen synergies and to lessen contradictions between agricultural and environmental practices and policies;

**POA WMFS 4:** Promote understanding the complementarities in supply and demand-side management strategies (cost recovery, cross and direct subsidies, awareness campaigns and educations, etc.); and

**POA WMFS 5:** Develop and promote initiatives addressing the challenges and opportunities for reliable water supply for food production.

## 5. Water Security

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Water security is a concept that has at least three different, yet interrelated, notions all driven by a vision to protect and care for humanity. First, climate change and climate variability are influencing the incidence of extreme natural events (e.g. droughts, floods, tsunami, storms, typhoons etc.). The poor are the hardest hit by these occurrences. Finding ways to cope with uncertainty and risk by developing early warning systems, rapid response action plans and adaptation strategies is of vital importance, especially for vulnerable communities in both the developing and industrialized countries.

Second, there is an increasing concern to address the effects of social conflict and warfare on the integrity of water resources and related infrastructure. Finally, the concept of hydro-solidarity refers to a broader vision, which seeks a higher ethical involvement of citizens in their interaction with water for the sake of peace and coexistence. Concerted and concrete actions are required at all levels to enable ASEAN's countries to achieve their WSSD targets related to food production, poverty alleviation and environment.

Plan of Actions on Water Security (WS) include:

- POA WS 1:** Develop and implement strategies for local adaptation to climate change and variability, as well as other extreme natural phenomena;
- POA WS 2:** Implement programs for capacity-building and financial support schemes for participative forecasting technologies for early warning system and predictive capacities, risk assessment, risk mitigation, risk sharing strategies and adaptation strategies;
- POA WS 3:** Develop and implement strategies to deal with social conflict and warfare threats (e.g. protection and security schemes for water supply and wastewater facilities, rapid response strategies to toxins and bio-hazards; surveillance techniques and institutional development of water security responsibilities; water security implementation plans and inter-agency coordination in the event of complex emergencies, etc); and
- POA WS 4:** Promote crafting local water ethics and hydro-solidarity for implementing good water governance.