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Coping with water scarcity: policy, strategy
and technical options

The background features a faint, light-colored compass rose on the left side, with a map outline of the Asia-Pacific region. The text is centered and has a slight drop shadow.

Regional priorities

- ▶ Growing regional water scarcity and competition for water, compounded by the effects of climate change, represents a major threat to future advances in food security and poverty alleviation.
- ▶ member countries to develop systemic national responses to water scarcity that address policy, institutional, legal, economic and technical obstacles, adopt more effective and strategically focused investment strategies in water management, assess the potential of international trade to offset water scarcity, and enhance regional cooperation.

- ▶ **Supply-side responses** still an option in some basins, but **managing demand** for agricultural water use should be the priority in the region.
- ▶ Member countries to focus on **water-use efficiency and agricultural productivity along the value chain from farm to market**, including on-farm water management, irrigation system performance, improved governance and adjustments of national water and irrigation policies.

Member countries to:

- ▶ implement **service-oriented reforms of irrigation institutions** and adopt **demand-driven irrigation modernization strategies** focusing on cost-effective water service delivery, while recognizing multiple uses and services of agricultural water and extending participatory management to various local actors.
- ▶ **support needed significant new investments in irrigation systems** by strengthening **capacity** at all levels and adopting benchmarking systems to **monitor the effects of policy change and performance improvements** in the irrigation sector.

FAO to scale up its regional irrigation modernization programme in support of these efforts.

Member countries to:

- ▶ **boost the productivity of rainfed agriculture** by providing incentives for the adoption of practices that minimize water risks, such as water harvesting, and by developing and promoting the use of seeds tolerant to flooding, salinity and drought.
- ▶ develop and report **reliable information on agricultural water use**,
- ▶ facilitate effective **dialogue among key water sector interests**,
- ▶ establish robust and transparent methods to **negotiate allocation** amongst competing water uses and users,
- ▶ and address **institutional, technological and economic obstacles** constraining progress towards optimal **intra- and inter-sectoral water allocations**
- ▶ consider and develop mechanisms for the **compensation of providers of environmental services**.

FAO to assist member countries in developing comprehensive policy and strategic frameworks for coping with water scarcity:

- ▶ improving **water governance** at the level of communities, irrigation systems, river basins and aquifers;
- ▶ adopting **multi-sectoral strategic planning approaches** related to food security, agriculture, water, environment and investment;
- ▶ adopting **demand-driven and service-oriented irrigation development and management**;
- ▶ **modernizing irrigation systems**;

- ▶ enhancing water productivity in rainfed and irrigated production systems while maintaining environmental protection;
- ▶ developing and adopting improved on-farm water management including water-saving practices;
- ▶ safeguarding vulnerable agro-ecosystems and populations, such as those in tropical deltas and in arid or semi-arid areas; and
- ▶ addressing land tenure and land titling issues and access to natural resources to create a more conducive environment for investment and sustainable use of land and water resources.

FAO to assist member countries in promoting:

- ▶ conservation agriculture,
- ▶ integrated pest management,
- ▶ integrated plant nutrition,
- ▶ sustainable forest management,
- ▶ best practices in livestock production,
- ▶ more efficient processing and marketing processes, water treatment facilities for industrial and marketing complexes,
- ▶ other measures to conserve and protect water resources and water quality

inter alia to protect inland fisheries, aquatic resources and aquaculture.

FAO to:

- ▶ strengthen **AQUASTAT** in the region.
- ▶ support the establishment of **regional networks of experts**, to facilitate the sharing of knowledge, information, experiences, technologies and best practices related to water management and approaches for coping with water scarcity.
- ▶ in collaboration with other relevant organizations, continue facilitating **regional and international dialogue on water scarcity issues** and **transboundary cooperation** in the management of water resources.

- ▶ launch a regional initiative (FAO-IWMI ...) on re-inventing irrigation and agricultural water governance in Asia and the Pacific.
- ▶ support the development of practical **adaptation and mitigation strategies for climate change** in the region.
- ▶ collaborate with **regional centers of excellence** to develop and promote appropriate and affordable water management technologies and mechanization for effective on-farm water management.
- ▶ give high priority to all that and to strengthen its own capacity and resources.

FAO main regional technical programmes (water)

2010-2013



F2: Countries address water scarcity in agriculture and strengthen the capacities to improve water productivity of agricultural systems at national and river-basin levels including trans-boundary water systems

Indicators

Number of countries or river-basin organizations adopting recommendations on water-scarcity coping strategies as a result of FAO policy, legal and strategy support

Number of institutions which have adopted FAO water productivity enhancement tools and approaches.

Uptake of FAO Water information products and global datasets

- ▶ Preparation and mainstreaming of a **Comprehensive Framework to cope with Water Scarcity**, including a Water Accounting/Auditing Methodology to assess the extent of water scarcity at country and river basin level in the Asia Pacific Region
- ▶ Reducing the **water foot print** of food harvesting, transformation, transportation and distribution through decreasing losses and improving processes to contribute to water scarcity coping strategies and food security in the Asia Pacific

- ▶ Validation and mainstreaming of **projections** on future irrigated areas and agricultural water requirements established for 2030 and 2050 in the Asia Pacific, including assessment of **Climate Change impacts for major food production areas** in the region
- ▶ Development and mainstreaming of information tools to estimate yield response to water of various agricultural crops and criteria to improve **Crop Water Productivity** and of methodologies for **auditing performance and designing productivity improvements in medium and large irrigated systems**, relevant for and adapted to the Asia Pacific

- ▶ Improved **Agriculture Water Management for Smallholder** Farming and Rural Livelihoods
- ▶ **Advocacy and regional cooperation** within-Water partners and other regional organizations, stakeholders and initiatives, to develop, advocate and support regional initiatives policies, investment, monitoring of investment and result for **water security and food security** in the Asia Pacific Region

Regional projects/programmes/initiatives

▶ On-going

- Regional Irrigation Modernization Programme
- Study on analysis of sustainable water resources use:
 - ▶ Water allocation
 - ▶ Regional, China, Malaysia, Thailand, Vietnam
- IWMI-FAO Knowledge Hub on Irrigation Service Reform
- FAO-ESCAP Water Resources Strategic Planning Network

▶ Pipeline

- Capacity building in irrigation modernization
 - ▶ China, India, Malaysia, Thailand, Vietnam
- Development of FAO-IWMI Initiative on re-inventing irrigation and Agricultural Water Governance for MDGs
 - ▶ China, India, Pakistan, Indonesia, Malaysia, Thailand, Vietnam

THANK YOU

