

**5th World Water Forum, Istanbul, Turkey
16 to 22 March, 2009**

**Theme 2: Advancing Human Development and the Millennium
Development (MDG)**

Topic 2.3: Water and Food for Ending Poverty and Hunger

SESSION OUTCOME

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on Behalf of the

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INTRODUCTION

The 5th World Water Forum (WWF5) was held in Istanbul, Turkey, 16 to 22 March 2009 under the main theme: *Bridging Divides for Water*. The set-up of the program consisted of six Themes with each Theme having about four topics. One of the Themes is Theme 2: Advancing Human Development and the Millennium Development Goals (MDG). Under this Theme there are four topics. One of these Topics, Topic 2.3: *Water and Food for Ending Poverty and Hunger* was coordinated by the International Commission of Irrigation and Drainage (ICID).

This document presents the main outcomes for each of the four sessions of Topic 2.3, which addressed the key questions:

- How to achieve the required food production to meet the growing demand?
- How can food market measures boost rural development and poverty alleviation?
- Water for bio-fuel or food?
- How can better water management reduce poverty and hunger? A synthesis.

The session outcome is organized into four categories:

- key issues;
- Recommendations;
- Commitments; and
- Initiatives.

This document draws mainly from the presentations and discussions held during the WWF5 on 18, 19, and 21 March 2009 on the basis of the *Topic Report* and *Session Situation Document* prepared by Professor Bart Schultz and Dr. Henri Tardieu who coordinated Topic 2.3 on behalf of ICID.

The coordinators, conveners, co-conveners, panellists, reporters, support staff from the host country, Turkey, and the wider audience have collectively ensured smooth and excellent conduction of the sessions as well as enriching and gathering of the herein presented key outcomes.

SESSION OUTCOME

Session 2.3.1: How to achieve the required food production to meet the growing demand?

KEY ISSUES

- How to bridge between agricultural and water policies to avoid both global and local food crises?
- How can institutional and technical water management improvements contribute to the required increase in food production?

- What types of investments are necessary to develop additional water resources including non conventional and to modernize existing irrigation and drainage schemes to improve water productivity?
- How can rainfed agriculture contribute more effectively, while maintaining irrigated agriculture, to enhance food security and improve livelihoods in rural areas?
- What policies and actions are needed to ensure the sustainability of water resources and the river basin services that underpin the increases in agricultural productivity that must be achieved?

RECOMMENDATIONS

- Farmers may be successful in producing sufficient food; however, this may not alleviate urban poverty and hunger. Therefore, decisions on investment need to be based on decrease in food production cost and would be clearly demonstrated;
- Consider multifunctionality of agriculture/ irrigation with due attention to environmental impacts and services;
- Slight overall increase in water withdrawals for irrigation along with increase in crop yield levels will be required to meet future food production, primarily in the least developed and emerging countries;
- Ensure timely and sufficient availability of other inputs like quality seeds, fertilizers, pesticides, equipments, and extension services, besides water for obtaining higher crop yields;
- Fragmented and small land holdings are significant constraints for increasing crop/water productivity. Promote improvement of farm holdings, in agreement with the concerned farmers (for example by rural reconstruction, or land reallocation) to improve economic viability of farming and reduce production cost;
- Besides increasing food grain production, other foods like fish and milk production need equal attention to cater protein needs of poor population;

COMMITMENTS

- Food demand is expected to double by 2030-2035. Main drivers are population growth, change in dietary habits and waste of food. (from field to fork). Devise both short term and long term solutions to comply the food demand;
- Enhance investment in various water management solutions (irrigation, water harvesting, rainfed agriculture, drainage) both by public and private sectors;
- Under the changing conditions and increased complexities capacity building at the appropriate levels will be required.

INITIATIVES

- Focus on improvement of existing irrigation schemes and their effective long term operation and maintenance;
- Develop close cooperation between Ministries of Water Resources, Agriculture, and others dealing with water. National Governments to take the required steps to assure effective food production for their people and improved livelihood of the poorest;
- Include and encourage farmers in discussions on agricultural water management initiatives;

- Women are playing a substantial role in farm level activities and in food production in many countries of Africa and Asia. However, their contribution is not sufficiently recognized. Therefore, involve women in water management and decision making process;
- Promote adoption of innovative water saving technologies on large areas, reuse of poor quality waters for irrigation, and measures to achieve better water productivity;
- Plan and implement capacity building/ development initiatives at all levels in context of the changing conditions and increasing complexities;
- Data collection and analysis, monitoring and evaluation would have to play an important role in sound decision making.

Session 2.3.2: How can food market measures boost rural development and poverty alleviation?

KEY ISSUES

- How can poor farmers benefit from market opportunities and how to improve the marketing chain?
- How can local markets be strengthened through for instance capacity building and farmer empowerment (including micro-financing) consistent with trade?
- How can new agricultural market opportunities help in financing improved water productivity and services?
- What is the optimal mix between short-term and long-term strategies to address vulnerability of small-holder farmers to market volatility, climate variability?

RECOMMENDATIONS

- Context-specific solutions are needed for different challenges and crises including land and water governance and tenure security arrangements especially considering rural migration and in fragile states;
- Short-term action plans to reduce smallholder vulnerability need to be linked to their involvement in long-term structural rural poverty alleviation reforms;
- Food price volatility especially for poor small-holder net buyers of food would have to address climate change proofing of agricultural water related goods and services, for example, drought and flood resistant crops and livestock, innovative rural finance insurances, dual purpose roads transport and travel, multiple use and spate irrigation, local level storage facilities, field to fork reduction of losses, weather and price information and knowledge;
- Water alone can not help to produce the required output to eradicate poverty: proper market arrangement that suits poor rural farmers, agricultural inputs, credit, post-harvesting technologies have to be considered as integral assets of the production systems;
- Subsistence food production and business oriented approaches are necessary and need to be employed simultaneously so as to ensure that farmers meet their basic food demands while at the same time have the opportunity to escape the poverty trap;

- Market opportunities for smallholder farmers need to include all livelihood assets and be two-way including field-to-fork consumer relations for enhanced sustainability;
- Development of local market is key to move farmers from survival mode to market oriented farming. Expand local market infrastructure, improve market chain, recognizing farmers as entrepreneurs;
- Small-holder poverty eradication initiatives must be demand driven, multipurpose and profitable;
- Rainfed agriculture remains key livelihood option for most smallholder farmers: its potentials merit to be further capitalized;
- In capacity building and technology development, dual approach: bottom-up and top-down would have to be employed, with emphasis on bottom up to reach poor farmers;
- Knowledge and capacity development in water management and impacts of climate change is needed for all, at all levels, for both men and women to be empowered;
- Cost is not the only criteria in choice of required water control and market infrastructure development interventions; they have to be done in a rural development context and local socio-cultural values would have to be respected.

COMMITMENTS

- Involve small-holder farmers in all business oriented livelihood improvement decision making in the capacity of entrepreneurs;
- Allocate budget as part of the global, regional and national development investment package for market development (price, information, infrastructure);
- Provide targeted subsidies and adapted financial packages, including crop insurances;
- Put in place proper auditing mechanism for all financial investments as well for trade-off among the uses of water by the agricultural, environment, industrial and domestic sectors;
- Secure equal access for small and large scale farmers to markets and information on prices;
- Provide complementary physical infrastructure and allow local ownership to ensure sustainability;
- Prevent land degradation and restore fertility; secure access to land and water;
- Invest in human capital: access to knowledge, training, gender considerations
- Ensure enabling governance and policies;

INITIATIVES

- Recognise small-holder farmers, poor and emerging, women and men, old and young as rural entrepreneurs and as such as part of the solution, not source of the crises;
- Organize small-holder farmers into socially cohesive bodies to operate as one big entrepreneur;
- Respect small-holder farmers (80% are women) as crucial for food production in many parts of the world;
- Couple informed decision-making by small-holders, especially in times of crises, to inclusive empowerment and institution strengthening;
- Develop cheap alternative farming, smaller multiple-use infrastructure, and processing and energy technologies; use success stories for up-scaling;
- Improve crop varieties not only based on dollar per drop or tonnage per drop but also kcal, proteins and taste and cooking times;

- Promote organic agriculture and carbon credit schemes as possible alternatives to reduce migration, enhance labour availability, improve livelihood in both rural and urban areas as well as protect watershed and the environment;
- There is no such thing as migration induced idle lands; identify return schemes that could offer alleviation;
- Rural sanitation and safe water re-use to be coupled to agriculture and water investments agendas for better bankability and allowing for the recycling of nutrients under food safe conditions.

Session 2.3.3: Water for bio-energy or food?

KEY ISSUES

- How can rural communities benefit from bio-energy crops? Can bio-fuel plantations give a sustainable income to the small and marginal farmers?
- How to avoid conflict with food production by considering reversible crops from non-food to food production, and using marginal water and land?
- How to develop farming practices compatible with nature balance, increasing the resilience of rural poor and ecosystems?
- What may be implications of bio-fuels policies and trends for water resources, availability and allocation among uses (including by ecosystems) and on ecosystems and livelihoods?
- Can bio-fuel prices be not affected from the impact of changing prices of fossil fuels?

RECOMMENDATIONS

- Consider changing the key question in: *What may be the implications of bio-fuel policies and trends for water resources, their availability and allocation amongst different sectors (agriculture, industry, domestic, and environment) and thus on ecosystems and livelihoods?*
- The debate should not be water for food OR fuel, it would have to be how to optimize water use for food AND fuel while ensuring water security for other uses;
- Biofuel production needs to be seen in the wider context of agriculture, with the same debates and issues at stake – resource scarcity and sustainability.

COMMITMENTS

- Integrated policies and decision-making that complement not contradict each other will be encouraged: integrated approaches will be followed in both policy and implementation;
- Globally, circumstances differ - solutions will be taken on a situation specific basis.

INITIATIVES

- Water, and in some cases land, are limiting factors but are needed for food AND fuel, besides for environment and other uses. Farmers take the decisions regarding crops

- based on market conditions and product demand. Enabling circumstances will be created, especially in least developed countries;
- To organize and inform small-holder farmers on water availability use. Encourage debates on the means of allocating water, to people and nature;
 - To promote strategic environmental assessments for large-scale land and water acquisitions;
 - To protect rights of the poor to use water for production of basic food demand.

Session 2.3.4: How can better water management reduce poverty and hunger? A synthesis

KEY ISSUES

- How to reconcile agricultural and water policies to avoid both global and local food crises?
- How can institutional and technical water management improvements and investments contribute to increase the food production?
- How can scientific findings more effectively be transferred to practical technologies, especially supporting the poor farmers?
- How can poor farmers, especially women, benefit from market opportunities?
- How can local developments benefit from bio-energy?

RECOMMENDATIONS

- Consider diverse options for agricultural water management: rainfed, irrigated, water harvesting. Integrate these options in an optimum manner;
- Water, energy and agriculture are intimately related. Deal with them as an integrated entity; dealing with agriculture in this context will have the added value of enabling the sector to attract better attention from development organizations and the donor community;
- Rural sanitation and safe water re-use need to be coupled to agriculture and water investment agendas;
- Move from water management to integrated resource management (land degradation, water, infrastructure, institutions, markets, etc.).

COMMITMENTS

- We are now fixing our own water resource management problems, it is time we involve people to resolve them;
- Small-holder agriculture and its rural water agenda have been neglected. The current crises is to be seized to generate double opportunities for promotion of diversified livelihoods;
- Food price volatility especially for poor small-holders need to address the promotion of climate change proofing agricultural water related goods and services;
- Higher/right food prices at the farm-gate to ensure that there is no excuse for poor water management.

INITIATIVES

- Promotion of mainstreaming of water in national and international strategic development planning;
- Encouragement and assistance for establishment of grass-root land and water resource management institutions (financing, land, water, micro-credit);
- Concerted effort by ICID, FAO, IFAD and other organizations to formulate integrated programmes (water-energy-environment, local and cultural setting) as well as generate dialogue with local government and donor communities to mobilize appropriate technologies and make them accessible to small-holders to achieve the ultimate objective of poverty eradication.

FOLLOW - UP

- We will prepare the draft synthesis report, including all presentations, comments made during the sessions, recommendations and initiatives. It will be mailed to all Consortium and Consultation Partners and put on the VMS and ICID web site for comments;
- Several Consortium Partners are working on proposals that will elaborate on the issues as presented and discussed in the Topic report and the sessions on the Topic.