



## **INTERNATIONAL COMMISSION ON IRRIGATION AND DRAINAGE (ICID)**

### **ICID POSITION ON WATER FOR FOOD AND RURAL DEVELOPMENT AT THE THIRD WORLD WATER FORUM, KYOTO, JAPAN, 16-23 MARCH 2003**

ICID is the largest international organization devoted to the promotion of the sciences and arts of land and water management for agriculture and food production. It promotes the development of the application and practices of irrigation, drainage and flood management.

“Irrigation is practiced on some 270 million hectare (M ha) land representing only about 17% of all the lands used for agriculture worldwide. Irrigated agriculture contributes 40% of all the food production in the world and provides livelihood and employment for 2 billion of the rural people mostly in developing countries” – stated Dr Keizrul bin Abdullah, President of ICID.

At the 3<sup>rd</sup> World Water Forum (WWF-3) in Kyoto, ICID made its contribution to assist in averting the world water related problems of the 21<sup>st</sup> Century. ICID, working along with many partners and through a broad-based approach by its National Committee Network spread over about 100 countries, is developing and promoting measures that can translate the Vision announced at the Hague in the year 2000 into concrete action. “Our efforts have culminated into fruition and we are now presenting the long awaited first phase results here in Kyoto” – stated Dr. C.D. Thatte, Secretary General of ICID.

Malnourishment and hunger are stalking sizable population in the world even today in spite of spectacular growth in food production during the last fifty years. More than 800 million people sleep hungry every night. Millions more are unable to meet a good nutritional level due to economic poverty. Two billion more are likely to be added in the next 30 years to have the world population reaching 8.5 billion by 2050. World production of food will have to double during this period to stamp out hunger, malnutrition and raise the standard of living for billions.

Most suitable lands in the world are presently used for agriculture. Where available, arable lands will have to be provided with irrigation and drainage facilities. “To meet with the demands, either we will have to cultivate marginal lands, reclaim waste lands, divert forests for agriculture accompanied by environmental consequences or we will have to opt for agriculture intensification and vertical expansion for food production. Both will call for more abstraction of water from river systems along-with more storages where possible. Irrigation expansion offers a major opportunity to achieve the level of production needed with minimal environmental consequences” – said Dr Keizrul bin Abdullah, President of ICID. “ICID Task Forces that were set up earlier to tackle important issues, have come up with a series of measures to respond to this challenge. Our main pre-occupation is to meet the Millennium Development Goal declared by the United Nations in the areas of fighting hunger, malnutrition, environmental sustainability and reduction of poverty, especially for the rural poor” –continued the ICID President.

“We note with great concern the continued decline in the investments for agricultural development by National Governments, Development Agencies, and International Financial Institutions. We call

upon these institutions to reverse this adverse position, so that we all can move forward towards a better future for all”- the ICID President said.

## **FOOD SUFFICIENCY, SECURITY AND TRADE**

Most food is consumed in the countries where it is produced. Less than 8% of all food produced is traded between countries. Its importance in reaching out to needy people has been significant. However, issues of export subsidies, cross subsidies, world food prices and access to market are favouring the developed countries and exacerbating the efforts of the developing countries to feed their growing population.

To increase national capacity for undertaking food production measures, such as enhancement of crop productivity, better and more efficient water resources development and management and soil and water conservation, research and development are needed and should be encouraged. Improved irrigation and drainage technology can increase crop production from the same unit area of the land and it is possible to increase irrigation efficiency to achieve “more crops and jobs per drop”. President Abdullah said that we have now to go for ‘more crop for less drops’ to realise food sufficiency. But it has been seen that food sufficiency brings about food security, only if it is coupled with adequate governance. The ICID countries have to strive hard for sufficiency and security where possible through trade.

## **SOCIO-ECONOMIC SUSTAINABILITY**

Very often we hear that farmers must pay for water. The macro economic model often called for full cost pricing and cost recovery for water to induce efficiency in water allocation and use. Water is a major input for production. Adding this at additional cost will result in passing these costs to the ultimate users viz. the food consumers of the world. To the majority of farmers in developing countries who live under the conditions of subsistence farming, this will affect negatively their ability to feed themselves and their families. Care must be taken to subsidize the poor and not penalise them and negatively impact their food sufficiency and security. Efficiency measures under these conditions can be induced more effectively through packages of technological and management practices. Under commercial farming condition, there is wider range of options using market forces and mechanisms to induce efficiency. These options will vary from one country to another in accordance with their stage of economic development and activities in international trade.

## **PERFORMANCE MEASUREMENT THROUGH BENCHMARKING**

There is a wide misconception that using water for crops and food production is a wasteful use of scarce resource. Water unused by plants is normally returned to the hydrological cycle as surface water runoff or is infiltrated into groundwater. The portion used by the plant is mostly returned to the atmosphere by the evapo-transpiration process or remains as a part of the biomass. Monitoring and measuring the performance at field system and at a basin level is a key for better management and decision-making.

ICID is cooperating with several partners in developing a scientifically based system for performance measurement that is tailored to meet the needs for planning, data collection, analysis, integration, actions and review of system. These techniques will be available to serve water users, farmers, system managers and decision makers and will provide a useful tool for comparing various systems under different conditions. The site-specific characteristics incorporate all the specific features of the system and provide results useful to assess service delivery, productivity, and environmental and socio-economic impacts.

## **APPROPRIATE DECISION MAKING FOR LARGE DAMS**

During the 20<sup>th</sup> century, some 45000 large dams were built to provide for water storage, regulation of river flows for the purposes of irrigation, flood control, hydropower generation and improved inland navigation. Irrigation and flood control account for 70% of all dams and reservoirs built. To reach the goal of food for all during the 21<sup>st</sup> century, it is expected that more dams will be built to provide the water storage required to irrigate additional lands. The expertise and knowledge on the planning, design construction, operation and maintenance and decommissioning of dams have rapidly advanced over the years. Progress in hydrology, engineering, economics and social and environmental sciences has made the decision making process more open, transparent and complex at the same time.

ICID has contributed over decades to the advancement of these sciences. It has now embarked upon development of appropriate decision making procedures to integrate the present knowledge, and provide them for use by stakeholders - both beneficiaries and affected population, at governmental, NGO and members of the civil society - a greater role and effective contribution. The improved decision making procedures will take into consideration location, size, impact, operation, emergencies, role of riparians etc. It is expected that procedures can be adapted to suit local conditions and applied according to each country's specific norms and standards.

## **COUNTRY POLICY SUPPORT PROGRAMS**

Advancement in the technology has made it easier to build mathematical models side by side with traditional and conventional methods to enable a rational approach for evolution of water policies. ICID, in cooperation with several partners is developing and applying such models to assist national policies for integrated development and management of water resources (IWRDM) for meeting with at least the basic human minimum needs like drinking water, food and energy while taking care of all the three sectors viz. water for food, people and nature. The process is capable of constructing various scenarios of development, identifying all options and ramifications of each on water use and availability, food production under varying conditions of population growth, land availability and water resources. Basically, the programme is expected to demonstrate that the IWRDM approach can alone help achieve sustainable development.

## **BACKGROUND**

ICID is the International Commission on Irrigation and Drainage established in 1950, having a membership network spread over 100 countries, of which 69 national committees are presently contributing actively together, along-with 22 Permanent Observers, including UN bodies and International Organizations. ICID is a constituent member of the World Water Council and actively participates in all water related activities, including hosting the Secretariat of the International Water-related Associations' Liaison Committee, which represents 12 major water related scientific and technical professional associations worldwide.

ICID Central Office Address:

**ICID**  
48 Nyaya Marg, Chanakyapuri  
New Delhi-110 021, INDIA  
Web: [www.icid.org](http://www.icid.org); E-mail: [icid@icid.org](mailto:icid@icid.org)