



US Army
Corps of Engineers



USACE International Center for Integrated Water Resources Management

U.S. Army Corps of Engineers (USACE) objectives for international water resources encompass the full spectrum of Corps Campaign Plan goals as applied thru both direct USACE support to Army & COCOM's, and thru partnerships with other Federal agencies and a wide range of international partners, including the Department of State, United States Agency for International Development (USAID), and the United Nations (UN), to reduce the destabilizing forces associated with poverty linked to a lack of public works infrastructure and/or limited access to clean water and sanitation, including:

- Stability, Reconstruction and Humanitarian support to developing, emerging and post-disaster/conflict nations and regions
- Informing and Improving USACE provision of water resources solutions, both domestic and abroad

In February 2008, The "International Center for Integrated Water Resources Management" (ICIWaRM) was nominated by the Office of the Assistant Secretary of the Army (Civil Works), the U.S. Government (USG) and the U.S. Mission to UNESCO as a global water center (known as a Category II Center) within the UNESCO International Hydrological Programme (IHP) water network. ICIWaRM resides within the U.S. Army Corps of Engineers' Institute for Water Resources (IWR) in collaboration with several U.S. academic institutions and professional organizations sharing an interest in the advancement of the science and practice of integrated water resources management (IWRM) around the globe. The nomination of USACE IWR's center was endorsed by the UNESCO IHP Bureau in March 2008, and was just endorsed by the IHP 36-member nation Intergovernmental Council earlier this month (June 2008) at its bi-annual meeting at the UNESCO Headquarters in Paris, France.

The overall mission of ICIWaRM is the "*advancement of the practice of integrated water resources management (IWRM) to address water security and other water-related challenges by regional and global action, through new knowledge, innovative technologies, collaborative interdisciplinary planning and research, networking, training and capacity development, within the framework of UNESCO's International Hydrological Programme (IHP)*".

The core of IWRM is to improve water management – i.e. the effective delivery of water-related services in an economically efficient, socially equitable and environmentally sustainable manner. To do so, ICIWaRM emphasizes the integration of improved planning and engineering models and water data, with practical methods for comprehensive watershed planning and socio-economic evaluation aimed at the advancement, application and infusion of best management practices around the globe.

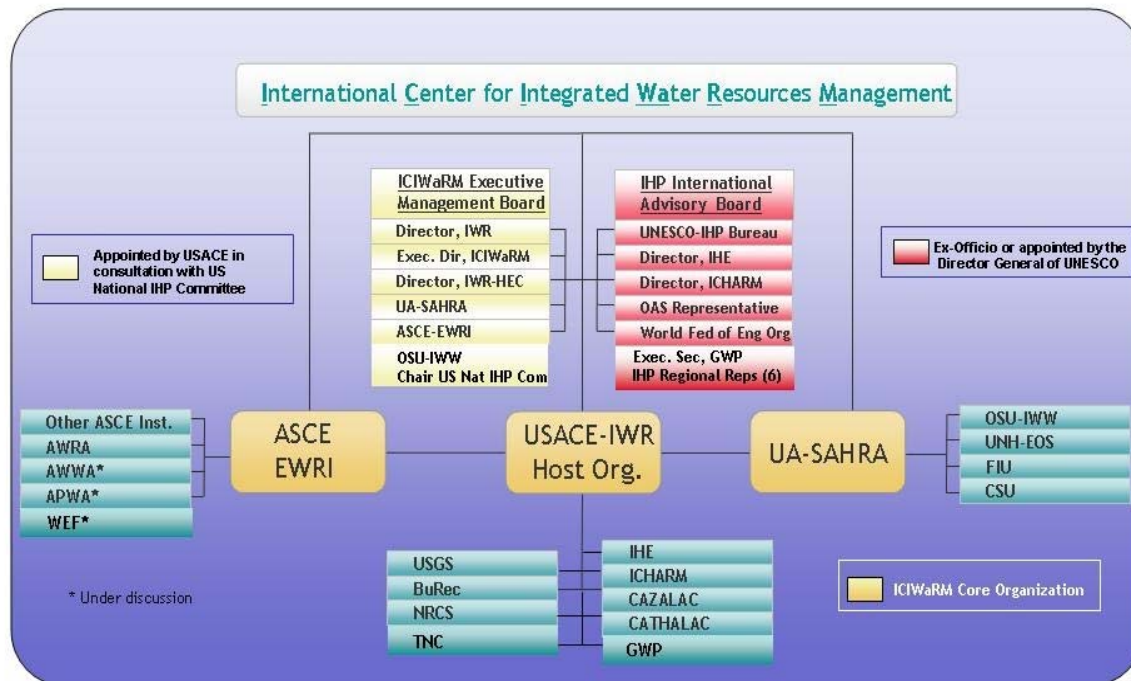
As a center working in partnership with UNESCO, ICIWaRM will serve as a USACE and USG knowledge center for transferring new ideas, science and technology developed both in the U.S. and through the various IHP programs and initiatives, integrating them with current "*best management practices*" for IWRM in order to achieve the objectives associated with the seventh phase of the IHP program (2008-2013) and the UN Millennium Development Goals (MDG), particularly to ensure environmental sustainability, and to advance the UN Commission on Sustainable Development's (CSD) goals for integrating the social, economic and environmental dimensions of sustainable development in policy-making.

ICIWaRM will serve as an entry portal to full capability of USACE, including the technical expertise resident within Corps districts, divisions, centers and laboratories. ICIWaRM's structure also

capitalizes on the diverse capabilities and broad technical resources of several other U.S. institutions currently engaged in the development and application of IWRM methods, and their transfer to developing nations and nations in transition around the globe, with an initial emphasis on Africa, Latin America and the Caribbean.

ICIWaRM's water node is led by an academic consortium headed by the University of Arizona, and also includes initial partnerships with Universities of New Hampshire, Oregon State, Florida International, and Colorado State, The professional practice sector is led by the American Society of Civil Engineers' Environmental and Water Resources Institute (ASCE-EWRI) with the American Water Resources Association.

ICIWaRM technical activities will leverage other USACE IWR collaborative partners, including other U.S. Federal agencies, such as the Geological Survey (USGS), the Bureau of Reclamation (BuRec) and the Natural Resources Conservation Service (NRCS), other domestic organizations such as The Nature Conservancy, and international partners such as The Global Water Partnership.



ICIWaRM Organization Structure

By its nature, it is recognized that a UNESCO Center serves two principal functions – it (1) assembles and transfers the knowledge and expertise of the host nation (USG), host organization (USACE) and Corps partners to the developing world, and (2) gathers, coordinates and absorbs equivalent knowledge and information from the rest of the world, thereby serving as a more effective technology transfer agent.

ICIWaRM is already engaged in active collaborations with existing Centers within the UNESCO water family, as well as other international institutions devoted to promoting sound IWRM. The nature of

IWRM is such that it must attempt to integrate various practical aspects of water management while striving to simultaneously inject advances in the state of the art into “best water management practices”.

The program of the Center is to address both the practical science and sound water management implementation goals inherent in pursuing the aims of other relevant USG international water-related initiatives. The work program supporting the goals and objectives is listed below and consists of joint projects and study efforts on key issues supporting the USG and USACE campaign plan, with an initial emphasis on Central and South America, the Caribbean, and Africa.

Goal A: Contribute to the development of **IWRM principles and best management practices**, focusing on governance (institutional frameworks), engineering and planning and evaluation issues.

- Synthesize innovative principles, procedures and practices of USACE and U.S. water management agencies, the private sector, and engineering societies that contribute to IWRM
- Participate with OAS countries, African nations, and international aid agencies (World Bank, UNESCO, USAID, UNDP, etc.) to share and advocate best IWRM management practices through workshops, conferences and websites
- Integrate professional engineering societies into Center activities to help in development, training and dissemination of “best management practices”

Goal B: Foster **technological development and technology transfer** of models and methods that enhance IWRM and effectively disseminate “toolkits”.

- Promote applied research, testing and dissemination of innovative models and methods for hydrology and ecological analysis and water resources management
- Collate and synthesize best available practices and procedures, both from the public sector as well as the private and professional engineering societies, and convert into standards, manuals for practitioners and best management practices
- Share information with other institutions established by UNESCO, World Bank, etc.

Goal C: Undertake training, education and **capacity-building effort**, focusing on training for implementing IWRM at both watershed and national levels, particularly in Latin America and Africa.

- Collaborate with and extend capabilities and reach of UNESCO education and capacity building at all levels (short courses; mid-career long-term training; executive seminars)
- Build on distance learning through a network of universities, USACE training courses, non-governmental organizations (NGOs) and other U.S. partners, and incorporate facilities and capabilities of federal agency training centers (USACE, IWR, ERDC, BuRec, USGS, FEMA, etc)
- Leverage training and facilitate transfer of practical experience of professional engineering societies and private engineering sector