

**MEMORANDUM OF UNDERSTANDING
BETWEEN**

**THE INSTITUTE FOR WATER RESOURCES (IWR)
U.S. ARMY CORPS OF ENGINEERS
AND
THE WATER SYSTEMS ANALYSIS GROUP (WSAG) OF THE
INSTITUTE FOR THE STUDY OF EARTH, OCEANS, AND SPACE (EOS)
UNIVERSITY OF NEW HAMPSHIRE**

The Institute for Water Resources (IWR), United States Army Corps of Engineers (USACE), and the Water Systems Analysis Group (WSAG) of the Institute for the Study of Earth, Oceans, and Space (EOS), University of New Hampshire, hereinafter jointly referred to as "the Parties":

Having a common interest in integrated water resources management (IWRM); sustainable development; global water science and assessment; national and international partnerships; and capacity building through technology, information sharing and training;

Having independent missions with technical activities of mutual interest, and with each institution having established programs that promote research, technology development, and capacity-building, and enhance the use of effective water resources development and management policies throughout the world;

Recognizing EOS's commitment to understanding the Earth as an integrative system through the advancement of global water science, sustainable development, integrated water resources management, and related scientific research, education, training and awareness-raising at all levels, and particularly for the development and use of computer models and geospatial data sets in synthesis studies of the interactions among the water cycle, climate, biogeochemistry and anthropogenic activities, in conjunction with the networking of scientists and the sharing of water-related information and knowledge through local, regional and continental to global scale modeling;

Acknowledging IWR's mission as a national expertise center for IWRM, collaborative planning, environmental and socio-economic impact assessment, risk analysis, water resources systems management, climate change, and hydrologic engineering; including a focus on policy development, applied research, training, and capacity development, and improving the practice of water resources planning and management in collaboration with other practitioners and scientific/academic institutions, and professional organizations;

Desiring to promote and enhance social well-being, environmental quality, sustainable development, public health and community welfare by fostering interdisciplinary scientific research, development and the improvement of IWRM practices, and to promote, encourage and advance the understanding of global water science through research and cooperation in these fields; including as contributions to the United Nations' *World Water Assessment Programme (WWAP)*, and other regional, national and global assessments and related scientific endeavors of mutual interest; and

Recognizing the parties' mutual interest in working together to contribute to such partnerships with national and international organizations, including, but not limited to, activities of the International Hydrological Programme (IHP) of the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the *Seventh Phase of the IHP Programme* (IHP-VII); and further, recognizing the benefit to each party's water resources management, scientific and capacity-development missions through mutual cooperation, collaborative activities, and working together towards the establishment of a joint international water center with EOS/WSAG serving as the node for global water science, consistent with the policies, goals and laws governing each party;

Do hereby simultaneously declare the following framework for partnership:

Article I

The University of New Hampshire EOS/WSAG and USACE-IWR will use their best efforts to establish a long-term cooperation and partnership in the advancement of **global water science, integrated water resources management, and related interdisciplinary scientific research, and capacity-building on local, regional and global scales, and particularly for the benefit of developing/emerging countries, and post-disaster nations/ regions.**

The Parties are especially interested in pursuing cooperative opportunities in the following areas of common interest:

1. Integrated water resources management and sustainable development;
2. Infrastructure development, adaptive management and adaptation to global warming;
3. Hydrologic, socio-economic and risk analysis of extreme events;
4. Geospatial analysis and advanced application of GIS systems and integrative systems modeling;
5. Linking high technology and remote sensing information with hydrologic, socio-economic and ecological information for analysis of current and future water challenges;
6. Comprehensive monitoring and early warning systems for emerging water problems;
7. Application of state-of-the-art technology from the Earth Systems science community for improved world-wide water resources assessment;
8. Development of actionable IWRM indicators to inform regional, national, continental and global water assessments;
9. Identification of water information gaps and development of strategies to address data needs;
10. Science implications to policy, governance, and institutional aspects of water management;
11. Promoting capacity development and advancing education/training methods and systems;
12. Water security, including within the context of IHP-VII and the Millennium Development Goals (MDG'S);
13. Effects of climate change on water resources at global, continental and regional scales.
14. Providing scientific peer-review services and student/scientific exchanges, when requested and appropriate

Article II

Each party shall designate a Principal Representative to serve as the primary point of contact between the parties on all matters arising under this Partnership Document, with the EOS/WSAG Principal Representative being the WSAG Director and also concurrently serving as the Chief Scientist for the proposed global water science center node.

Article III

Any cooperative activity undertaken between the parties shall only be done under the authority of the laws, regulations, and policies governing each party individually.

Article IV

Notwithstanding any other provision herein, nothing in this Partnership Document shall be construed as binding under International Law. Further, nothing in this document shall be construed as either authorizing or obligating either party to commit funds or resources to any projector work except as otherwise authorized by the laws, regulations, and policies governing each party individually.

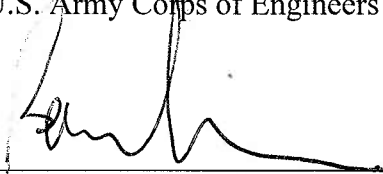
Article V

This Partnership Document shall become effective when signed by both USACE-IWR and University of New Hampshire, EOS.



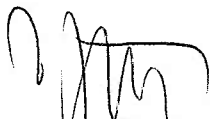
ROBERT A. PIETROWSKY
Director, Institute for Water Resources
U.S. Army Corps of Engineers

12 Sept 2007
DATE



BERRIEN MOORE III
Professor and Director,
Institute for the Study of Earth, Oceans, and Space
University of New Hampshire

9/14/07
DATE



CHARLES J. VOROSMARTY
Professor and Director,
Water Systems Analysis Group
Institute for the Study of Earth, Oceans, and Space
University of New Hampshire

9/12/07
DATE