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Water Science and Technology Board
Division on Earth and Life Sciences
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Committee on Strategic Research for Integrated Water Resources Management

An ad hoc committee of the National Research Council (NRC) will provide independent advice on strategic research to support integrated water resources management to the Water Institute of the Gulf—a nonprofit, independent research organization located in Baton Rouge, Louisiana. The Institute’s focus is on the lower Mississippi River and its delta and coastal region, but it also will draw upon ideas, technologies, and solutions from around the world in addressing local problems, and to export knowledge to address water management issues in deltaic and coastal systems globally. The Institute plans to conduct integrated research that explores linkages among natural science, engineering, and the dynamics of social and economic systems that underpin water management decisions. The Institute considers Integrated Water Resources Management (IWRM) to reflect these multidisciplinary factors. In advising the Institute, the NRC committee will consider several issues that fall into three topical areas: 1) common problems and challenges, 2) strategic research, and 3) transferring and applying knowledge.

Common Problems and Challenges

- Discuss other prominent large deltaic and coastal systems focusing on why and how they may be analogous to and relevant to scientific issues and management decisions in the lower Mississippi River and delta system.
- Identify key challenges for IWRM in large deltaic systems in general, and types of research that can contribute to meeting these challenges.
- Discuss prominent lessons and promising IWRM practices from large river delta systems, including the lower Mississippi River that can be applied broadly.

Strategic Research for IWRM

- Identify unmet research needs in the lower Mississippi River and its delta complex, and in large river/delta/coastal areas outside North America, for which opportunities exist for research to gain understanding necessary to further IWRM.
- Discuss promising approaches, including organizational structures and related processes, for identifying and integrating relevant multidisciplinary knowledge and skills into management decisions for large deltaic regions.

Transferring and Applying Knowledge

- How can the Institute utilize knowledge gained from the lower Mississippi River and delta system in developing a research program to support water management decisions in other large river/delta complexes?

The study is sponsored by the Water Institute of the Gulf. James Wescoat of the Massachusetts Institute of Technology will chair the committee. The study director is Laura Ehlers (lehlars@nas.edu), WSTB senior staff officer. An expert committee of eight members will meet twice over a six-month period and produce a report in summer 2013; the members of this multidisciplinary committee are:

James L. Wescoat, Massachusetts Institute of Technology
Ximing Cai, University of Illinois, Urbana-Champaign
G. Mathias Kondolf, University of California, Berkeley
Ben R. Hodges, University of Texas, Austin
Samantha B. Joye, University of Georgia, Athens
William M. Lewis, University of Colorado, Boulder
Leonard A. Shabman, Resources for the Future, Washington, DC
Eelco van Beek, University of Twente, Netherlands