

A synthesis of Five Global Thought Leaders on Integrated River Basin Management and Potential Application to the Mississippi River Basin.

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In the summer of 2012, each of the authors of the papers in this packet were approached and asked to prepare a paper recommending an approach for developing the institutional arrangements and shared leadership needed to advance integrated river basin management (IRBM) in America's Great Watershed, the Mississippi River Basin.

The September 26-27, 2012 Summit in St. Louis, Missouri and these papers are an opportunity to bring together some of the best thinking and experience regarding integrated river basin management for application in the Mississippi River Basin. The goal for these papers is to advance the conversation in St. Louis -- and beyond -- and help to develop the shared vision and collaboration at the scales needed to develop and implement solutions that support and balance the many competing demands placed on this system.

When you read the papers, you will see that the authors emphasize different approaches and themes and support their papers with examples from their varied and deep experiences in the United States and internationally. The directions provided to the authors were purposely left open-ended to better allow them to determine how best to share their insights, experiences and recommendations to the task at hand. The papers received were not only interesting reading, they were also very different and reflected the different roles and approaches of each of the authors. Despite this, you will see many similarities in the issues identified and observations shared. You will also spot differences in style, substance and recommendations.

Below, is a brief introduction to the authors and a summary of what issues they were asked to include in their paper.

- Dr. Alfred Duda, Global Environment Facility (retired), was asked to prepare a paper based on his global experiences with GEF and include discussion of how to structure the integrated river basin management process for the Mississippi River Basin.
- Professor Gerry Galloway, University of Maryland, was asked to prepare a paper building on his experience on the Mississippi River Commission and Upper Mississippi Presidential initiative, bringing ideas to help inform AGWI process to address basin-level issues.
- Dr. Bruce Hooper was asked to discuss best practices and capacity building as part of the process needed to develop institutional arrangements and performance indicators for IRBM in the Mississippi River basin.
- Mark Davis, Director of Tulane Institute on Water Resources Law and Policy at the Tulane University Law School, was asked to approach the discussion from the perspective of developing a compact among the states and federal government to establish an integrated river basin management system.
- Professor John Briscoe, Director of the Harvard Water Program, was asked to share lessons observed from his domestic and international experiences at the Harvard Water Security Initiative, the World Bank and other positions.

As the charges provided to the different authors are different, so too are their works. I have attempted to summarize below some of the main points developed in the authors' works, trying to note some common themes as well as unique points developed by the author.

All of the authors make the case that the Mississippi basin is a world-class resource with amazing political, economic, and environmental complexity. It is also a resource facing growing challenges. The current management systems are not comprehensive or integrated and represent ad-hoc responses to past challenges, resulting in missed opportunities today and in the future for the river basin. The authors' advance the case that although it will be tremendously difficult, moving towards integrated watershed based management has been accomplished in different places and at different scales both within the United States and internationally, and that successful implementation in the Mississippi Basin would lead to many benefits for the river and the stakeholders. Despite presentation of some common themes and observations, it is worth emphasizing that - as expected - the authors present different directions and points of emphasis moving forward.

The word 'vision' appears often throughout the papers, normally in the context that the stakeholders in the Mississippi basin need to develop a shared comprehensive vision for the basin looking forward. Some authors have suggestions for steps to begin this process. Others recognize that this is a critical step towards integrated watershed management in the Mississippi basin.

The authors include different resources into the discussion and their definition of the challenge – some including groundwater along with surface water while others link the Mississippi Basin work with the efforts in the Gulf of Mexico. Some authors provide tremendous case studies illustrating precedents, highlighting opportunities and lessons that can be learned for the Mississippi. Some of the other authors provide strong recipes with indicators that could be used to frame actions based on case studies, studies of international best practices, and professional histories.

Finally, the authors recognize and acknowledge that this is a long-term project, with progress likely measured in decades. That being said, because of growing challenges and changing economic, environmental and political circumstances, the authors agree that now is the time to take steps to begin the project.

I have used an informal notation system in my summary, citing quotes and key concepts with page number in parenthesis, referring readers to the original papers for more complete and informed discussion and review.

Approaches for Introducing IWRM in the Mississippi River Basin and Downstream Gulf of Mexico Based on Processes Utilized in other Basins

Alfred M. Duda, Ph.D.

Dr. Duda's call to adopt Integrated Water Resources Management (IWRM) throughout the entire basin is built on the fiscal, human and ecosystem costs of inaction and status quo. He notes that "federal agencies can no longer afford outlays of \$8 billion in payment for agricultural food loss in just one flood event or billions more for levee strengthening and urban flood damage in the floodplains" (page 3). Effective IWRM will help to protect and enhance the "economic and social well being of America's heartland and the south" from drought, floods, storms and pollution, and will lead to improved watershed management and balancing of competing and conflicting uses (page 1).

Dr. Duda's summary begins by making explicit the linkage of the Mississippi River Basin and the Gulf of Mexico, emphasizing that their size and complexity have "defied proper management" but stating that effective integrated water resources management must include both systems. After noting that there are some solid regional efforts making progress towards IWRM and Integrated Coastal Management (ICM), Duda points out that these initiatives are not adequately integrated, coordinated nor funded, and lack adequate political support. This leads to missed opportunities (page 2).

After sharing case studies in both the Mississippi Basin and elsewhere where large water basins have applied concepts and practices of IWRM, he proposes a two-track approach to apply IWRM for the entire Mississippi River Basin by starting with immediate actions, followed by constituency building among stakeholders aimed at support for longer-term state and federal legislative actions.

His paper provides four significant case histories including the Boundary Waters Treaty of 1909 focusing on the Great Lakes and St. Lawrence Seaway (which created the International Joint Commission – IJC), and the Tennessee Valley Authority, both of which include states within the Mississippi watershed. He also discusses the efforts to manage the Chesapeake Bay watershed and the Danube River basin in central Europe. The studies within the Mississippi basin are especially significant to Duda because, along with other authors to follow, he suggests that a future system building on processes and institutions that are familiar to some basin states will be more politically acceptable as part of a larger initiative for the entire basin (page 3). His case studies note that seven Mississippi River basin states participate in the IJC/Boundary Waters process for the Great Lakes with North Dakota and Montana also participating in additional IJC processes. An additional seven states have participated with the TVA for almost 80 years. Because these "suggested approaches have been utilized in 14 of the Mississippi basin states for other drainages, ... there should not be barriers to use" (page 10).

There were several important points and themes developed throughout Duda's presentation of the four case studies where successful components of ICRM have been developed. Some of the key points raised include the need to develop visioning processes across the watershed, participatory action jointly taken by many actors, integrating land, agricultural and water resource management, undertaking activities at multiple scales and across sectors, parties making binding commitments to act, long term commitment to action (measured in decades), and systems adaptable to changing circumstances.

Duda's first track toward IRBM throughout the Mississippi River Basin involves coordinating the existing smaller scale initiatives currently being applied in the basin to develop a "coherent platform for basin-wide work and constituency building with businesses and NGOs" (page 10). Duda calls for first harnessing stakeholders and their interest groups to establish basin wide arrangements for coordination and coherence with processes previously presented [in case studies] to introduce more comprehensive, adaptive approaches that included IWRM and ICM (page 10). He suggests "all scales of institutions from trans-boundary with Canada and Mexico to basin-wide, sub-basin, federal, state, local and watershed must be engaged to introduce these approaches" (page 10).

After these initial arrangements and funding are in place, Duda's second track requires steps to develop legislative authorities at the state and federal levels (page 10). He notes that active participation from the business and NGOs in the basin will be needed to pursue the second track of passing federal and state legislation and appropriations for a new management system. Because of the complexity of the task and the watershed, Duda notes that many pieces of federal legislation will be involved including "Farm Bill, Clean Water Act reauthorization, Water Resources Development legislation, Safe Drinking Water Act, and others" (page 11).

An Essay on 21st Century Management of the Mighty Mississippi
Gerald E. Galloway, PE, Ph.D., University of Maryland

Professor Galloway begins his paper with a 2009 quote from the former Chairman of the US House of Representatives Transportation and Infrastructure Committee, former Congressman Jim Oberstar: “[US Water] policy is ad hoc, implementation is decentralized, coordination is fragmented, and communication is non-existent or fails to connect. We need a national water policy and unifying vision and guiding principles. “

After a brief discussion of the historic development of the Mississippi River basin, Galloway notes that the development of the water resources has been on an “ad hoc basis with little thought given to the integration of the various uses of the river to ensure that all sectors could continue to grow over time and that no sectors were disadvantaged by actions of others” (page 2). This has led to a management structure best understood as a “patchwork of policies and objectives, organizations that have been cobbled together to meet every challenge and then some, a lack of adequate resources.” This system, he concludes is “unprepared to deal with the uncertainties that lie ahead” (page 3).

Galloway clearly states that there is “no national water vision or policy, no national agreement on roles and responsibilities for water management and no national direction for how water issues will be addressed in the decades ahead. There is similarly no comprehensive approach to the Mississippi River Basin. As a result, tensions grow and opportunities disappear” (page 3). Galloway also introduces the legal and administrative challenges facing water management in a system with 31 different state governments, a multitude of federal agencies and laws governing water resources in the basin.

Despite this fragmented management, there are some examples of success in the Mississippi basin developing an integrated management approach. Galloway describes some of the successes seen in experience of the Tennessee Valley Authority (TVA), the Mississippi River Commission (MRC) and the Miami Conservancy District (Ohio) (MCD). Federal or state governments have given these organizations clearly defined water resource missions and resources to carry out their missions.

Galloway also discusses the activities and successes of the basin commissions created under the Water Resources Planning Act of 1965 in places where state support existed. Several commissions were created in the Mississippi basin for the Ohio, Missouri and Upper Mississippi rivers until all were eliminated by Reagan administration in 1981. Although some aspects of these basin commissions have continued after federal dissolution, the voluntary participation and the advisory nature of federal participation has limited their effectiveness. Galloway also notes that many smaller local watersheds throughout the basin have seen activities that integrate local, state and regional government and non-governmental organizations with some support from federal agencies.

In his section titled “What is needed for effective water resources Management?” (page 5), Galloway cites the American Water Resources Association dialogues and the American Society of Civil Engineers reports on water management and infrastructure which document the failure of the current systems and the need for effective change. To respond, Galloway lists four ingredients needed for effective water management starting with the need for direction – vision, goals and objectives. The direction must then be integrated to connect water management with other sectors. The system requires leadership by a group who has the responsibility and the authority to act and finally, it must have resources to support the water management needs. He then discusses these four criteria in more detail (pages 6-8).

Looking forward, Galloway notes that “[s]ome sort of governance needs to be put in place to guide the movement of the basin into the 21st century” (page 8). Ideally, he would like to see the structure cover the entire basin but he doesn’t believe creating an organization that covers the entire basin is “politically or

fiscally feasible at this point in the nation’s history” (page 8). Developing management structures for the major sub-basins in might be a “more reasonable option” (page 8). He then describes the background and some of the activities of several proposed or active sub-basin organizations within the Mississippi Basin.

Galloway concludes, “there is no single solution for the governance of the water resources of the Mississippi River Basin” (page 11). He suggests that it “makes sense” to use and develop multiple solutions reflecting the different needs in the sub-basins as long as the principles of direction, integration, leadership and resources are coordinated. Efforts should start in the Upper Mississippi and Missouri basins because they lack clearly defined visions, goals and strategic objectives and also don’t have an organization in place to implement plans. Galloway notes that the existing Mississippi River Commission remains the centerpiece for flood control, navigation and related environmental restoration in the Lower Mississippi Valley. To integrate with the upper Mississippi and Missouri basins, he suggests expanding the existing Mississippi River Commission. This would require an expanded charter to include ecosystem stewardship as called for in the report after the 1993 floods, and creation of an independent funding mechanism similar to what is used currently for the MR&T program.

Multi-State Compacts and Regional Water Management

Mark Davis, Tulane Institute on Water Resources Law and Policy, Tulane University Law School

Author Mark Davis from Tulane University begins his paper with a focus on the legal complexity of water in general and in the Mississippi River watershed. Water can be a state resource or a federal resource, it’s surface water or ground water, and it’s water in its banks, or storm or flood waters – all these definitions affect how water is treated legally. In addition, he notes that state ownership of water changes hand at each border, “like a baton in a relay race” (page 1) being passed to a new runner. With 31 states, many federal laws and programs, and tribal legal rights in the waters of the Mississippi River basin, this legal status of water poses a significant challenge to integrated and coordinated management.

Because the many different states and federal government often do not share common purposes for the river water, shared management goals are not likely. “The result,” Davis writes, “is a patchwork quilt of private and public legal rights and duties that almost guarantee conflict between and among states and the federal government” (page 1). This is emphasized because the states cannot impose their will on other states and because “the US constitution limits the ability of states to decide between themselves how interstate resources should be divvied up and managed” (page 2).

To avoid unending legal conflict or the threat of a federal or judicially imposed solution to the Mississippi River’s management, Davis suggests that a compact – a legal agreement among the states and federal government - might be the best alternative (page 2).

His paper provides background on the legal basis for compacts in the US Constitution (Article I, Section 10, Clause 3), allowing states to enter into agreements with the other states with the consent of Congress. He notes, however, “Congressional approval has only been required when the multistate agreement would increase the political power of the states or interfere with the federal government’s supreme powers, such as those dealing with the regulation of interstate commerce” (page 2). No other organizations, groups or even federally recognized Native American tribes can be party to a compact. Because a compact for the Mississippi would affect interstate commerce, congressional approval would be required.

Davis presents the four main goals of existing multistate compacts affecting waterways:

1. Facilitate consultation and discussion among states;
2. Provide management of water resources for quality and quantity;
3. Apportion the ownership of water resources; and
4. Combination of above (page 3).

States normally seek a compact for water resources where there is some “strategic interest or intractable conflict” (page 4). Even with these conditions, Davis notes that a potential compact needs to offer states at least one of five listed potential benefits (pages 4-5):

1. “ To be able to do something that would otherwise conflict with federal law. An example of this is the power of a state to keep water for itself in ways that would otherwise violate the Commerce Clause.
2. To gain advantages from acting under federal law. An example of this would be using the terms of the compact to trump or reconcile contrary provisions of state law by virtue of the Supremacy Clause of the U.S. Constitution.
3. To incentivize the federal government to provide some benefit. The Colorado River Compact is an excellent example of this. The federal government’s willingness to construct Hoover Dam was conditioned on the seven Colorado River state’s agreeing on how the Colorado would be apportioned among the upper and lower basin states.
4. To provide a framework for regional water planning and for resolving interstate disputes (and avoiding remedies such as judicial apportionment).
5. To avoid the uncertainty of leaving the framing and resolution of interstate conflicts to Congress or the Supreme Court.”

Davis notes that multistate compacts are “not hard to understand” in the abstract but “making them work in practice is another matter” (page 6). Four case studies are presented in the paper including the Colorado River Compact of 1922, the Great Lakes-St. Lawrence River Basin Water Resources Compact of 2008, the Red River Compact, and the Apalachicola/Chattahoochee/Flint Compact. These compacts represent successes and failures, newly adopted and historic examples.

Developing a multistate compact for the Mississippi River Basin will be a formidable task because of the number of participants, the scale and impact of the waterway reports Davis. Even with that, however, he suggests that the growing importance and competition for the water resource could be the basis for a compact covering “all or parts” of the Mississippi (page 10). There are currently 14 compacts in the system although none affect the main stem of the river (page 10).

To develop a successful multistate compact for the Mississippi Basin, Davis offers several points as he wraps up his paper. Among these, he encourages recognition of the value of water in the basin beyond human uses. It’s important for commerce but it also affects ecology, culture and communities in ways that are not fully understood. Recognizing and incorporating the importance of hydrology and the water cycle while developing any compact affecting the basin is a second point he raises. Despite different legal status, a compact will be less likely to succeed without this connection. Third, have a full understanding of current water users and uses in the basin – even if these uses are not clearly established legally. Fourth, remember that water rights and duties are both public and private. Fifth, anticipate new water uses and users by maintaining some adaptability to accommodate new demands, new information and changing priorities. Finally, develop a water budget - how much water is available and how much is needed by different uses -- and identify clear public interest priorities as a key to sustainability (page 13).

Davis concludes noting that the demands in the Mississippi River basin will likely lead to consideration of a compact. That compact, however, will take willing states and constituent groups, time and several intermediate steps before the timing is appropriate for a comprehensive approach. He also warns that this comprehensive compact will be “orders of magnitude more challenging than any ever attempted in the United States and will demand a commensurate level of vision and commitment from the basin states, Congress, and key constituencies” (page 13-14).

Advancing integrated river basin management in the Mississippi basin – suggestions from international experiences on institutional arrangements, organisational roles and responsibilities and shared leadership.

Bruce P. Hooper, Ph.D., Independent water advisor, Brisbane, QLD. AUSTRALIA

Bruce Hooper’s paper builds on his work as a Fellow with the US Army Corps of Engineers and is quite different from the others in the series, focusing more on broader traits and benchmarks of successful integrated watershed basin management organizations and less on specific case studies or experiences in the Mississippi Basin. He includes discussion about the types of institutional arrangements, organizations and shared leadership needed to advance IRBM in the Mississippi.

Hooper outlines some pre-existing conditions in the Mississippi Basin that favor the IRBM approach. Among these conditions, Hooper includes water resource problems affecting different sectors which require voluntary participation and cooperation and consensus to address; serious water-based problems in the basin that cannot be solved by a single agency; the lack of a single agency or group with all the answers; no user group has all the rights to the water; and upstream vs. downstream benefits and impacts occur amongst water stakeholders.

Hooper advances that IWBM should not only include surface water management but also address the key role played by groundwater in water cycle management. Hooper acknowledges that this addition will require additional consideration and efforts. The nine main river valleys located in the basin are identified and this subdivision is later used to create an organizational framework for river basin management in the entire Mississippi River Basin.

A foundation in Hooper’s paper is built on a best practice approach, sharing insights he has gathered from river basin organizations, government agencies, NGOs, water management experts and academics. According to Hooper, these practices have been seen to be “what works best” in applying IWBM. Table 2 in his paper (pages 2-4) is a comprehensive listing of best practices as applied to a proposed Mississippi river basin organization. In his summary, he notes that these practices are “grouped into 11 categories representing institutional, human resources, organisational, financing, technical and other attributes. They include governance, empowerment and implementation issues as well as critical people-oriented skills and organisational-oriented procedures.” To make the chart of practices more meaningful, Hooper also includes indicators for each practice.

Hooper’s paper also discusses broad functional characteristics of river basin organizations in general and presents a summary of nine identified types of river basin organizations, ranging from advisory committees to federations. He recommends that an appropriate model for the Mississippi Basin should be a ‘commission’ as a strong legal entity combined with advisory/education roles, monitoring roles, undertaking works on the ground and fulfilling goals of a joint governments’ charter” (page 5). He cites the Delaware Basin Commission as a domestic example of a commission. Hooper acknowledges “the

choice of which organization type is appropriate to the Mississippi basin will be contentious due to the different expectations of stakeholders” (page 5).

His proposal would have a Mississippi River Basin organization be served by the nine river valley organizations. Similar to other authors, Hooper notes that the river basin organizations “tend to be more effective and easier to create if they emerge from existing organizations.” He then suggests, “reforming the existing Mississippi River Commission into an IRBM-focused organization” (Page 5). This new organization, similar to the formation of the Australian Murray-Darling Basin Commission, would require new legislation specifying how the coordination will take place, what oversight mechanisms will be established, and the roles and responsibilities and interactions with and among the member states and non-governmental organizations. Hooper emphasizes that “this will require *high level ministerial coordination* to ensure that all relevant ministries work toward a common vision ...” (page 6, emphasis in original). Although not expanded upon, Hooper calls for creation with presidential endorsement, which in turn further builds recognition, national, and basin awareness and financial support (page 6).

Before a basin commission can be established, Hooper presents two preceding steps. The first is the creation of a shared vision for the Mississippi articulating the shared benefits of water use and management in the basin. Recognizing that this document could be mired down in legal and political disputes, one option he includes is to delegate the negotiation of high-level goals in the “hands of leaders with consummate negotiation skills” (page 6). The second step prior to creation of a commission is the creation of a “State of the Basin Report” by the federal government including:

- “Clear summary statements on the condition of natural resources
- Clear summary statements on who are the key stakeholders, their roles and responsibilities
- Any agreement of priority issues and location of critical basin ‘hotspots’
- A suggested roadmap on ‘where to from here’” (page 6).

Hooper is clear that it will be difficult for a river basin organization to achieve success in a short to medium term - five – 10 years - and that a stepped approach is more appropriate to measure success. He lays out key functions of the proposed Mississippi Basin Commission in Table 4 (page 7), into a time stepped chart, anticipated to be five – 20 years in duration. One best practice he highlights in his conclusion is to aim for some visible early outcomes, possibly including inclusion of all stakeholders to create ownership, and seek top-down political support and recognition.

He concludes his paper noting that this ambitious approach is both “doable” and “formidable” (page 8). He offers optimism based on experience seen in other watersheds in other places including Australia and Western Europe and wraps up his paper with the exhortation “to get out, try it and learn by the doing.”

“Fluid prejudice: Some (disputable and somewhat disjointed) observations on what global experience and changing national well-being might mean for the management of the Mississippi River”

John Briscoe, Gordon McKay Professor of the Practice of Environmental Engineering, Harvard University

Professor John Briscoe’s contribution (which he proclaims is “not a paper!”) is an interesting conclusion to the materials. Instead of a specific proposal or path forward to create integrated watershed basin

management, Briscoe provides the reader with a series of observations, informed by decades of being a practitioner and academic, that can be applied to watershed management moving forward.

Briscoe begins with a summary of his initial training in Africa and later his work for the World Bank, followed by a series of 10 observations linked back to his experience with watershed management. Briscoe leads off with cautionary advice received from a former boss to "avoid platitudes at all costs" and notes that the terms being discussed in this broader discussion such as "integrated water resources management", "sustainability" and "involvement of stakeholders" can "become vacuous statements subject to little critical review" (page 3). The emphasis seen throughout his contribution is to inform and encourage people with management responsibilities in the Mississippi River basin to focus more on practical implementation and learn from what works (and what hasn't worked) and focus less on organizational forms and definitions. He encourages critical and careful review of case studies and expects disagreements and discussions as practitioners try to make progress on the complex issues present in the Mississippi watershed.

His first observation is for readers and conference participants to avoid what he calls "hydrocentrism" (page 3). Noting that practitioners (and Summit attendees) give water "a political primacy which it does not in reality have," Briscoe challenges the reader to recognize that water is in a list of dozens of issues facing society and governments and that some of these other challenges have more pressing and immediate demands. He describes water management as the "art of the possible" and encourages practitioners to seek meaningful and sustained improvements by embracing "fifth and sixth best" alternatives instead of making the pursuit of perfection a roadblock to meaningful progress (page 4).

Briscoe's second and third observations focus on when and how reforms occur in water management. He notes that reforms driven by water management professionals will be less likely to succeed than reforms responding to the demands of major interested parties and water users. These users will participate in reform only when they perceive the need for change to preserve or enhance their options (page 4). He then follows with his third observation that water reform is a 'dialectical' process over time. Challenges emerge and are met with reforms. These reforms lead to new challenges, which, in turn lead to new reforms. With this observation, he notes that there will not be a "final" answer or solution to the water management challenges on a system as complex as the Mississippi River basin. New reforms should seek to meet new challenges while not discarding the benefits from prior reforms (page 5).

Observation four highlights that values depend on income and vary over time. Using international examples, Briscoe notes that attitudes towards water management vary depending on the income of the society and that these values change over time. Applied to the Mississippi, he notes that past reforms addressed the values and economy at the time they were implemented (flood control, economic development as examples). Reforms initiated today start with a different situation. Challenges facing the US economy – and public perception of these challenges – will affect the acceptable reforms moving forward.

Briscoe's fifth observation warns reformers to avoid "moral hazards" - situations where decision makers do not bear the full consequence of their actions. Applied to the Mississippi, he provides a couple of moral hazards as examples. The first is seen when agencies make decisions and prioritize the concerns of groups and interests without a presence in the basin. A second is where costs for projects that deliver primarily local benefits are allocated to the federal government instead of relying on local funding. He acknowledges that these situations are "more defensible in some cases than others" because of the broader, federal benefits associated with some projects (page 8).

Observation six through nine focus on implementation issues and concerns. Six warns reformers to "beware concepts which have not encountered practice" and encourages reformers to aggressively seek to

reconnect with academic institutions and researchers to address the challenges – historic and new – facing river basin managers. Seven directs reformers to seek reforms that encourage innovation, professional judgments and adaptation over rigidity and judicial resolution of conflicts. Observation eight highlights the critical role that financing will play for the future of water management in the Mississippi Basin. After noting that massive federal funding for maintaining the flood and navigation infrastructure will not materialize, Briscoe believes that the time is now for the Mississippi River Commission, states and communities to reevaluate a common understanding of costs and benefits. Observation nine starkly notes, “Instruments matter more than organization.” Instead of placing undue attention on the organizational form for watershed management for the Mississippi, Briscoe encourages more focus on the “legal, financial and knowledge instruments” inside and outside the water sector that will affect the behavior in the basin. Although he has a “strong bias in favor of building on existing organizations” (page 11) when the time comes to create a watershed organization, Briscoe instead encourages more focus on outcomes and instruments of change.

Briscoe concludes his contribution with the charge in observation ten that “it’s implementation, stupid.” Using his experience, he points out that effective policy implementation is often what separated success from failure in international economic development. Once success is achieved, it is easy to take for granted. Noting that the Mississippi basin is “blessed” with some world-class agencies to implement, Briscoe encourages watershed managers to focus on “maintaining, strengthening and modernizing this capacity” (page 11) to maintain and improve watershed management in the Mississippi.

The summaries presented above are my effort to capture some of the high points and key themes advanced by the authors in their much more complete presentations. Most of the papers were 10-14 pages in length and included significant detail and much more nuanced presentation than I was able to capture in this brief summary document. Unfortunately, this is especially true in regard to the case studies. I greatly enjoyed this project and I encourage you to read the original papers to fully appreciate the different authors’ substance and styles.

- Harald (Jordy) Jordahl