Project Work Plan

INTOSAI
Working Group
on Environmental
Auditing

Auditing Water Issues: The Experiences of Supreme Audit Institutions

Auditing Water Issues: Experiences of Supreme Audit Institutions

Project Objectives and Outcome:

Water issues have long been a matter of great interest to WGEA members, serving as a major theme for the Working Group during its first 10 years and then culminating in a major 2004 study by the Netherlands Court of Audit entitled, "Auditing Water Issues: Experiences of Supreme Audit Institutions." That report described the key water issues confronting the nations of the world, catalogued the growing number of SAIs that were evaluating their governments' efforts to deal with them, and recommended that SAIs continue to focus on water issues in their audit work. In the 7 years since that study's completion, global water issues have continued to evolve, and SAIs' interest in addressing them has continued to grow.

This project will build on the excellent work of the Netherlands Court of Audit, taking into account new information and the rapidly changing circumstances of many countries' water challenges. Specifically, the study will (1) examine and discuss critical water problems facing nations around the globe, paying particular attention to emerging issues (such as the implications of climate change on both the quality and availability of water supplies), (2) describe governments' efforts to respond to these issues, and (3) analyze SAIs' audits and evaluations of their nations' water issues and government programs, *focusing in particular on creative and innovative methods SAIs have used to analyze and report on their priority water challenges.*

Project Scope:

Using as a starting point the list of issues from the Netherlands' 2005 study, we have surveyed some of the extensive international literature on international water issues and worked with our Subcommittee members to identify a tentative list of priority water issues. We recognize that deriving any such list is at least in part a matter of judgment, and expect that while our effort in this regard will produce a meaningful and useful list, it will not be proposed as the "only" list. With this in mind, the issues below are subject to refinement based on further contacts with our Subcommittee and upon review by, and feedback from, the WGEA Steering Committee.

- *Availability of safe drinking water*. The principal water sources for direct human consumption, including lakes, rivers, soil moisture, and shallow groundwater basins, account for only 0.01 percent of the total volume of water on earth. Sources of pollution include untreated sewage, chemical discharges, petroleum leaks and spills, dumping of waste in old mines and pits, and agricultural chemicals and manure that are washed off or seep downward from farm fields. The types of challenges involved in ensuring safe drinking water supplies vary greatly among nations.

- *Competing demands for limited water supplies*. Growing populations, together with the goal of fostering economic development, increasingly lead to situations in which alternative goals are in direct competition for finite water supplies. Worldwide, the competing demands over water needs for human consumption, energy, agriculture, and industry have led to difficult policy decisions—and often to direct conflict.

- *Drought*. Many countries are already affected by serious drought conditions during many months of the year. Projected increases in temperatures and decreases in precipitation associated with climate change, compounded by early snowmelt, are expected to exacerbate the problem in many parts of the world.

- *Flooding*. While some regions suffer from chronic drought, others are primarily concerned with flooding. Here too, projected impacts associated with climate change may worsen the current situation, leading to floods of greater magnitude and frequency. In addition to inundating susceptible areas, flooding often affects water quality, as large volumes of water can transport contaminants into water bodies and also overload storm and wastewater systems.

- *Quality of surface waters including rivers, lakes, and other bodies of water*. Economic development and industrialization have led to greater threats of contamination that can directly harm human health and reduce the availability of water for agriculture, recreation, and other purposes. Higher water temperatures and changes in the timing, intensity, and duration of precipitation can also deteriorate the quality of rivers, lakes, and other surface waters.

- *Marine environment*. The major threats to oceans are marine pollution, over-exploitation of living marine resources, and coastal habitat loss. Different sectors of human activity cause marine and coastal degradation. Globally, dumping and spills by ships, sewage discharges, agricultural nutrient run-off, and atmospheric inputs derived from vehicle and industrial emissions are also major sources of contamination. Looming in the future are predictions for sea level rise resulting from climate change—a problem that some countries are already experiencing.

- *Financing/resourcing/planning wastewater and drinking water treatment facilities*. Municipal drinking water systems and wastewater collection and treatment facilities are critical elements of the infrastructure of most nations. Large, sometimes staggering sums of money are often needed to support capital construction, maintenance, and eventual replacement of these facilities. In many countries, particularly with large rural populations, smaller "alternative" systems are needed where it is impractical to support the larger conventional systems typically designed for more urban areas.

- *Enforcement of water laws*. Most nations have laws designed to ensure a proper allocation of limited water resources and to ensure their quality. Such laws, however, can only have their intended effect if properly enforced. Many factors, such as limitations in training and resources for compliance activities, and difficulties balancing economic development with resource protection may impede governments' ability to enforce these laws, leading to wide-spread violations and inequities in their application.

- *Challenges of managing water resources shared by multiple nations*. Worldwide, more than 250 river basins are shared by more than one country, and many are seriously depleted and polluted. The unique challenges posed by these shared resources can only be met by cooperative actions among the governments concerned. In a parallel manner, SAIs have shown an increased willingness to audit the effectiveness of their respective governments' actions, including assessing how well they are meeting their international environmental obligations.

- *Adequacy of water-related data to make informed policy decisions*. The availability of reliable data concerning both the quantity and quality of water is crucial to make informed water policy decisions. The adequacy of such data, however, has long been a problem in most developed countries, and is proving to be an even greater problem in many developing countries.

- *Impacts of climate change on water resources*. The prospect of climate change introduces additional complications, and a significant element of uncertainty, about most of the water challenges listed above. In most cases, climate change can be expected to accelerate and amplify already-challenging problems. Higher water temperatures, for example, can accelerate the reduction of dissolved oxygen levels in a manner that further harms aquatic life. Where stream flow and lake levels are already a problem, further reductions mean water shortages and higher concentrations of pollutants. As the recent multi-lateral WGEA Climate Change audit noted, a small but growing number of nations are beginning to undertake serious adaptation measures, including water conservation, the use of markets to allocate water, and the application of appropriate management practices to mitigate the effects of climate change on their water resources. SAIs are also paying closer attention to the way in which these adaptation measures are being carried out, and the manner in which the funds that support them are being spent.

Planned Methodology and Participants:

Objective 1: Identify and describe critical water issues facing nations around the globe. During the latter months of 2010, we worked with our Subcommittee members to develop a tentative and diverse list of water issues currently facing nations and which they can expect to confront in the years to come. We paid particular attention to ensuring that the issues were germane to different regions of the world and to both developed and developing countries. Recognizing that this can be a somewhat subjective process (Different authors would likely prioritize water issues differently, depending on their experiences and perspectives.), we will continue to work with our Subcommittee members to modify this list to reflect their perspectives and, as noted above, will also incorporate feedback from the WGEA Steering Committee before finalizing it. Then, as we move forward to the next phase of our work, we will follow the trail of our Netherlands colleagues in describing (and updating) these issues by drawing from the international literature on water issues published by the United Nations Environment Program, the World Bank, Organization for Economic Cooperation and Development, the International Water Management Institute, and other recognized institutions.

Objective 2: Describe the status of government efforts to respond to these issues. The literature review and our consultation with Subcommittee members will also help us respond to this objective. In addition, however, we will obtain more country-specific information that directly addresses both the problems encountered to individual nations in dealing with their highest priority water problems, and the mitigation strategies that have been proposed, developed, and implemented to deal with them. Toward this end, starting with our international literature review and our contacts with international institutions as points of departure, we will contact specific national environment ministries and national water departments for specific information about the problems they face and the steps they are taking to address them.

Objective 3: Provide audit tools and methodological ideas to assist SAIs in maximizing the value of their water audits. This key task will involve numerous contacts with individual SAIs that have

analyzed the kinds of water issues to be described in the first two objectives. As the centerpiece of the project, our work under this objective will seek to analyze SAIs' audits with a particular focus on their approaches in carrying out the full range of audit steps, from selecting the audit through the development of their findings and recommendations. This work will entail examinations of reports' findings and their methodologies, and follow-up contacts with the reports' authors as appropriate. The ultimate goal of this objective will be to identify and showcase audits that have used creative or innovative methodologies that have led to compelling results. In this manner, we will strive to develop a compendium of audit "tools" that have been used successfully by SAIs in performing challenging water audits.

Key Question: Formal (4-Step) Guidance Document or Working Group Study?

One key question that a few of our Subcommittee members recommended clarifying was whether we were heading toward developing a formal Guidance Document (as described in the WGEA's "*Guide for Project Leaders: How to Develop a Guidance Material in Environmental Auditing*") or toward a Project Study that includes comparative information about SAIs' experiences with water audits, but does not follow precisely the *Guide's* 4-step process.

Based on the feedback we received on the matter, and in consideration of the breadth and diverse nature of the subject matter covered by the project, our initial inclination is to go with the Project Study rather than the formal Guidance Document. We think that the important thing will be to gather as much useful empirical information on the audit approaches SAIs have successfully used in addressing the many different types of water audits. We expect to find that these audit approaches and their associated methodologies vary widely, depending on the particular water issue addressed, geography and other physical characteristics, and other unique circumstances. We're hopeful that if we do a good job in cataloguing these varied approaches, it will in effect provide more useful "guidance" to SAIs than if we tried to distill our findings into an overall "How to" approach toward auditing all water issues. We would note, however, that even with the Project Study approach, the final report would still conform to most of the "*Guide's*" other recommendations in terms of the report's appearance (such as contents page and use of graphics) and content (e.g., wide use of examples).

Having expressed this initial preference, we would be very pleased to obtain Steering Committee input on the issue as we proceed into the post-planning phase of the project.

Contacts:

Steve Elstein (ElsteinS@gao.gov), Nathan Anderson (AndersonN@gao.gov), and Pat Dalton (DaltonP@gao.gov)

Timeline and Key Milestones:

Activity	Date
2011	
Draft Project Work Plan to the Subcommittee	Early January 2011
Final Draft of Project Work Plan to the WGEA-secretariat	Late January 2011
Receive comments from Steering Committee	February 2011
Present the Project Work Plan at SC10 in Morocco for final review and approval	7 – 13 March 2011
Project Work Plan finalized	April 2011
Detailed Report Outline (Including major findings, chapter headings and sub-headings, and graphics and other elaboration of support)	October 2011
Distribute detailed report outline and present findings at WG14 in Buenos Aires, Argentina	November 2011
2012	
Send complete draft report to the Subcommittee and relevant international organizations	March 2012
Send complete draft report to the WGEA Secretariat	May 2012
Present draft report at SC11 for review and comments	Mid-2012
Final draft of the report to the WGEA Secretariat	October 2012
2013	
Final version of the report – translation, editing, printing etc.	April 2013
Present complete report at WG15 in Estonia for final approval	June 2013