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IHA World Congress Bulletin

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IHA WORLD CONGRESS HIGHLIGHTS: THURSDAY, 16 JUNE 2011

Throughout the day, the International Hydropower Association (IHA) World Congress on Advancing Sustainable Hydropower held plenary sessions on assessing sustainability performance, diverging views on social issues and sharing water for development; as well as parallel sessions on using the Hydropower Sustainability Assessment Protocol, downstream flow regimes and hydropower in the 21st century. In the evening, participants were invited to a light and sound show at Itaipu Dam.

ASSESSING SUSTAINABILITY PERFORMANCE

Albert Geber de Melo, Electric Power Research Center (CEPEL), described the tools used for sustainability assessment in Brazil, including the 2007 Manual for Hydropower Inventory of River Basins, and highlighted the need to balance the cost effectiveness of energy production, social impacts, environmental impacts and multiple water uses. Israel Phiri, Ministry of Energy and Water Development, Zambia, described his country's experience in the development of the Kariba dam in the Zambezi river basin, noting the value of using the Protocol to make the project more attractive for international investors and enhance positive impacts on the adjacent populations and environment. Participants discussed the costs and benefits of assessing sustainability of African hydropower projects.

David Harrison, The Nature Conservancy (TNC), described the inception and development of the Protocol, noting the challenges posed by the "sheer complexity" of hydropower projects. He explained that the Protocol aims to provide an objective and systematic set of criteria for assessing multiple dimensions of sustainability.

Participants suggested holding a workshop on the Protocol in Asia and encouraged international financial institutions and governments to provide financing for applying the Protocol in Africa. The Asian Development Bank representative announced a project currently undertaken with the Mekong River Commission (MRC), World Wide Fund for Nature (WWF) and the US Agency for International Development (USAID) to formulate a basin-wide sustainability assessment tool.

Asked to provide the perspective of a regulator, Reginald Hernaus, Ministry of Infrastructure and Environment, the Netherlands, described existing processes within the European Union (EU) for assessing hydropower projects and challenged the IHA to demonstrate the value of its Protocol.

In the ensuing discussions, participants encouraged multiple sectors, including suppliers, contractors, operators and governments, to further develop and test the Protocol. In response to a statement from 22 civil society organizations against the Protocol, Harrison clarified that the Protocol is a measurement tool, not a new standard, and should be seen as strengthening, not displacing, the recommendations from the World Commission on Dams. Other participants noted that the Protocol provides common language for measuring performance.

Lauding the Protocol for being developed within the industry, Gil Maranhão Neto, GDF Suez Energy Brazil, observed that it allows stakeholder queries and expectations to be met. Terry

Moss, ESKOM, noted that the Protocol has been used to assess several pump storage and hydropower schemes, allowing a greater focus on their operation and management within their respective communities and environments. Richard Taylor acknowledged that the Protocol is not perfect, highlighting the current version is being released to gain practical experience from its implementation.

PRESS CONFERENCE

At a press conference held to launch the Sustainability Protocol, Refaat Abdel-Malek, IHA President, commended industry and non-governmental organizations (NGOs) for their engagement in its three-year review process. Harrison noted that NGO involvement in the process derives from their belief that only a systemic approach to dam design can save freshwater ecosystems, since past opposition to individual dams has not been effective. He hoped wide application of the Protocol would lead to a sustainability certification mechanism, while cautioning that it does not guarantee sustainability, but provides a process to measure it and a common language for stakeholders and affected parties. Cameron Ironside, IHA, presented a video showcasing an early trial of the Protocol in Kazakhstan's Shardara Dam. Phiri added that the Protocol gives governments ownership over the sustainability process, unlike in the past where different financial institutions imposed conditions. Andrew Scanlon, Hydro Tasmania, Australia, called on industry to embrace the Protocol. Transparency International welcomed the work of the IHA in promoting accountability, integrity and transparency within its membership.

DIVERGING VIEWS ON SOCIAL ISSUES

Jörg Hartmann, WWF, moderated a panel session on the "sensitive" topic of diverging views on social issues, which he explained represented multiple perspectives across sectors and global-, country- and project-levels. Hartmann stressed that the costs of social sustainability efforts should be seen as investments in reducing social conflicts.

Helen Locher, Hydro Tasmania, Australia, called attention to key challenging areas in the Protocol's development, including human rights, livelihoods and the differences between physical and economic displacement. Locher described how the assessment tools, scoring criteria and cross-cutting issues allow for consideration of a range of social concerns.

Shi Guoqing, International Network on Displacement and Resettlement, China, spoke on best practices for resettlement, using the example of the Danjiangkou Dam in China. He highlighted strategies including minimum compensation standards for housing, provision of improved community facilities, long-term compensation, and support for long-term sustainable livelihoods through, *inter alia*, skills and training programmes, generation of multi-income sources, micro-credit and post-resettlement support funds.

Outlining legislation and agreements on the rights of indigenous communities to natural resources and traditional lands, such as the International Labor Organization's (ILO) 1989 Convention Concerning Indigenous and Tribal People in Independent Countries, Roberta Leonhardt, Machado, Meyer,

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Sendacz e Opice Advogados, Brazil, discussed obligations to “free, prior and informed consent” (FPIC) from communities in developing hydropower projects in Brazil.

Michael Lawrenchuk, Lead Negotiator and former Chief, Fox Lake Cree Nation, Canada, recalled the plight of his community during the construction of three hydropower projects in the 1960s, saying it is important to learn from past experience and stressed the value of genuine dialogue and the need to take into account local and indigenous communities’ needs and vulnerabilities.

Olivier Salignat, EDF Hydro, France, outlined actions for addressing social issues with local communities, including: understanding the socio-economic issues; communicating effectively; adapting to evolving situations; and committing to compensation.

Participants discussed, among other things, social benefits of multi-purpose hydropower projects and case-by-case versus standardized approaches for identifying project-affected communities. On the Protocol’s expected impact on social issues, Locher recognized that as a scoring tool, it reduces complex social issues to numbers, but underscored its main value will be to act as a bridge between different world views and to facilitate dialogue among stakeholders.

SHARING WATER FOR DEVELOPMENT

Session chair Jorge Samek, CEO, Itaipu Binacional, with moderator José Ayres de Campos, CEO, WorleyParsons Brazil and Argentina, pointed to Itaipu Dam as an example of sharing water across borders for development. Satit Phiromchai, Director of the Planning Division, MRC Secretariat, outlined the cooperation of the four countries of the lower Mekong basin through the 1995 Mekong Agreement and the MRC, highlighting: participatory processes and prior notification, consultation and agreement for dams; infrastructure development; irrigation expansion; food security; and mechanisms for benefit-sharing.

Daniel Mugerza recalled the more than 40-year process leading to the full operation of the Binational Yaciretá Dam between Argentina and Paraguay, reflecting on the changing political, strategic and sociological circumstances that influenced this process.

Jakob Granit, Stockholm International Water Institute, Sweden, reflected on the importance of international cooperation as a large number of river basins are shared among countries, highlighting the need for balancing benefits, needs and interests, and conflict prevention.

Salisu Abdulmumin, African Ministerial Council on Water (AMCOW), highlighted the successes and challenges Africa faces in developing its water resources in an equitable manner.

In the ensuing discussion, participants discussed how to ensure treaties are equitable, and how to proceed when there is no universally accepted treaty or body to ensure equitability.

PARALLEL SESSIONS

USING THE HYDROPOWER SUSTAINABILITY

ASSESSMENT PROTOCOL: Ironside introduced the structure of the Hydropower Sustainability Assessment Protocol explaining that it follows the life cycle of a hydropower project, and measures the performance of different sustainability indicators in a range of 1-5. Jörg Hartmann, WWF, described: the institutional framework for the Protocol’s implementation including a Hydropower Assessment Council, chambers for interest groups and a Managing Entity; and the criteria applied to different categories of assessments, namely, official or unofficial, for private use or for publication. He noted the need to safeguard the Protocol and prevent its use for “green-washing”.

Participants noted the different nature of the proposed evaluation compared to traditional International Organization for Standardization (ISO)-type audits, and the need to build capacity in audit organizations. Donal O’Leary, Transparency International, highlighted the importance of high-quality evaluations and suggested some NGOs may be interested in being

trained as auditors. He added that unofficial assessments, for example by NGOs, may be most useful at the early stages of a project.

Ricardo Fontenele, Bureau Veritas, said client engagement is key to a good evaluation and highlighted evaluations usually lead to plans of action and improvements to operations’ sustainability. Participants also highlighted the usefulness of the Protocol for intra-firm management improvements and as a tool for dialogue.

HYDROPOWER IN THE 21ST CENTURY: The Rise of Emerging Markets: Moderator Emmanuel Branche, EDF Hydro, France, presented an overview of the global hydropower market, noting that recent growth in the sector has been driven by Asia and Latin America. He noted that future market leaders in hydropower will be China and India. Altino Ventura Filho, Ministry of Mines and Energy, Brazil, said that hydropower is set to grow 88% by 2030, thus taking advantage of two-thirds of potential hydropower resources in the long-term.

Y. N. Apparao, Athena Demwe Power, India, stressed that only 12% of hydropower potential has been exploited in India, and said that with the target of universal energy access by 2012, a number of strategies are being pursued, *inter alia*: low cost power generation methods; electricity distribution reforms; and improved communications strategies. Kuang Shangfu, China Institute of Water Resources and Hydropower Research, remarked that hydropower’s strategic significance for China is for: climate change adaptation; energy security; poverty reduction; and to support social and economic development.

In the ensuing discussion, one participant queried how to “marry” the commercial energy needs of India with the spiritual connection many citizens have to their rivers. On whether there are suitable markets to sell “green electricity” at a premium, Ventura Filho noted that as the majority of Brazil’s lowest-cost electricity is already renewable, this was not feasible. In conclusion, Rasim Kazhiakhmetov, Hydropower of Russia, observed that future growth in the industry will be aided by a change in perception to water as a global energy carrier.

DOWNSTREAM FLOW REGIME: Parallel session moderator James Dalton, International Union for the Conservation of Nature (IUCN), explained that dams and large-scale infrastructure smooth out river flows, and that some modifications can be made to replicate rivers’ natural flows to protect downstream ecosystems and communities that rely on more variable flows.

Gabriel Azevedo, Odebrecht Energia, outlined the shift in the hydropower sector from early concerns about “sanitary flows” focused on water quality, to recent recognition of “downstream flows” that consider a broad range of ecological and human considerations. He stressed that there is no “one-size-fits-all” solution, and encouraged a focus on variability and adaptive management.

Domingo Rodriguez Fernandez, Itaipu Binacional, spoke on the impacts of flows on fish populations, especially for migratory species, and outlined the phases of planning and monitoring required for protecting the ecological integrity of rivers.

Antonio Fonseca dos Santos, Brookfield Energy, Brazil, pointed to the filling of reservoirs and the operation of power plants as distinct periods where flow regimes must be considered. Advocating for the identification of downstream needs on a case-specific basis, he described two examples of multi-stakeholder negotiations to address community concerns associated with hydropower projects in Brazil.

Scanlon outlined efforts to retrofit existing hydropower projects in Australia to address downstream flows, noting that there are often competing objectives and that the baseline of the natural river is not always appropriate, as ecological and social conditions may have changed over time.

Interventions from the audience addressed: baselines for minimum flows; concern for flow variability and maximums as well as minimum flows; the need for catchment-level analyses; groundwater recharge from floods; and how siting decisions can influence downstream flow issues.