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## **WWF Dams Initiative: Improving Outcomes by Comprehensive and Integrated Water and Energy planning**

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## **WWF Dams Initiative: Improving Outcomes by Comprehensive and Integrated Water and Energy planning**

Dr. Jian-hua Meng      Dr. Jörg Hartmann

Der WWF unterstützt mit seiner 'Dams Initiative' international die Entwicklung nachhaltiger Wasserkraft. Einer der Tätigkeitsschwerpunkte ist die Arbeit im "Hydropower Sustainability Assessment Forum" (HSAF). In diesem Forum wird eine Neufassung des "Hydropower Sustainability Assessment Protocol" entwickelt. Dieses novellierte Protokoll wird im Juni 2009 zur öffentlichen Erprobung und Konsultation veröffentlicht werden.

### **1 WWF' Dams Initiative**

The World Wide Fund for Nature (WWF) is one of the largest conservation organisations in the world. We work in more than 50 countries in both the developed and developing world and our mission is stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature. We aim to achieve this by working to conserve the world's biological diversity, by ensuring that the use of renewable resources is sustainable, and by promoting the reduction of pollution and wasteful consumption. Key decision-makers see WWF as an organization that engages with a wide variety of partners in an effort to find solutions. We work with governments, the corporate sector and other NGOs. There is no other conservation organization in the world today that has the on-the-ground field experience of WWF. This work on the ground allows us to base our policies on sound science and to constantly incorporate the lessons learned from the field into this work.

WWF has been working on sustainable freshwater management for many years and across the world. The main targets of the global freshwater program include promoting the conservation of major river basins, the sustainable use of freshwater resources for human development and poverty alleviation, and the sustainable management of freshwater habitats. The program links field projects with policy and market activities. From local demonstration sites to landscape-

scale examples of ecological processes, the objective is to document and up-scale experiences made, and influence national & international policymakers, as well as decision-makers in the private sector.

As part of this freshwater program, the **Dams Initiative** focuses on water infrastructure. While infrastructure has considerable benefits for water resource management, it also fragments river ecosystems, enables over-abstraction of water, and is responsible for some dramatic declines in freshwater biodiversity and the ecosystem services that rivers provide. The objective of the Dams Initiative is to contribute to a proper and sustainable balance between costs and benefits of infrastructure. It is based on fieldwork in a number of key river basins, identified in WWF's new Global Programme Framework - including the Amazon, Zambezi, Congo, Danube, Ganges, Mekong, Yangtze and Amur-Heilong River. A common approach is promoted to identify opportunities for advocacy and intervention along the "causal chain of decision-making", in order to prevent damage to ecosystems and loss of ecosystem services.

The Dams Initiative contributes to the development of global best practices and standards, by engaging global organizations including companies, banks, NGOs, lobby groups and research agencies.

## 2 Sustainable Infrastructure

Core support of the Dams Initiative is contributed by WWF Germany and the HSBC - WWF Climate Partnership. This reflects the growing importance of climate change for water resource management. On the one hand, hydropower is a renewable, climate-friendly source of energy, and WWF has endorsed a significant expansion. On the other hand, climate change impacts on river flows and is one of the elements that makes today's infrastructure decisions so difficult and critical. During the lifetime of this infrastructure, dramatic changes must be expected with regards not only to river flows, but also with demand for water and water-derived products, such as food and energy, and the values of societies.

So in this context, climate change is one among of a manifold of highly volatile conditions to which long-living water infrastructure must have the capability to adjust to. This is a main task to be properly addressed at the early feasibility assessment and design phases and also a major task concerning existing and ageing infrastructure.

The implications of infrastructure for energy and all other water demands and measures for adaptation and mitigation need to be assessed basin-wide. There may be a case for providing more infrastructure, but without proper Integrated River Basin Management (IRBM) and Cumulative Impact Assessment (CIA) such investments may be suboptimal, futile or even counterproductive.

WWF positions are published by our 2007 "Climate Solutions" global energy vision. This vision promotes a number of technologies to reduce global greenhouse gas emissions. In it, WWF strongly supports retrofitting old dams to generate more power, and supports the current rate of development of small hydro (acknowledging that poorly implemented small hydro projects may also have severe environmental impacts). The vision also endorses a modest increase in medium and large hydro projects in those countries that have developed less than 30% of their economically feasible hydro potential. This comprises about half the currently planned hydro developments and would increase installed capacity by about a sixth of the global economically feasible hydro potential.

The condition though, is the condition of sustainability:

Hydropower projects should be authorized, financed and built only if

- they don't destroy critical natural assets, and a representative sample of free-flowing rivers and their ecosystem services is maintained,
- credible information is publicly available to demonstrate that they are the best option, and that the best possible locations, designs and operating rules have been chosen,
- all parts of society, including downstream users of ecosystem services, are better off with than without the project.

Smart infrastructure decisions will leave options open for future generations and enable adaptive management of our rivers.

### **3 Hydropower Sustainability Assessment Protocol**

One example for the global processes that the Dams Initiative is engaged in is the active participation in a global multi-stakeholder forum, the Hydropower Sustainability Assessment Forum (HSAF). This forum is currently in the final process of developing a sustainability standard for hydropower projects, based

on the existing guidelines and protocol of the International Hydropower Association IHA.

This Forum will release a revised sustainability assessment tool in 2009. This assessment tool will be broadly endorsed by hydropower industry, commercial / development banks that have committed themselves to the Equator Principles and the World Bank, environmental and social NGOs and developing and developed countries. These groups are all represented in the HSAF forum.

The protocol will be released to the Public Consultation and Trialling phase in June 24th 2009 at the IHA Conference in Reykjavik. The endorsement is scheduled to the end of this year.

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