

The Dams Newsletter

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AFRICA'S WATER DEVELOPMENT NEEDS



VICE PRESIDENT PAUL ROBERTS I was privileged to attend a recent workshop in Johannesburg, South Africa on Transboundary Water Resources which had been arranged by the New Partnership for Africa's Development (NEPAD) and the African Development Bank (AfDB). I was able to attend in view of the experience I gained in international shared rivers in my career in the South African Department of Water Affairs and Forestry, and of my background in International Rivers as Chairman of the ICOLD Technical Committee on Shared Rivers. The Workshop was attended by about 60 persons from all over Africa. Various organisations were represented ranging from official of the AfDB, The World Bank, government ministries, other multi-lateral development banks, NGO's, Regional Economic Committees, River Basin Organisations and consultants.

Consultants to the AfDB had prepared a situation analysis on seven of Africa's largest river basins which provided a most informative insight into Africa's water situation and the future needs for significant water resources development and management.

Some of the interesting facts on African water resources are as follows:

- Africa has over 60 of the world's 200 larger transboundary river/lake basins which are shared by more than two countries and reaching up to 10 for the larger ones.
- Co-operative management of the river basins varies from well-established and reasonably resourced river basin organisations (eg Senegal) to absence of any cooperative arrangements (eg Congo).
- In spite of the central role of water in any society, the current situation shows that the development of the sector has lagged behind. Currently only some 40% of the rural population is served with potable and safe water supply.
- Africa suffers from extreme climate variability and hence has a high risk of recurrent drought. Water resources development is thus essential for the management of the resource and to ensure acceptable assurance of supply of water.
- Agriculture is vulnerable to rainfall variability with only some 4 to 5 % of the productive land irrigated in sub-Saharan Africa compared to 38% in Asia. At present only about 4% of available water is used in the whole continent.
- Water storage in Africa is considerably smaller than other countries : 43 m³ of water stored per person in Ethiopia, 746 in South Africa versus 2486 in China and 6150 in North America !
- The African energy consumption is very small (450 kWh/capita/year) compared to the USA, (11 994 kWh/capita/year)

From all these facts, it is clear that many challenges arise in Africa to manage and develop its water resources for the benefit of its peoples and hence improving their quality of life. That includes building many new dams. ICOLD has much to offer developing countries in the way of water development and management and has already had contact with the NEPAD initiative (meeting of the Africa-Australasia Association of ICOLD in Seoul in 2004) As Vice President for the Africa-Australasia Region, I have been active in promoting ICOLD membership amongst some 27 African countries in order to promote their joining the organisation. ICOLD member countries are encouraged to assist in this initiative should their individual members have contact with any representatives from these African countries. The extended membership of ICOLD will also assist the organisation in the 'dam debate' as there is a clear need for dams in Africa on humanitarian grounds. ICOLD can offer the means to ensure that such dams are environmentally and socially sustainable.

Paul Reberts

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UN Symposium calls on financing agencies to accelerate sustainable hydropower

We publish hereafter the Beijing Declaration, adopted in October 2004. The mention of the Millennium Development Goals¹ that can be read at the beginning of the declaration illustrates a phenomenon we have seen for the last three years: Developing countries have fought for a redefinition of sustainable development, away from the environmentalist orientation of the OECD ecologists, back to the original definition. Thus, sustainable development has seen the fight against poverty becoming more central. In this context, dams have been re-evaluated as vital tools for development.

The Symposium was sponsored by United Nations Department of Economic & Social Affairs (UNDESA), the World Bank and the National Development and Reform Commission of China (NDRC). The local organiser was China Institute of Water Resources and Hydropower Research, chaired by ICOLD Vice-President Jia Jinsheng. According to him, "it is an important milestone in hydropower development in recent 20 years with consideration of discussions on benefit and concerns related".

During the opening ceremony, Zhang Guobao, Vice Chairman from NDRC, China; Kui-Nang Mak, Chief, Energy & Transport Branch, UNDESA and David Dollar, Chief, Division of China of World Bank addressed the audience. Contribution from 79 participants were submitted at the symposium. Among them, Suo LiSheng, Vice Minister of Water Resources, P.R. China, made a keynote address on "Scientifically Exploiting Hydropower Resource to Promote the Sustainable Utilization of Water Resources and the Sustainable Development of Economy and Society".Lu YouMei, Academician, Chinese Academy of Engineering (and CHICOLD president) made a keynote address on "Hydropower and Sustainable Development in China". Hon Peter Rae, Chairman, the International Hydropower Association, made a keynote address on "Sustainability Imperative - Hydropower as a Renewable Energy Resource". He Gong, President of Chinese Hua Electric Corporation, made a keynote address on "Future of China's Hydropower-Speeding up development and sustainable development". Jean-Etienne Klimpt, the Consultant of World Bank, made a keynote address on "Overview on best practices and the way forward". Zhu Xingxiang, Director of State Environmental Protection Administration of China, made a keynote address on "The Countermeasure of Hydropower environmental protection in China", He LiuZhong, Standing Chief Executive of NuJiang Li nationality autonomous prefecture made a keynote address on "Hydropower and Sustainable Development of NuJiang," Mark Radka, UN Environment Planning Academy, made a keynote address on "The Central Challenge - Investment of Dam and the Sustainable Development".

Jia Jinsheng explained to the *Dams Newsletter* that: "Based on presentations and discussions during symposium, the following recommendations should be emphasized, especially for developing countries:

(1) Developing hydropower is the first choice in consideration of sustainable development. It is the foundation on which lies the "Beijing Declaration on Hydropower and Sustainable Development". Hydropower is among the world's major energy sources, accounting for about one fifth of global electricity supply. Hydropower offers great potential for bringing electricity to many of the two billion people in the developing world that have no access to modern energy services.

- (2) Best practices in developing hydropower in the world make a very strong foundation to go forward for hydropower. At the symposium, tangible action is called for assisting developing countries to finance sustainable hydropower. World Bank said that they are back for sustainable hydropower.
- (3) Speeding up hydropower in developing countries is based on scientifically recognition of hydropower. Hydropower has made a tremendous contribution to the society. In the future, hydropower has still the enormous potentiality to make contributions. There are about two billion people without modern electricity supply, while 2/3 of economically feasible hydropower resources still needs to be developed. Speeding up hydropower development is the first choice and necessary measure for developing country based on scientific recognition of hydropower.
- (4) The negative impact of hydropower development to social, environmental, especially to vulnerable communities should be highly emphasized. Owners and governments are called on to strive for good practice in this important area."

There has been in the past a number of cases in which the wealth brought by a dam project has not been equitably shared. There have been many other cases where local people have benefited greatly from the dam, in India, Brazil, USA or Europe. It is now absolutely necessary for dam planners and owners to insure that all future dams follow these best practices. The UN Beijing Declaration expresses confidence that it is not only possible, but that is also desirable, as one of the conditions for achieving the Millennium Development Goals.

¹ By the year 2015, all 191 United Nations member states have pledged to meet eight goals, the first one being eradication of extreme poverty and hunger. See http://www.un.org/millenniumgoals/

Environmental NGOs feel they are losing the battle to the pro-development

There were a number of NGOs present during the Beijing symposium: from Thailand, Earth Rights International, IUCN the World conservation Union, Southeast Asia River Network; from India, Narmada Bachao Acdolan; from USA, Blue Nile Associates, WWF International, International Rivers Network; from Nepal, South Asian solidarity for Rivers and Peoples and Water and Energy Users.

Although these NGOs tried after the Symposium to claim they were "systematically marginalized", they were obliged to recognize that "NGOs were given an opportunity to comment on the official conference declaration", as can be seen on the accompanying picture, where representatives of the World Bank, the UNDESA, the Chinese government and from different NGOs are discussing the final wording of Beijing Declaration.

The truth of the matter is expressed in a letter to Mr. Kui-Nang Mak Chief, Energy & Transport Branch at the Division of Sustainable Development of UNDESA, signed by 8 NGOs reprentatives. They declare themselves "disturbed to note that the UN played a pivotal role in organizing a conference heavily biased in favor of large hydropower development." They try to get back to "the best practices recommendations of the WCD", because they are "concerned with the World".

Bank's plans to re-engage heavily in large hydro which was expressed in the proceedings of the symposium; this is of great concern for NGOs and affected communities around the world."

It seems like environmental NGOs feel they are losing the battle, in the sense they are unable to seriously answer the challenges of the Millennium Development Goals.

Round table conference on discussion about Beijing declaration by UN, World Bank, Chinese Government and NGOs



Beijing Declaration on Hydropower and Sustainable Development

- 1. We, the representatives of national and local governments, representatives of utilities and the private sector, United Nations agencies, multilateral financial institutions, other international organizations, non-government organizations, the scientific community and academia, and international industry associations, having met at the United Nations Symposium on Hydropower and Sustainable Development from 27 to 29 October 2004, in Beijing, China, reaffirm our shared resolve to achieve Millennium Development Goals (MDG) and the sustainable development goals and targets contained in Agenda 21 and the Johannesburg Plan of Implementation (JPOI).
- 2. We reiterate that access to energy is essential to achieving sustainable development and is critical for meeting the MDGs and JPOI targets and commitments.
- 3. Noting with concern that 2 billion people do not have access to electricity, we call upon all stakeholders to work in concert to deliver energy services to all in a reliable, affordable and economically viable, socially acceptable and environmentally sound manner.
- 4. We emphasise that improving access to energy will generate opportunities for economic growth, enhanced education, better health care, more training and employment, as well as higher productivity in business, thereby contributing to sustained poverty reduction.

Strategic importance of hydropower for sustainable development

- 5. Recalling that the JPOI calls for a diversification of energy supply and a significant increase in the global share of energy from renewable energy sources, including hydropower, we note that hydropower offers potential for contributing to these goals.
- 6. We further recall that the Political Declaration adopted at the Bonn International Conference for Renewable Energies acknowledged that renewable energies, including hydropower, combined with enhanced energy efficiency, can contribute to sustainable development, to providing access to energy, especially for the poor, and to mitigating greenhouse gas emissions.
- 7. Hydropower represents an important source of energy, accounting for some 20% of world electricity supply. Hydropower has made a contribution to development, as shown in the experience of developed countries where the majority of technically and economically feasible hydropower potential has been exploited, and in some developing countries, where hydropower has contributed to poverty reduction and economic growth through regional development and expansion of industry. In this regard, we note that two thirds of economically viable hydropower potential is yet to be tapped and 90% of this potential is in developing countries. In Africa, less than 5% has been developed. We agree the large remaining potential in developing countries, as well as in countries with economies in transition, can be harnessed to bring benefits to these countries, bearing in mind that the world's poor use only one twenty-fifth of the energy consumed by the world's rich.

- 8. While we are convinced of the need to develop sustainable hydropower, along with other options, including the rehabilitation of existing facilities and the addition of hydropower to present and future water management systems, we emphasise that such development should be sustainable from social, economic, and environmental standpoints.
- 9. We underscore the importance of an integrated approach to dam construction, bearing in mind that other than generating electricity, dams often perform multiple functions, including supplying water for irrigation, industrial production, and residential use, as well as flood prevention and habitat maintenance. We note with concern that demands for water in these areas are already on the rise, and competition for water resources is most likely to intensify in future.

Promoting hydropower development that is environmentally friendly, socially responsible and economically viable

10. Having heard expert presentations on social and environment aspects, we acknowledge that progress has been made by governments, financing agencies and industry in developing policies, frameworks and guidelines which are relevant to individual country contexts for evaluation of environmental and social impacts of hydropower, for mitigation of such impacts, and for addressing the concerns of vulnerable communities affected by hydropower



development. We also note the many instances of good practice presented, and call on governments and the hydropower industry to disseminate good practice, policies, frameworks and guidelines, and build on it to mainstream hydropower development that is economically, socially and environmentally sustainable.

11. Withrespect to social aspects, we note that the key ingredients of successful resettlement include minimization of resettlement, commitment to the objectives of the resettlement by the developer, rigorous resettlement planning with full participation of affected communities, with particular attention to vulnerable communities. We are encouraged by the trend of

Mr. Xiaogang YU, representative from Chinese NGO, addresses the symposium.

some governments to go beyond good practice resettlement by providing benefit sharing with host communities, and call on governments to consider incorporating such approaches in their legal and regulatory frameworks. We further call upon Governments and regional and local authorities to accord special consideration to culturally sensitive areas.

12. With respect to environmental impacts, we recognize that some hydropower projects have had substantial adverse impacts on the environment. Rigorous environmental impact assessment and mitigation and management plans are an essential part of sustainable hydropower development. We note that norms are now in place for such assessments and planning, but that rigorous application of such norms is not universal. We call on project owners and governments to strive for good practice in this important area.

13. We call upon Governments to put in place procedures that emphasise the need to plan hydropower developments in a river basin context and in the context of the full range of alternatives for energy production, and that planning should give due weight to environmental and social factors, as well as economic and financial factors.

Hydropower development: investment challenges and opportunities

- 14. Noting that hydropower projects are highly capital intensive, we call for tangible action to assist developing countries to finance sustainable hydropower. This should include both conventional multilateral and bilateral loans and guarantees, credits and grants as appropriate to the level of development of the country concerned
- 15. Further noting that four-fifths of investment in hydropower in developing countries in the 1990s was financed by the public sector, we recognize the World Bank and regional development banks' plans to re-engage in financing sustainable hydropower projects.
- 16. We urge Governments to create a favourable environment to attract investment for co-financing sustainable hydropower projects. We further urge Governments to establish and strengthen a transparent regulatory framework for private investment, both domestic and international, in hydropower development.
- 17. Developing country Governments at the meeting call on bilateral agencies to also re-engage in sustainable hydropower development.

Hydropower and sustainable development: the way forward

- 18. Having considered the social, economic and environmental dimensions of hydropower and its potential contribution to achieving sustainable development goals, we firmly believe that there is a need to develop hydropower that is economically, socially, and environmentally sustainable.
- 19. Having shared perspectives, experiences and best practices from all regions of the world, we invite Governments, United Nations agencies and other international organisations, international industry associations, and non-governmental organisations, the private sector, and civil society, to further address the issue of hydropower and sustainable development in appropriate forums, including through regional meetings, in Africa in particular.
- 20. We invite Governments, United Nations agencies and other international organisations, non-governmental organisations, the private sector, international industry associations, and civil society, to report back to the Commission on Sustainable Development in 2006 on their actions in sustainable development of hydropower.

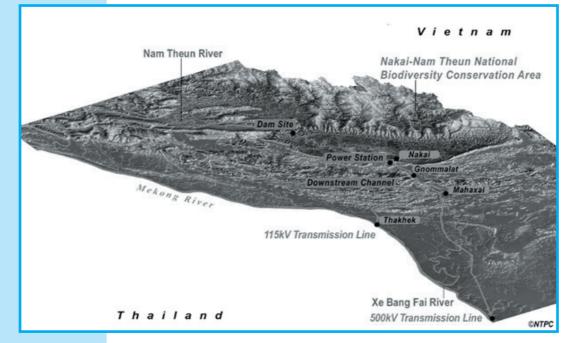
We express our gratitude to the Government of the People's Republic of China for successfully organising the Symposium and to the Government and people of the People's Republic of China for the hospitality and warm welcome extended to all participants. We pledge to work in determined and concerted action to ensure that sustainable hydropower be harnessed for poverty reduction and for achieving the MDGs and JPOI targets and commitments.

Adopted at the United Nations Symposium on Hydropower and Sustainable Development, Beijing, China, 29 October 2004.

World Bank Board Approves Nam Theun 2

The World Bank Board of Directors voted March 31 to approve the Nam Theun 2 dam project in Laos. Nam Theun 2 is the first major dam to be supported by the World Bank since it announced its intention to renew lending for large dams in 2003, on the basis of its new Water Resources Sector Strategy.

The Nam Theun 2 Hydroelectric (NT2) Project seeks to generate revenues for poverty reduction from the environmentally and socially sustainable development of the Nam Theun 2 dam. Revenues from the sale of power to Thailand will enable spending on basic health and education to rise by as much as 25 to 30 percent in the project's first year of operation. The project includes the construction of a



Laos is a landlocked country but rich in rivers and forested mountains, for which the development of hydroelectricity is, at present, the main opportunity for achieving sustainable development. The project is a trans-basin scheme, benefiting from a 348 meter-high head to produce almost 6000 GWh per year, for a maximum reservoir size of 450 km² and active storage of 3500 million m³.

dam that will provide 995 MW power for export to Thailand, and an additional 75 MW for domestic use; management of environmental and social impacts on the Nakai Plateau, in the NT2 watershed, and in the downstream areas of the Nam Theun and Xe Bang Fai (XBF) rivers; and, monitoring and evaluation arrangements designed to meet sound engineering practices, fiduciary responsibilities, and the respective oversight requirements of the various financial institutions.

Along with the NT2 hydroelectric project (\$50 millions, grace period of 10 years, maturity 40 years), two other related projects have been voted : \$10 millions for a Poverty Reduction Support Credit (\$5.5 millions grant and \$4.5 millions credit) and \$20 millions for Nam Theun 2 Social and Environment Project (NTSEP).

This project will finance a portion of the Lao Government's equity in the Nam Theun 2 Power Company to fund specific environmental and social mitigation activities for environmental and social protection as well as for conservation, and would support continued independent project monitoring. The environmental and social programs funded by the project are spelled out in the project's safeguard documents and include support for the resettlement of affected communities and restoration of their livelihoods; wildlife management on the plateau and building the government's environmental management capacity; enforcement of laws and regulations on wildlife trade and non-sustainable resource use in the NT2 watershed; as well as support for the Dam Safety Review Panel and the Environmental and Social Panel of Experts to monitor impacts and mitigation measures under the project. Construction on the \$1.3 billion project has already begun but will be stepped up after financial close in May 2005. The project is supposed to be completed by 2009.

The World Bank President, Mr. James D. Wolfensohn, said that Nam Theun 2 and the other initiatives were an effort to assist a country which has great needs and few options.

"Lao PDR has an average income level of less than a dollar a day, and in many rural areas, it is considerably less than that," he said. "Children still suffer malnutrition in many parts of the country, and too many young people receive little or no formal education".

"But to get out of this poverty trap, the country has few options to generate income. Essentially, it relies on mining, timber and hydroelectricity. We believe that a sound approach to selling hydroelectricity, supported by improved government

A new president for the World Bank

The World Bank's board unanimously approved the nomination of Deputy Defense Secretary Paul Wolfowitz, an architect of the Iraq war, to be the next president of the 184-nation development bank. Wolfowitz, 61, will take the helm of the development bank on June 1 to serve a five-year term. Wolfowitz was the only candidate nominated to replace Wolfensohn, under the informal agreement whereby the US and Europe, which dominate the World Bank and IMF boards, divide the top jobs.

The appointment of Paul Wolfowitz as president of the World Bank must not lead to "politicization" of the institution and its mission, the bank's outgoing president has warned James Wolfensohn, who steps down at the end of May after 10 years at the bank, said the institution's controversial selection process had contributed to a "dangerous trend of regionalization of opinion" on the bank's board. He said in an interview with the Financial Times: "I do not think that at the moment we are an instrument for the US government or any country." But he added: "In periods in the bank in the past there has been a politicization of objectives, and I personally think it would be a very sad thing if this place was not run on the issue of poverty as a global issue." Wolfensohn said the biggest challenge for his successor would be to get developed and developing countries to live up to their poverty reduction commitments. Wolfowitz has told shareholders that

poverty reduction will remain the bank's primary goal. He also declared on BBC :"I will take my orders from the Bank's shareholders" and not from the White House. He did not comment on the Bank's decision in favour of Nam Theun, but he is generally expected to follow Wolfensohn's steps, at least during his first year.

Future World Bank President Paul Wolfowitz (I) shakes hands with sitting President James Wolfensohn (r).

policies, is the best way for the country to increase the amount of money it can invest in health, education and basic infrastructure for the benefit of the poor."

Mr. Wolfensohn said that the project was quite complex and would pose some serious implementation challenges to the Government of Lao PDR, the private sector developers, and the other supporters, including the World Bank.

"We have spent the best part of a decade studying the project and evaluating the risks," Mr. Wolfensohn said. "In fact, we have been advised by some independent experts that we have studied it for too long, and been too focused on possible risks. But because it involves resettlement of people, because it impacts not one but two rivers, and because it is so vital for the future of the country, we



believe these risks need the utmost attention. Our decision, after a lot of deliberation, is that the risks can be managed; in fact, one major reason we are involved is to help manage those risks."





The Nakai Plateau today is a povertyridden area of Laos. Before the dam construction has even been launched, a pilot village does exist, to illustrate the kind of equipment those displaced will find. On the left, an aerial view of the pilot village. Future reservoir waters will come close to the eastern side of the village (upper part of the photo), allowing access to fisheries and providing irrigation water to the fields On the right, construction of one of the 29 houses of the pilot village. In order to acquire a sense of ownership for their new homes, villagers participate fully to their construction and have a real say in terms of the type of livelihood activities they will undertake.

In addition to the construction of the dam, the project also provides for:

- Increased environmental protection in Lao PDR, with a valuable biodiversity area, nine times the size of the area to be flooded for the dam, being set aside and conserved;
- Improved housing and higher incomes for the 6,200 villagers who are resettling from the reservoir area;
- A robust and proactive mitigation and compensation program to assist communities downstream to prepare for changes to their livelihoods well in advance of the actual impacts;
- Special measures to ensure that revenues from the project are used effectively to reduce poverty.

Of course, the World Bank decision, after nearly 10 years of discussions with the Lao government, generated a lot of criticisms from the anti-dam organisations, WWF, IRN and Friends of the Earth.

"We fear that this dam rather than reducing poverty will only increase human misery and environmental degradation," said Ute Collier of WWF's Dams and Water Infrastructure Programme. In the first year of dam's operation, the Lao budget for health and education will increase by at least 25%. Is this really what Ute Collier calls an increase of human misery? May be the WWF has a different definition of human misery than the one commonly held by UN development programs.

Friends of the Earth, who may now also be called *"Friends of Poverty"*, declared that the project will lead "only" to a 5% increase of the Lao State revenue, with \$ 25 millions per year. Many countries would happily and blindly invest in a single project that would generate such an increase of income. But FoE lied by omission: after 10 years during which a significant part of the dam-generated income will be devoted to pay for the dam construction, the income will surge and reach \$ 110 to 120 millions. In average, on the next 25 years, the income will thus be \$75 millions per year. After those 25 years, the Lao State will own the dam, which will produce clean electricity at low cost for the development of the country.

In fact, there is only one thing on which the project's opponents agree with those who support it : the World Bank decision is a watershed decision, which will orient the financing of dams for years to come.

DAMS IN THE WORLD PRESS

The New York Times against dams and development: a case story

"In Life on the Mekong, China's Dams Dominate". Thus an article published in the New York Times (March 19, 2005) violently attacks China for developing the Mekong. Relying mainly on the "expertise" of environmental group Southeast Asia River Network, author Jane Perlez retails "human interest" stories of fisherman on the lower Mekong, in Southeast Asia, blaming the building of dams on the upper Mekong in China for numerous supposed disasters on the river. "The reason is China --China's ravenous appetite for hydroelectric power at home and its thrust southward into Southeast Asia in search of trade." (In fact, China has worked closely with Southeast Asian nations in the grand plan for developing the river basin.) Perlez shows her stripes by arguing that the "Mekong has been protected (emphasis added) through the ages by a lack of development, and more recently by wars in Vietnam, Cambodia, and Laos." Pining for those good old days of poverty, war, and backwardness, Perlez complains that "today the countries downstream from China -- Myanmar, Thailand, Laos, Cambodia, and Vietnam -- have settled into an era of relative peace and have shed their old fears of China, indeed, are currying favor. Booming Thailand is seeking more trade with China. Impoverished Laos and Cambodia want China's aid to kick-start their economies. Myanmar shares China's passion for hydropower to supply future growth."

Even worse, cries Perlez, is that fact that China has taken a more prominent role at the Asian Development Bank (ADB) and "the bank's grand plan for roads, bridges and a telecommunications network to knit southern China together with the five other Mekong River countries -- a plan 10 years in abeyance -- got a quick boost." The New York Times hate piece has been also published by Business Times Asia (March 25) under the title "Murdering the Mekong", and in the Star Tribune (March 27).

Antidam sentiment receding in Japan

A very interesting article has been published by the Yomiuri Shimbun (December 27, 2004). Titled *"Dams reinvented as flood, disaster-prevention saviors"*, it explains why there has been such a sharp turn in the public sentiment towards dam, after the series of floods in the summer 2004 :

"In the late 1990s, dams became seen as a symbol of public works projects that destroy the environment. Meanwhile, the economic slowdown and decline in population growth reduced demand for water to a level much lower than previously projected. As a result, budgets for many projects were cut, and some were cancelled."

But public sentiment changed this year as floods caused by typhoons and torrential rains caused widespread devastation. The Yamatosaka dam, a government project on the Hijikawa River in western Ehime Prefecture, is one example of the new attitude to dams.

In the original 1994 plans, the dam was designed as a multipurpose project with a capacity of 40.8 million tons of water. It was supposed to supply agricultural, industrial and tap water, as well as reduce the risk of flooding by regulating the river flow. While difficult negotiations between central and local governments delayed the construction schedule, the project was put on a list of projects that could be cancelled. Further discussions concluded the project could be continued if the dam was designed solely for flood control.

"Now after the flood, an official at the ministry's Shikoku Regional Development Bureau said the Hijikawa river would not have flooded if the dam had been in place" says the Yomiuri Shimbun. In discussing disaster measures, antidam sentiment was so strong that regions with no disaster-prevention choices except that of constructing a dam were excluded from the discussion, a construction ministry official said. The paper concludes: "It is time to discuss the dam issue seriously, taking into consideration the background and effect of each project".

News FROM THE NATIONAL COMMITTEES Moroccan national committee reviews the press: favourable to dams!

The Moroccan committee of large dams (CMGB) has made an analysis of articles recently published in the Moroccan press, about dams or the more general subject of water resources. This analysis led to the conclusion that, in Morocco, given an intermittent water ressource, there is no other choice than to stock input from swellings in the dams' reservoirs for an efficient, timely and staggered use. The other alternative is to let these water resources lost in the sea.

This situation is made worse because of climate changes and that imposes on our country to build more dams, with the highest possible storage capacity (some existing dams are continuing to discharge in flooding period).



Lalla Takerkoust dam, in the Atlas region

The rain rate varies strongly from one region to the other, when going southward or eastward. To reduce the effects of that disparity, Morocco has adopted a policy for transferring water from regions with surplus towards regions with water deficits. This is the case for

- 1. Water transfer from the Oum Er Rbia basin to the perimeters of Doukkala and Haouz, for irrigation purposes and water supplying of the cities of Marrakech, Safi, El Jadida and Casablanca.
- 2. Water transfer from the Bin El Ouidane dam for irrigation of the Tessaout valley
- 3. Water transfer from the Mohammed V dam to the lower Moulouya Valley and water supplying of the cities of Oujda, Nador and Berkane.

The dam policy initiated at the beginning of the 1960s has had beneficial fallouts for social and economic development of the country, its role was salutary during the long droughts of the 80 and 90 decades from last century, especially in the area of water supply and crop irrigation. There are now 110 large dams in Morocco, with a storage capacity of 15.8 billions of m³.

In Morocco, it is generally perceived that everything was made to lower the environmental impact of dams. The Water Sector Department, recently created to manage water administration, is intending to continue to build large dams in order to mobilize the totality of the surface water resources from the country.

It can be said that the water storage by dams is supported by the majority of concerned people and citizens, in Morocco. The users, which did not endure water scarcity during the last 20 years, despite very severe droughts, have conscience of the benefits of dams for the satisfaction of their water needs.

> Abderrahim EL GHISSASSI Media correspondent of the Moroccan Committee of Large Dams

AGENDA

May 25-27 2005 Nijmegen, Netherlands

Third International Symposium on Flood Defence :'Floods, from defence to management'

River floods have become major society disrupting events. Worldwide, water managers have become conscious that a new approach towards flood risk reduction is needed: flood management is necessary in order to alleviate poverty in developing countries.

After centuries of "fighting the floods" and "raising the dikes", the new philosophy is based on "living with floods". This gradual shift from pure engineering (ISFD in Kassel, 1999 and in Beijing, 2002) towards a more integrated flood management approach, is also reflected in the ISFD3 motto "Floods, from defence to management".

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23-25 May, 2005 Stavanger, Norway

Hydropower '05: The Backbone of Sustainable Energy Supply

www.hydropower05.org

7-9 June, 2005 Kathmandu, Nepal.

6th International Conference on Development of Hydropower-A Major Source of Renewable Energy,

Organized by International Association on Electricity Generation, Transmission and Distribution (Afro-Asian Region) in association with Nepal Electricity Authority and Central Board of Irrigation & Power.

Dr SN Mishra, sumit@info.com.np

30 May 2005 to 2 June 2005 Kaprun, Austria ANCOLD

Dam Surveillance Practice

2nd Experts Seminar

This International Seminar will deal with the Surveillance of Dams in operation. The Participants will get acquainted with the fundamental principles of Dam Engineering and successful Safety Philosophies as well as with practical techniques of Dam Safety Assessment, presented by experienced experts.

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> June 6-23, 2005 Trondheim, Norway

Hydropower Development and Management

Examples of hydropower projects assisted by the mechanisms of Green Certificates and Tradeable CO2quotas will be presented by investors and by the World Bank Prototype Carbon Fund. Market analysts will provide insights into the future value of the new trading instruments.

There will be also sessions on Consequences of deregulation processes, environmental issues and Innovative technical solutions

congress@heitmann.no www.ich.no

July 18-19, 2005 Coimbra, Portugal

International Conference on Ground Improvement Techniques

There have been tremendous advances in ground improvement techniques in the last few years, many including new and innovative technologies. With ever increasing pressure to develop areas deemed in the past as too problematical or costly, a sound knowledge of present and future techniques to improve such ground is vital. The scientific programme covers a broad spectrum of the available and recently developed techniques. The conference aims to provide a forum for all those with an interest to come and exchange experiences on design, execution and the behaviour of improved ground.

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July 18-22, 2005 Austin, Texas

Waterpower XIV

Waterpower XIV represents a one-of-akind learning opportunity. Individuals new to the industry can receive the training needed to aid them in their professional development. Industry veterans can focus on specific areas of interest. All attendees will benefit from sharing proven strategies and lessons learned.

waterpower@hcipub.com www.hcipub.com/wp

August 21-27, 2005 Stockholm, Sweden

World Water Week www.worldwaterweek.org

> September 5-22, 2005 Trondheim, Norway

Hydropower and the Environment <u>www.ich.no</u>

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