

**MINISTRY OF DEVELOPMENT OF NORTHEASTERN REGION
&
THE WORLD BANK**

WORKSHOP REPORT

**STUDY ON
NATURAL RESOURCES, WATER & THE ENVIRONMENT NEXUS
FOR DEVELOPMENT AND GROWTH IN NORTHEAST INDIA
NEW DELHI 26-27 JUNE 2006**

1 INTRODUCTION

The Government of India (GoI), as part of its endeavor to expand avenues for sustainable growth and development in the country's Northeastern region, had requested the World Bank to focus its poverty-reduction efforts on this area. India's Northeast is home to an abundance of natural resources – forests and biodiversity, and water – that constitute a basis for regional wealth. Much of these resources, however, lie underused or are under threat due to population growth, unregulated economic development, and unchecked assault by man and nature. As such, the Ministry of Development of the Northeastern Region (MoDONER) had asked the World Bank to outline a strategy that would enable making the natural resources of the Northeast a platform for sustainable economic growth and poverty reduction. MoDONER and the World Bank jointly worked on the study **Natural Resources, Water & the Environment Nexus for Development and Growth in Northeast India**.

As part of the study, a series of background papers (see Table 1) were commissioned and these served as vital inputs for the draft Strategy Report that was discussed at the workshop. The themes covered by these background papers (sub-studies) ranged from the geomorphology of the Brahmaputra and Barak basins to river flooding and erosion, from hydropower and water resources development possibilities to options for inland water transport, from communities and forests to the current knowledge base about biodiversity. Most background papers were finalized in early 2006, after wide dissemination and discussion. They are available on the MoDONER website www.mdoner.gov.in.

• **NATIONAL-LEVEL WORKSHOP**

Prior to the finalization of the Strategy Report, MoDONER and the World Bank hosted a national-level consultation workshop in New Delhi on June 26-27, 2006. The workshop sought to discuss the draft report, and stakeholders from the central and state governments, as well as national experts and academics from a variety of institutions provided comments. International experts made presentations on selected topics covered in it, presenting relevant experiences from the United States, Canada and Brazil. The workshop was thus envisaged as a

crucial source of feedback and recommendations to incorporate, as appropriate, in the final report.

At the workshop, Ms Karin Kemper, lead water resource management specialist, the World Bank, spoke on the backdrop and broad findings of “**Natural Resources, Water and the Environment Nexus for Development and Growth in Northeast India**”. This was followed by presentations on the Tennessee Valley Authority by Ms Barbara Miller, lead water resource specialist, the World Bank; on the ‘Columbia River Basin: Downstream Perspective’ by Ms Cynthia Henriksen, United States Corps of Engineers; on the ‘Columbia River Basin: Upstream Perspective’, by Mr Kelvin Ketchum, British Columbia Hydro, Canada; on the ‘Columbia River Basin: Benefit Sharing Perspectives’, by Mr Johannes T. Smienk, chair Columbia Basin Trust, Canada; on ‘Water Management in a Federal Country: The Case of Brazil’, by Mr Benedito Braga, director, National Water Agency, Brazil; on the ‘Brahmaputra River Basin: Downstream Perspective’ by Mr Bharat Chandra Narah, Minister for Water Resources, Assam; on ‘River Basin Management: Upstream Perspective’, by Mr Gegong Apang, Chief Minister of Arunachal Pradesh; on ‘Northeast India: Harnessing Resources for Growth and Development’, by Mr. P.R. Kyndiah, Minister, DONER and Tribal Affairs, GoI.

Participants at the workshop were presented the draft strategy report – most had already been sent or otherwise accessed the draft – and came armed with feedback. Questions were invited after the presentations, leading to a lively, interactive and mutually-enriching discussion.

- **USING WORKSHOP FEEDBACK**

Feedback received at the June 26-27 workshop was taken into account and, broadly, incorporated into the final report, which is available at www.mdoner.gov.in and at www.worldbank.org/northeastindiastudy. In addition to specific technical comments and suggestions received, key issues raised by workshop participants were:

- There should be a transparent and reliable database for basin management, with computer modelling tools used to study the river basin. Initially smaller basins should be selected for study and the process should be scaled up. Assessments of rivers’ carrying capacities should be carried out.
- The stakeholder population should be expanded relentlessly, with the extension, for instance, of public hearings to grass-roots level. This would remedy perceptions of neglect among communities in the Northeast. Greater participation of women during such civil society discussions should be worked towards. Institutional arrangements should be put in place to ensure appreciation of local sensibilities and needs in relation to water resources development.
- Check pollution in rivers and dams, stress on the quality of the water. Drinking water should get greater priority in the report,
- Community involvement in decision-making is critical. The sharing of information on benefits and incentives establishes the integrity of the development programme and its implementing agency. Also, benefits and incentives should not be a one-time deal, but a long-term legacy, in the form of bonds and equity shares perhaps, for local communities,
- Where possible, royalties should be paid directly to communities, panchayats or tribal institutions, rather than be left to trickle-down a hierarchical bureaucratic system.

- There was need for sharing of knowledge and benefits not just among communities in the Northeast, but within a local and State-level matrix. This could include neighbouring countries such as China, Bangladesh and Myanmar.

2 WORKSHOP PROGRAM

The workshop – chaired by Mr P. R. Kyndiah, Minister, DONER and Tribal Affairs, GoI – covered issues ranging from water resources development in the Northeast, to structural and non-structural possibilities in flood management to the interplay between communities and forests. See **Annex I** for details of the workshop programme.

3 WORKSHOP PARTICIPANTS

A total of **121** participants attended the workshop. They included:

- Representatives from the Planning Commission, the Union Ministries of Environment and Forests, Power, Water Resources and Tribal Affairs.
- Representatives from the Central Water Commission, Brahmaputra Board, North-Eastern Council, and Inland Waterways Authority of India.
- Representatives from the Governments of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim.
- Academics and invited experts, including from the Indian Institute of Technology, Guwahati; Guwahati University; Dibrugarh University; Rajiv Gandhi University, Itanagar; North-Eastern Hills University, Shillong; World Wide Fund for Nature (India); Centre for Policy Research; and Northeast Centre; and the Omeo Kumar Das Institute of Social Change and Development.
- Officials from MoDONER and members of the World Bank study team.

See **Annex II** for a full list of participants.

4 THE WORKSHOP REPORT

This report provides a synthesised overview of the workshop’s proceedings. It attempts to reflect the key issues raised by participants, both in individual presentations and in the plenary discussions. Some of the opinions voiced were contradictory, as is expected in open discussions. This multiplicity of views is reflected in the report. Where they were made, power-point presentations have been reproduced in full (attached in Annex II). Readers are urged to refer to these.

5 SUMMARY OF WORKSHOP PRESENTATIONS & DISCUSSIONS

DAY 1

5.1 Session 1 – Opening

Ms Gauri Chatterji, secretary, MoDONER, welcomed the participants, pointing out the philosophy, as it were, behind the study: “The Ministry of DONER had invited the World Bank and the Asian Development Bank to assist us in preparation of project proposals in sectors which would lead to creation of infrastructure and better management of our resources.”

Mr Michael Carter, Country Director, World Bank, India, iterated the Bank’s mission: “The World Bank aims to improve the environment, reduce vulnerability of poor, strengthening the environment capabilities and policies for economic growth.” “The natural wealth of the Northeast,” he added, “is well acknowledged and to deal with the natural resources, water is of vital importance for the region.” It may be pointed out that the World Bank participated in the workshop, and in the project, on the basis of its India Country Assistance Strategy (CAS).¹

Mr P.R. Kyndiah, Union Minister, MoDONER and Tribal Affairs, went to the heart of the issue immediately, “It has correctly been stated in the draft report that appropriate water and forest management could provide benefits in the form of hydropower, agriculture, inland water transport, biodiversity conservation, reduced flood damage and erosion, longer dam and reservoir life, forestry and eco-tourism.”

“Systematic harnessing of these resources at both the regional and local levels,” the Minister added, “is expected to directly increase incomes and enhance economic growth and poverty reduction.” He said he was “optimistic the DONER Ministry and World Bank will surely work out an institutional framework to harness the natural resources of the Northeast”.

Mr Gegong Apang, Chief Minister of Arunachal Pradesh, made an impassioned plea from the region. “My State,” he said, “is suffering from the syndrome of isolation despite having immense natural resources. The state has no infrastructure and to set up any project in the state the local population should be taken into confidence.”

“The traditional tribal rights on rivers and forests of the state cannot be ignored,” he said, “so far no agencies have addressed tribal rights, and development plans were not carried out according to a need basis. People are apprehensive that their rights will be taken away.” He expressed his Government’s flexibility to development approaches: “We have adopted a

¹ The CAS, a document agreed to with Gol in early 2005, provides the basis for deploying the limited resources of the World Bank strategically to support India’s development and poverty-reduction strategy. The World Bank is a relatively small player on a national level in India. Its lending portfolio of US\$ 3 billion annually is less than 0.5 per cent of India’s GDP. The World Bank assistance is based on three working principles: (i) outcome oriented; (ii) strategic selection of sectors of engagement; and (iii) improving the knowledge base regarding development issues in India. The World Bank country assistance programme focuses on infrastructure, human development and rural livelihoods. Within each programme and project, the World Bank seeks to leverage increased governance effectiveness, empowerment of peoples and communities, and private-sector led economic growth.

policy to promote run-of-the-river projects, but we are also not opposed to high-raised dams if not many people are affected.”

Mr Bharat Chandra Narah, Minister of Water Resources, Assam, made a telling point: “The Northeast has enormous hydropower potential but it lacks consumers.” He sought the creation of “ample avenues in the Northeast” so that it could “consume at least 50 per cent of the power produced in the region”. He urged that “these aspects should find place in the strategy report”.

Mr Narah called for synchronised deforestation and forestation programmes so as to both maintain the ecological balance and facilitate faster economic development. He invited national and international specialists to visit Assam and interact with local river engineering experts.

“The Northeast is to be adequately provided with a network of seismological instrument stations and comprehensive planning,” Mr Narah said, “to minimise effects of earthquakes. [That aside] water quality improvement is the need of the day.”

Ms Karin Kemper, leader of the World Bank study team that researched and prepared the draft strategy report, presented an outline of her team’s work. The focus of the study, she said, was on the Northeast and, within the Northeast, on the Brahmaputra and Barak basins. The study’s emphasis was on the great natural wealth of the region and on the assumption that the region could potentially be one of the wealthiest in India. (See attached powerpoint in Annex III).

MoDONER’s charter for the Bank, Ms Kemper explained, was to (a) develop a vision for the development and management of water and related natural resources in the Northeast that could catalyse investment and initiate institutional change; (b) develop a framework to identify and prioritise high-return investments in physical and institutional infrastructure, taking into account development options; (c) identify critical institutional reforms for more effective development and management of the region’s water and forest resources; and (d) create a platform for interaction with stakeholders.

- **PRESENTATIONS BY WORKSHOP PARTICIPANTS**

Ms Barbara Miller, lead water resource management specialist, the World Bank, recounted the ‘Tennessee Valley Authority (TVA) Story’,² touching upon its historical context, keys to early success, contemporary imperatives, and development impact and benefits.

She described how the TVA Act had created a federal corporation in the United States, clothed with the power of government but retaining the flexibility and initiative of private enterprise, with broad powers of planning for the proper use, conservation and development of the Tennessee River Basin and its tributaries. It had specific powers to maximise navigation, flood control and the production of power consistent with the first two objectives, and provide for social and economic well being of the people of the river basin. The TVA was given the authority to build its own projects.

TVA, Ms Miller said, was alive to change. Its mission was to improve the quality of life in the region, supply affordable, reliable power, manage a thriving river system, stimulate

² www.tva.gov

sustainable economic growth, partner with stakeholders, improve financial viability of the fifth largest river system in the United States – one with 49 dams – and ensure integrated management for multiple purposes like flood damage reduction, navigation, power production, recreation, water quality, supply and recreation. Over the years, TVA had developed other functions: environmental protection and stewardship, land and shoreline management, reservoir operations and management, clean water and clean marina initiatives, pollution prevention and control, air emissions control (US\$ 5 billion total), demand-side management, recycling and reuse, environmental compliance, partnerships/public involvement, innovation and technology development.

Ms Miller pointed to the role of key individuals as institution-builders. TVA emerged from a unique set of circumstances; early success depended on the strength of its champions, and vision of its first leaders.

Ms Cynthia Henriksen of the United States Corps of Engineers spoke on the Columbia River Basin, shared between Canada and the United States. She explained that many agencies own dams here, with flood-control dams around the perimeter of the basin, and most power generation in the run-of-the-river dams on the Columbia River and its tributaries. Since the river flows through two countries, including four States of the United States, management is a complex issue, involving federal Governments, public and private utilities.

Ms Henriksen said benefits included a reduction in the spring floods caused by snowmelt. Flood control benefits were realised in Canada and the United States, right down to Portland, Oregon, near the mouth of the Columbia River. Other benefits accrued from the ability to cooperate with Canada to release flow in the winter, during cold weather and high power demand periods, to generate electricity in the United States.

Mr Kelvin Ketchum, Chair, Canadian Section, Columbia River Treaty Operating Committee, BC Hydro³, Canada, spoke on the Columbia River Treaty, citing it as an example of how two countries developed a mechanism for storage projects on an international river and shared the resulting power and flood control benefits equitably.

The demands were complementary. The United States had hydroelectric plants and flood control needs and Canada had good storage dam sites, Mr Ketchum said. Canada had 15 per cent of the basin area, mountainous, with much snow, and producing 35 per cent of the run-off for the entire basin. Fifty per cent of the highest-recorded flood flows at Portland, Oregon, the United States, came from Canada.

The Columbia River Treaty (1961) required Canada to construct the Mica, Arrow, and Duncan storage reservoirs on the Columbia River system (total storage of 19 km³), operate these reservoirs for optimum power generation and flood control downstream, in both countries

The Treaty gave priority to domestic and consumptive uses – for instance, drinking water and irrigation – and to flood control. These scored over energy production. Other related spin-offs – such as fisheries and recreation – were not mentioned in the document and were expected to be exploited by using “unilateral” flexibility under the treaty, or entering into mutually-beneficial agreements.

³ <http://www.bchydro.com/>

Mr Johannes T. Smienk, Chair, Columbia Basin Trust (CBT)⁴, Canada, spoke from the grass-roots as it were, articulating the concerns of local communities affected in large-scale projects. The CBT, he said, was a regional corporation, but with the power and capacity of a ‘natural person’. It was *not*, he affirmed, a Government agency. The CBT had a 12-member board of directors, one nominee from each of the six local governments in the region, six provincial (British Columbia) government nominees. All directors were required to be residents of the region.

What was CBT’s mandate? The Columbia basin treaty projects had displaced about 2,300 residents, and a dozen communities lost 60,000 hectares (231 square miles) of valley bottom land. That aside, the Columbia system was no longer a pristine river system, thus limiting opportunities for recreation and tourism. Communities along reservoirs were plagued by dust storms and the First Nations – the Canadian term for aboriginal communities, known in the United States as Native Americans – had lost much of their archaeological heritage.

The Columbia Basin Trust was created in recognition of the impact on humans and their habitat by the construction and continued operation of the Columbia River Treaty dams. In the early 1990s, residents of the Columbia Basin came together to press the province of British Columbia to respond to these concerns. Local governments in the basin coordinated their efforts and formed the Columbia River Treaty Committee which, along with provincial representatives in the region, negotiated with the British Columbia authorities.

The committee’s idea was to create a trust governed by a board of basin residents, which would receive and manage a share of the downstream benefits earned under the Treaty. On both counts, negotiations were successful. In 1995 the provincial legislative assembly, with the support of all political parties, passed the Columbia Basin Trust Act. Thus a new body was born, an initiative of and managed by civil society in the project-affected area.

Mr Benedito Braga, director, National Water Agency, Brazil, spoke on water management arrangements in a federal nation, with regional and inter-state variations and points of view. He pointed out that the river basin was the territorial unit for the implementation of Brazil’s National Water Resources Policy.

Brazilian law, Mr Braga said, makes allowance for the National Water Agency (ANA), a federal institution to implement the National Water Resources Policy and to co-ordinate the implementation of the National Water Resources Management System. A cooperation agreement strengthens state-level management agencies, facilitates management instruments (permits, control and charges), training of technical staff, monitoring and information systems, and implementation of the state-level – Brazil has 26 states – Water Resources Management Systems. Mr Braga pointed out that the process of achieving Brazil’s water resources management law and system had been a long one, and it had been driven through strong participation by academia and civil society.

5.2 Session 2

Technical Session: Inaugurated by **Mr Saifuddin Soz, Minister of Water Resources, GoI**

⁴ www.cbt.org

“Floods, erosion and deforestation are a big problem in the Northeast,” Mr Saifuddin Soz said, inaugurating a session that saw detailed presentations by the specialists invited from overseas, “and long gestation periods of any water related development projects adds to the problem.” Echoing the subtext of the strategy report, Mr Soz urged, “Involvement of communities in the decision-making process is important, and creation of employment for locals is crucial.”

Four of the invited experts now made detailed presentations on the theme of ‘Cross-Boundary Water Resources Management and Development; Examples from the Columbia Basin, Canada and United States’

5.3 Session 3

Facilitated discussion: Chaired by **Mr A. Sekhar, Advisor (Water Resources), Planning Commission**

- This was a lively, interactive session that saw some of the experts who had written background papers as part of the project – papers that had contributed to the understanding of issues for the strategy report – speaking about their work and sharing their thoughts on water resources and their management in the Northeast. Among the background paper subjects covered in this session were ‘Flood erosion management’, ‘Living intelligently with floods’, ‘Inland water transport’, ‘Hydropower’ and ‘Institutions for river basin management’ and ‘Options for regional cooperation’ (see Annex IV for titles and authors of all background papers).
- Questions and views were sought and readily provided by the audience, leading to a meaningful and mutually-appreciated exchange of ideas. Among the hotly debated issues was the one relating to floods – whether people of the region should adopt a fatalistic attitude to the floods and simply learn to live with them better, rather than, as panelist Sanjoy Hazarika put it, living on embankments that were never meant for human habitation. He made this point, explaining that he opposed the alternative solution of building dams.
- This led to sharp interventions from the audience, with some of the speakers, particularly from Tripura, Arunachal Pradesh and Mizoram, pointing out that an approach that centred on one state – as opposed to the region in its entirety – was flawed. They also sought greater evidence-based analysis of what solutions – living with floods, dams or otherwise – people in the Northeast wanted, arguing that these may differ from what was accepted as conventional wisdom. And, as pointed out, by Mr. Ete from Arunachal Pradesh, erosion is a large problem, too, with people losing their livelihoods, and “you can’t live intelligently with erosion”.

Opening remarks by Mr D.S. Poonia, Joint Secretary, MoDONER

5.4 Session 1

Biodiversity in the Northeastern Region: Chaired by Dr (Mrs) I.K. Barthakur, Member, Northeastern Council (NEC)

Dr Sejal Worah, Director (Programmes) WWF-India, spoke on the ‘Knowledge Base’. Her presentation stressed the need for biodiversity status assessment and mapping (including traditional knowledge systems, identification of critical areas, corridors, and traditional zones), underlying threats and root causes of biodiversity loss (including political, social and transition issues), economic valuation of biodiversity, an understanding of tenure, access and governance (role in conservation, contradictions and coordination, impacts on biodiversity), assessments for forest-based livelihoods and so on.

Dr Worah gave the example of Sikkim – where biodiversity conservation plays a major role in development, as almost 60 per cent of the State’s area comes under the Khangchendzonga Biosphere Reserve. But again, she pointed out, there are gaps in the knowledge base, there is scattered information, absence of a nodal centre that acts as a repository of knowledge. Unorganised and un-coordinated efforts lead to duplication and inconsistency; biodiversity conservation is just not a priority.

She highlighted that now is a crucial time to look at the intersection of biodiversity and the economic development push in the Northeastern Region.

Dr Vincent Darlong of the International Fund for Agriculture and Development (IFAD) spoke on ‘Community-Based Approaches to Local Natural Resource Management (CBNRM) in Northeast India’ and how these could facilitate poverty reduction, reversal of degradation of natural resources (particularly forest resources), expand livelihood options, and build social, human, physical, natural and financial assets.

Although The North Eastern Region Community Resource Management Project (NERCORMP) and CFANEI strategies have demonstrated elements of CBNRM success, overall understanding of CBNRM initiatives in the Northeast – how they are envisaged and prioritised between concerns of livelihood enhancement, sustainability, equity, and democratic decentralisation – remains limited. There is urgent need for research and documentation.

The Government’s dominant and expanding role in the Northeast sustains a perception that it is the paternalistic provider. In turn, this influences the gradual erosion of community-level capacity for self-governance and self-action. On the other hand, the Government is guided by a ‘decentralisation policy’, aimed at stimulating people’s capacity for self-governance and self-action (for example, Joint Forest Management or JFM).

There is need to develop a flexible framework for CBNRM. While many of the national NRM policies, such as the National Forest Policy of 1988 and JFM resolutions, are geared towards ecological sustainability and improving forest cover, the overriding concern of the communities to successful CBNRM is economic and livelihood enhancement. Blending these two aspirations holds the key. One possible option could be transforming JFM into CFM (Community Forest Management).

Research is also needed to develop models that would make NRM programmes attractive and remunerative to non-Government investors. There is strong possibility of linking CBNRM (for instance, CFM) with climate change projects, carbon trading and so on.

Professor (Mrs) Sheila Bora, Dibrugarh University, spoke on eco-tourism perspectives. She pointed out that the concept of ecotourism is not really clear and provided the audience with definitions which could provide a platform for a wider discussion in the Northeast. She urged developers to use the highly-evolved community system existing among most tribes in the Northeast, as these hold the key to biodiversity conservation. She said since ownership of land, forest and water resources in some of the Northeastern states was vested in the local people, any government laws may impinge on the traditional rights of these people. In such a situation it may be worthwhile to consider a system of entering into agreements directly with the local owners for the development of any tourism project and infrastructure.

Mr. Sushil Kumar, Vice Chairman, Inland Waterways Authority of India, highlighted the importance of Inland Water Transport for the Northeastern Region and outlined the institutional and investment needs to make use of the existing potential, including with regard to neighbouring countries.

Issues highlighted in the **discussion** that followed these presentations were:

- There is a lack of penetration on the ground by the major biodiversity NGOs, but there should not be only one: it should be a network.
- It would be important to make better linkages of water-related issues and biodiversity

5.5 Session 2

Facilitated Discussion: Chaired by **Mr A.M. Gokhale, former Chief Secretary, Nagaland, and former Secretary, Ministry of Non-conventional Energy Sources, GoI**

This facilitated discussion on ‘Biodiversity Options for Development in the Northeastern Region’ began with Mr A.M. Gokhale’s opening remarks. He said forest management and conservation in the Northeast *had* to involve Village Development Boards. These were capable of handling decentralised, on or off-grid, village-owned and operated electricity generation, using hydro or biomass or both. These power projects could be linked to the community agreeing to look after catchments, if GoI and World Bank chose to encourage them.

The next speaker, Mr Haridasan, spoke on biodiversity options and gaps in the Northeast. The region is a phyto-geographical gateway, with high endemism and is a centre of speciation of rich folk remedies and traditional healthcare. He warned though that there is no information on actual potential, no documentation of flora, fauna, traditional knowledge or usage, inadequate manpower and training and exposure. He also stressed health and livelihood security issues needed to be addressed.

Dr Sadanand Hedge focused on Arunachal Pradesh. He made the point that in spite of its rich biodiversity – forests, flora and fauna – the state is among India’s poorest. The benefit of these rich bio-resources was yet to reach the common man. This is tragic since Arunachal Pradesh is recognized internationally as one of the world’s 25 biodiversity ‘Hot Spots’, home to more than a third of India’s flora.

This was followed by three break-out sessions.

5.6 Break-out session I

‘Water Resources Management and Development’

Chaired by: Mr R. Jeyaseelan, Chairman, Central Water Commission

Summary of suggestions and discussion

- Start with small projects, then move on
- Data and knowledge are lacking
- Priority should be given to drinking water. Especially in the dry months from December to February, there is acute shortage of water in many of the hill States in the Northeast. As such, there should be a focus on water harvesting, and on an integrated water policy for the Northeast
- Micro-level basin-wise study and planning is necessary. Rainfall and flash flood data should be recorded. The pollution aspect at the dam sites should be taken into consideration. There should also be a thrust on completing projects conceived earlier but half-finished or unimplemented.
- Use of latest modeling techniques should be made.
- Flood and erosion studies need to be carried out.

5.7 Break-out session II

‘Biodiversity, Forest, Eco-Tourism and Development’

Chaired by: Mr A.M. Gokhale, former Chief Secretary, Nagaland, and former Secretary, Ministry of Non-conventional Energy Sources, Gol

Summary of suggestions and discussion

- Only experts in the field of forestry and biodiversity should be allowed to handle specialised matters related to forest, animal and biodiversity conservation. There is need to re-examine the classification of forest and forest products. Serious attention is required for *jhum* cultivation⁵. There is need to orient tourism entrepreneurs, but the question remains: who will train them? There is a scarcity of full-fledged ecologists.
- Eco-tourism is an important area, where involvement of local people is vital as it directly relates to livelihood issues. Traditional institutions should be taken into confidence as the Northeast has strong undercurrents of inter-tribe/clan rivalries outsiders are not aware of. There are more than 200 tribes and not one size fits all.
- The State Governments are weak in marketing development ideas, and farmers who cultivate cash crops as part of Government-sponsored schemes later suffer because they don't get a good price for their products. This needed to be addressed.

⁵ Jhum or shifting cultivation, popularly known as swidden cultivation or cultivation of slash and burn, is the most prevalent form of cultivation in the hill areas

- There is a need to clarify the legal status of bamboo by deciding if it is timber or not. That clarification would help the communities.
- There is also a complete disconnect between the older and younger generations in terms of biodiversity preservation traditions in the region. The problems of habitat shrinkage need to be watched closely.
- In biodiversity discussions, animals are often forgotten. Ethnobiology is important, including access and benefit sharing of genetics, and exploration of wildlife farming options.

5.8 Break-out session III

‘Regional and Local Benefits Sharing from Development Projects’

Chaired by: **Mr H.V. Lalringa, Secretary, North-Eastern Council**

Summary of suggestions and discussion

- Involvement of people right from the conceptual stage needs to be institutionalised. More project benefits should go to the local people. Before the project economics is worked out, ways should be found to give ownership to the community.
- One-time cash compensation will not be in the interest of the project. For a long-term relationship with the affected community, to make it feel that it is also part of the development scheme, there should be equity participation. Involvement of credible NGOs would perhaps help.
- Past experiences of oil companies that paid compensation to villagers in the 1960s were also discussed. Many people at that time bought properties and consumable items with the cash they received, spent their money and went back to the oil companies to ask for more. This showed the drawbacks of the one-time compensation strategy where cash was consumed and then was gone. A new system needs to be thought of.
- There needs to be an agreement between the states. Who will bear the costs for infrastructure? It is not only about benefit sharing but also about cost sharing.
- Give dam-affected people a share of revenues from dams, make them part owners, then people will come forward and want dams.
- State water agencies should be supported.

5.9 Closing session:

Chaired by **Mr D.S. Poonia, Joint Secretary, MoDONER**

Mr D.S. Poonia invited reporters from the three break-out sessions to summarise the proceedings of their respective sessions. The following provides the summaries as well as key issues highlighted by participants in the ensuing discussions.

To conclude the workshop, Mr Poonia, Joint Secretary MoDONER, thanked the participants and the World Bank, reaffirming MoDONER’s commitment to sustainable development and economic growth in the Northeast, a mission of which the strategy report and the workshop were only a part. He invited the World Bank and participants from the Northeastern States to make closing remarks.

Mr David Grey, Senior Water Advisor South Asia Region, World Bank, highlighted the importance of politics in water and regional development issues. He pointed out that it is legitimate for stakeholders to have their own agenda. It is necessary to look for joint development options because there are also opportunity costs for non-cooperation.

Ms Karin Kemper, study team leader, World Bank, thanked participants for their contributions to the workshop and suggestions for improvements to the strategy report that will inform the final version.

Mr. Sanjeev Ranjan, Resident Commissioner, Tripura highlighted the complexities with regard to Gumti dam that would need to be adequately reflected in the strategy report.

Mr Alok Rawat, Principal Secretary, Sikkim pointed out that by and large he agreed with the report. He specifically highlighted the international dimension of the report as very important, and also made a number of suggestions relating to Sikkim for editing in the draft report.

Mr Ete, Chief Engineer, Arunachal Pradesh said that he was grateful to the Government of India to being concerned with the Northeast and fully endorsed the report as prepared. He then went on to point out that the concept of NEWRA still needs to be negotiated. He pointed out that Arunachal Pradesh also wants development of the Northeastern Region, but that there are some requirements that need to be met. There is a need to look at affected people. They should benefit also.

Mr. Deka, Secretary, Water Resources Deptt., Assam endorsed the recommendations of the report. He then continued to mention that operation and maintenance of flood and erosion infrastructure are difficult if they are not income-generating and called for more community participation in this issue. He also highlighted the importance for the States to have a clear picture of their tributaries and called for the relevant studies to be taken up.

Further final comments from the audience included:

- No water management of the NER can be achieved without taking Bangladesh and Myanmar in consideration.
- Rainwater harvesting and landslides should be mentioned in the report. Small should be beautiful.
- Existing power sharing formula between Centre and states needs a complete relook.

In closing, the chair of the session, Mr Poonia, thanked the participants for their excellent contributions and closed the workshop.

ANNEX I
FINAL WORKSHOP PROGRAM

Time	Topic	Presentation by / Speaker
DAY ONE - 26 JUNE 2006		
0800 – 0900	Registration	
0900 - 0905	Welcome Address	Mrs. Gauri Chatterji , Secretary, MoDONER
0905 – 0915	Opening Remarks	Mr. Michael Carter , Country Director, World Bank
0915 - 0925	Presentation – Study on ‘Natural Resources, Water and the Environment Nexus for Development and Growth in Northeast India’	Ms. Karin Kemper , Lead Water Resource Management Specialist, World Bank
0925 - 0935	The Tennessee Valley Authority	Ms. Barbara Miller , Lead Water Resource Specialist, World Bank
0935 – 0945	Columbia River Basin – Downstream Perspective	Ms. Cynthia Henricksen , U.S. Corps of Engineers
0945 – 0955	Columbia River Basin – Upstream Perspective	Mr. Kelvin Ketchum , British Columbia Hydro, Canada
0955 - 1005	Columbia River Basin – Benefit Sharing Perspective	Mr. Johannes T Smienk , Chair, Columbia Basin Trust, Canada
1005 – 1015	Water Management in a Federal Country: The Case of Brazil	Mr. Benedito Braga , Director, National Water Agency, Brazil
1015 – 1025	Brahmaputra River Basin – Downstream Perspective	Mr. Bharat Chandra Narah , Minister for Water Resources, Assam
1025 - 1035	River Basin Management – Upstream Perspective	Mr. Gegong Apang , Chief Minister, Arunachal Pradesh
1035 – 1100	North East India: Harnessing Resources for Growth & Development.	Mr. P.R. Kyndiah , Minister, DONER & Tribal Affairs, GOI
1100 - 1130	Tea Break.	
1130 - 1145	Inaugural Address to Technical Session - North East Water Resources Authority – Management of River Basins	Prof. Saifuddin Soz , Minister of Water Resources, GOI
1145 – 1315	Crossboundary Water Resources Management and Development – Examples from the Columbia Basin, Canada and United States 1. The Downstream Perspective - USA 2. The Upstream Perspective – Canada/ BC Hydro 3. The Benefit Sharing Perspective – The Columbia Basin Trust Experience Presentations and Discussions	Ms. Cynthia Henricksen , U.S. Corps of Engineers Mr. Kelvin Ketchum , British Columbia Hydro, Canada Mr. Johannes T Smienk , Chair, Columbia Basin Trust, Canada

Time	Topic	Presentation by / Speaker
1315 – 1430	Lunch	
1430 – 1500	The Tennessee Valley Authority - Developing and Managing Water to Grow out of Poverty	Ms. Barbara Miller , Lead Water Resource Management Specialist, World Bank
1500 - 1530	Water Management in a Federal Country: The Case of Brazil	Mr. Benedito Braga , Director, National Water Agency, Brazil
1530 – 1600	Tea Break	
1600 – 1730	Facilitated Discussion about Water Resources in the Study Report <ul style="list-style-type: none"> - Flood, Erosion Management - Living Intelligently with Floods - Inland Water Transport - Hydropower - Institutions for River Basin Management 	Chair: Mr. A. Sekhar , Advisor (Water Resources), Planning Commission
1930	Dinner at HOTEL OBEROI, New Delhi	

DAY TWO - 27 JUNE 2006

0900 – 0910	Opening by MoDONER	Mr. D.S. Poonia , Joint Secretary, MoDONER
0910 – 1015	Biodiversity in the NER <ol style="list-style-type: none"> 1. The Knowledge Base 2. Community-based Approaches to Local Natural Resource Management 3. Option for Eco-Tourism 4. Options for Inland Water Transport 	Chair: Dr. (Mrs.) I.K. Barthakur , Member, North Eastern Council Dr. Sejal Worah , Director (Programs), WWW-India Dr. Vincent Darlong , International Foundation for Agriculture & Development Prof. (Mrs.) Shiela Bora , Dibrugarh University Mr. Sushil Kumar , Vice-Chairman, Inland Waterways Authority of India
1015 -1100	Facilitated Discussions on Biodiversity Options for Development in the North Eastern Region	Chair: Mr. A. M. Gokhale , Ex-Chief Secretary, Nagaland & Ex-Secretary, MNES, GOI
1100 – 1130	Tea Break	

Time	Topic	Presentation by / Speaker
1130 - 1300	Breakout Group Sessions on Selected Topics from the Study Report: 1. Water Resources Management and Development 2. Regional and Local Benefit Sharing from Development Projects 3. Biodiversity, Forests, Eco-Tourism and Development	Chair: Mr. R Jeyaseelan , Chairman, Central Water Commission Chair: Mr. H. V. Lalringa , Secretary, North Eastern Council Chair: Mr. A. M. Gokhale , Former Secretary, Ministry of Non-Conventional Energy Resources.
1300 - 1430	Lunch	
1430 – 1600	Report back from Breakout Sessions, Discussions and Recommendations for Study Report	Chair: Mr. D. S. Poonia , Joint Secretary, MoDONER Group Rapporteurs from Each Group
1600 – 1700	Summary and Closing	MoDONER, States, NEC, GOI Ministries, WB
1700 – 1730	Tea	

ANNEX II
WORKSHOP PARTICIPANT LIST

SPECIAL INVITEES

1. **Mr. P.R. Kyndiah**, Union Minister for Development of North Eastern Region
2. **Prof. Saifuddin Soz**, Union Minister for Water resources Development
3. **Mr. Bharat Chandra Narah**, Minister for Water Resources, Assam
4. **Mr. Gegong Apang**, Chief Minister of Arunachal Pradesh

LIST OF PARTICIPANTS

From (Agency)	No.	Name of Participants	
Ministry of Development of NE Region	5	Ms. Gauri Chatterji, Secretary	
	6	Mr. D.S. Poonia, Joint Secretary (IC)	
	7	Dr. Hari Krishna, JS	
	8	Mr. Sajal Mittra, Director	
	9	Mr. S.D. Sharma, Under Secretary	
	10	Mr. B. Balagopal, Director	
	11	Mr. Surender Kumar, Director	
	12	Mr. Amit Sahai, Director	
	13	Mr. Nikhil Pandey, Director	
	14	Mr. P.R. Meshram, Joint Director	
	15	Mr. S.K. Nayyar, Deputy Secretary	
	16	Mr. Jiwan Dass, Deputy Secretary	
	17	Mr. J.K. Sellate, Deputy Secretary	
	18	Mr. Samir Kumar Sinha, PS to Minister, DoNER	
	19	Mr. Rajeev Mathur, OSD to Minister, DoNER	
	20	Mr. K.S. Ranganathan, APS	
	21	Mr. Naushad Alam, APS	
	22	Mr. Bharat Bhushan	
	23	Mr. Angshumun Borah	
	24	Mr. Pan Singh, DoNER & MTA	
	25	Mr. S.S. Rawat, DoNER & MTA	
	Ministry of Finance	26	Mr. V.S. Senthil, JS
		27	Ms. Babni Lal, Director (PF-II)
	DEA, Ministry of Finance	28	Mr. R.P. Singh, Director
	Ministry of Water Resources	29	Mr. Rama Subban, JS
30		Mr. S.K. Chaudhuri, Commissioner (B&B)	

From (Agency)	No.	Name of Participants
	31	Mr. S.A. Baba, PS to Minister
Central Water Commission	32	Mr. R. Jeyaseelan , Chairman
	33	Mr. A.K. Kharya, Director
Brahmaputra Board	34	Mr. T.G. Antony Balan, Chairman
Ministry of Agriculture	35	Mr. R.K. Tiwari, Asst. Commissioner
Ministry of Power	36	Mr. A.K. Kutty, JS
North Eastern Electric Power Corporation	37	Mr. R.P. Singh, GM (Coordination)
National Hydroelectric Power Corporation Ltd.	38	Ms. O.R. Lalitha, Executive Director (Design & Engg)
Ministry of Environment & Forests	39	Dr. R.B. Lal, IG of Forests (Wildlife)
	40	Ms. Rekha Pai, D.I.G.
	41	Mr. Sanjay Kumar, D.I.G.F.
	42	Ms. Melinda Dias, D.S.
North Eastern Council (NEC)	43	Dr. (Mrs.) I.K. Barthakur, Member
	44	Mr. H.V. Lalringa, Secretary
Inland Waterways Authority of India	45	Mr. Sushil Kumar, Vice-Chairman
Government of Arunachal Pradesh	46	Mr. Avinash Kumar Misra, Resident Commissioner
	47	Mr. Gaken Ete, Chief Engineer (IFCD)
	48	Mr. Omak Apang, MLA
	49	Mr. R.K. Khrimy, MLA
	50	Mr. W. Lowangdong, MLA
	51	Mr. Brojen Baruah, OSD
	52	Mr. Dinesh Sharma
Government of Manipur	53	Mr. H. Bihari Singh, O.S.D. Power
	54	Mr. Y. Indramani, S.R.O.
	55	Mr. A. Luikham, Principal Secretary
Government of Meghalaya	56	Mr. H. Prasad, Addl. Chief Engineer (PHED)
	57	Mr. C.P. Marak, Conservator of Forests, Dept of Forests & Env.
Government of Mizoram	58	Mr. P. Krishnamurthy, Resident Commissioner

From (Agency)	No.	Name of Participants
	59	Mr. Lalmalsawma, Commissioner & Secretary, Planning
	60	Mr. Yogaraja, Director (Industries)
	61	Mr. Lalbiakthuama, Adviser & Joint Secretary, Planning
	62	Dr. R.K. Lallainthanga, Sr. Scientific Officer
	63	Mr. Ziley Singh, Advisor (Planning & Finance)
Government of Nagaland	64	Mr. I. Panger Jamir, Chief Conservator of Forests
	65	Mr. Anil Kumar, Principal Resident Commissioner
	66	Mr. Mhondamo Ovung, Addnl. Chief Engineer, PHED
Government of Tripura	67	Mr. Lok Ranjan, Commissioner & Secretary
	68	Mr. Sanjeev Ranjan, Resident Commissioner
Government of Sikkim	69	Mr. N.D. Chingapa, Chief Secretary
	70	Mr. G.K. Subba, Addl. Chief Secretary & Dev. Commissioner
	71	Mr. Alok Rawat, Principal Secretary
Government of Assam	72	Mr. D.K. Deka, Secretary, Water Resources
	73	Mr. N.C. Das, Director, Planning, Water Resources
World Bank (Including Study Team Consultants)	74	Mr. Michael Carter, Country Director
	75	Mr. David Grey, Senior Water Advisor
	76	Ms. Karin E. Kemper, Lead Water Resource Management Splst. and Task Team Leader
	77	Ms. Barbara A. Miller, Lead Water Resource Management Specialist
	78	Mr. Tapas Paul, Environmental Specialist
	79	Ms. Bela Varma, Program Assistant
	80	Ms. Vinod Satpathy, Team Assistant
	81	Ms. Barbara Mathilda, Team Assistant (T)
	82	Ms. Vandana Mehra, Regional Communications Splst, WSP
	83	Ms. Kiran Negi, Communications Officer
	84	Ms. Sonia Chand Sandhu, Sr. Environmental Specialist
	85	Ms. Ruma Tavorath, Environmental Specialist
	86	Mr. Ranjan Samantaray, Environmental Specialist (C)
	87	Mr. Ashish Khanna, Financial Analyst
	88	Mr. B.G. Verghese, Consultant
	89	Mr. Ashok Malik, Consultant
	90	Mr. Biswajyoti Das, Consultant
	91	Ms. Lianchawii, Consultant

From (Agency)	No.	Name of Participants
	92	Mr. M.K. Sharma, Consultant
	93	Mr. Sanjoy Hazarika, Consultant
Study Consultants (World Bank Consultants) & Invited Speakers	94	Ms. Cynthia Henriksen, US Corps of Engineers
	95	Mr. Josh Smienk, Chair, Columbia Basin Trust, Canada
	96	Mr. Kelvin Ketchum, British Columbia Hydro, Canada
	97	Mr. Benedito Braga, Director, National Water Agency, Brazil
	98	Dr. (Mrs.) Shiela Bora, Dept. of History, Dibrugarh University
	99	Mr. Herb Wiebe, North-West Hydraulic Consultants, Canada
	100	Dr. Vincent Darlong, NERCORMP
	101	Dr. Chandan Mahanta, Associate Prof., IIT, Guwahati
	102	Dr. Dulal C. Goswami, Dept. of Environmental Science, Guwahati University, Guwahati
	103	Dr. Sejal Worah, WWF-India
	104	Mr. Sudipto Chatterjee, WWF – India
	105	Cdr. R.M. Nair, Former Member (Technical), Inland Waterways Authority of India
Asian Development Bank	106	Ms. Pratima Dayal
	107	Ms. Jaya Chatterji
Other Experts	108	Mr. A.M. Gokhale, Ex-Secretary (MNES)
	109	Mrs. Savita Gokhale, Member, Earthcare Foundation
	110	Prof. Nayan Sharma, IIT Roorkey
	111	Dr. O.P. Singh, Reader & Head, Centre for Environmental Studies, North-Eastern Hills University, Shillong
	112	Dr. P.C. Bhattacharjee, Prof., Dept. of Zoology, Guwahati University, Guwahati
	113	Dr. Indranee Dutta, Prof. & Director, Omeo Kumar Das Institute of Social Change & Development, Guwahati
	114	Mr. H.N. Das, Ex-Chief Secretary, Guwahati
	115	Dr. Sadanand N. Hegde, President, A Society for Promoting Environmental Conservation, Education and Sustainable Development, Bangalore
	116	Dr. K. Haridasan, Joint Director, Foundation for Revitalisation of Local Health Traditions, Bangalore
	117	Mr. Kamesh Salam, Director, Cane and Bamboo Technology Centre, Assam
	118	Mr. Atish Mandal, DGM (Mktg.) – Heritage World India
	119	Mr. Abhinandan Saikia, Program Officer, WWF - India

From (Agency)	No.	Name of Participants
	120	Mr. M.C. Bora, Chief G M, Coal India Ltd.
	121	Mr. V.P. Chopra, Ex. Director, Union Public Service Commission

ANNEX III

POWERPOINT PRESENTATIONS

ANNEX IV

BACKGROUND PAPERS

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