
Overview of Water and Water Conflicts in NE India

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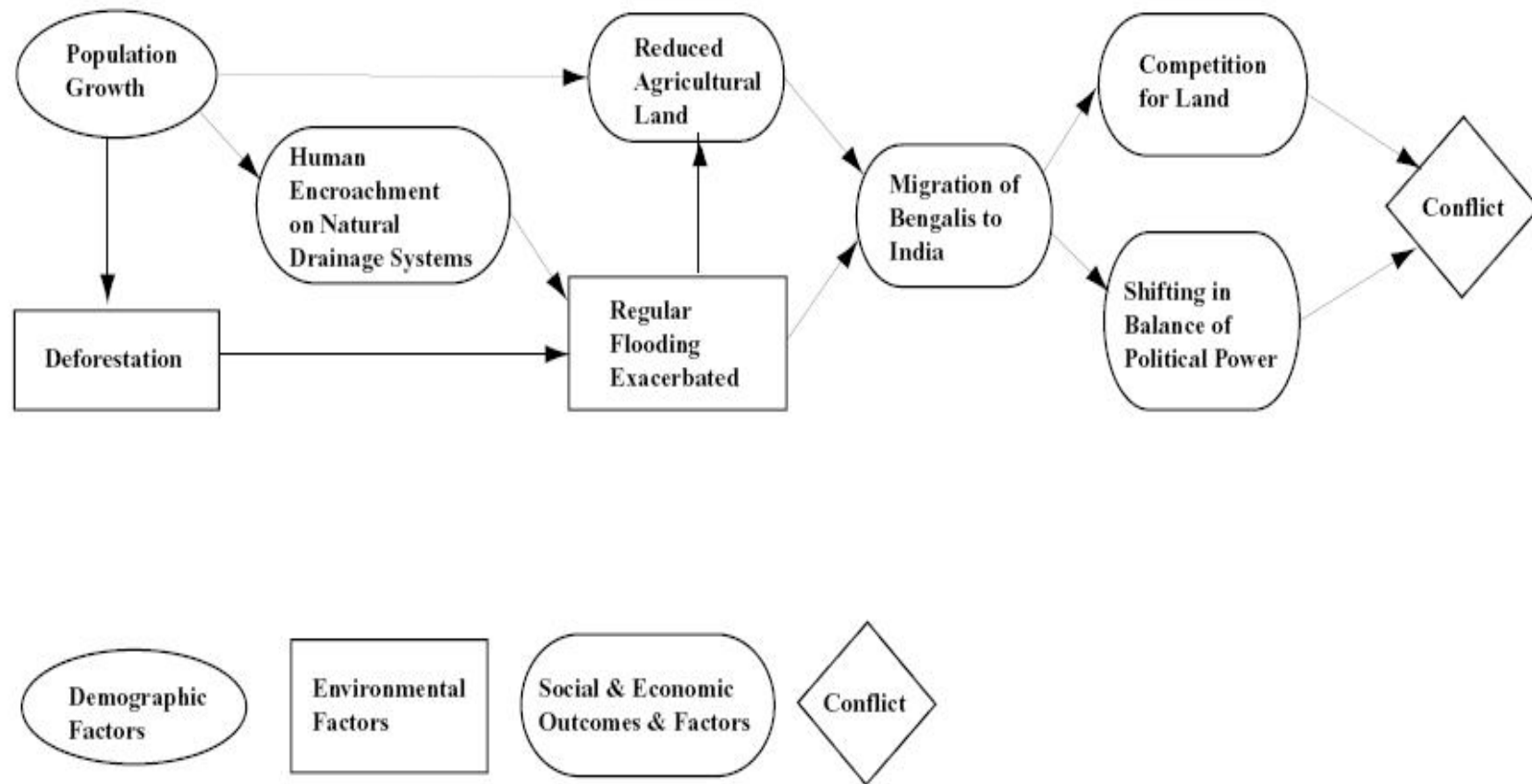
Training Programme on Understanding and Resolving Water Conflicts
in the Northeast India

23rd-26th January 2012, Guwahati

Areas of Major Emerging Conflicts...

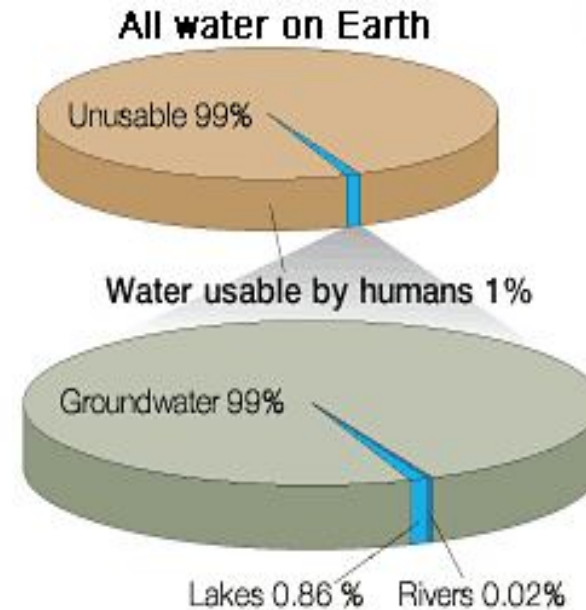
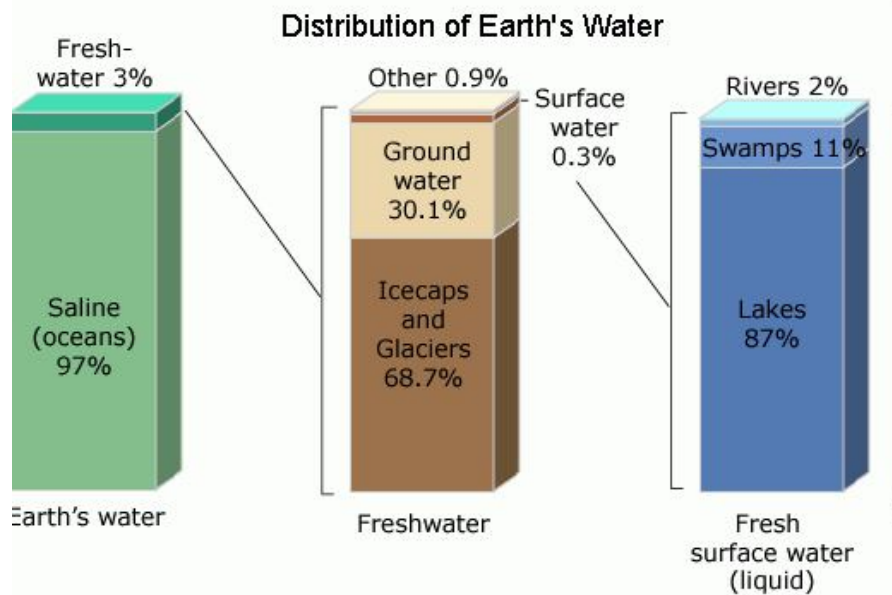
- Hydropower Projects
 - Drinking water
 - Water Quality and Health
 - Floods
 - Bank erosion and sedimentation
 - Drought
 - River Pollution
 - Groundwater
-

Flow Chart of Environmental Conflict for India (Northeast) Case Study



Source: UNEP, 1999

EARTH'S WATER



Groundwater provides
22% of all freshwater withdrawals
37% of agricultural use (irrigation)
37% of the public water supply withdrawals
51% of all drinking water for total population
99% of drinking water for rural population



Drinking Water

Water quantity +
water quality +
safe sanitation +
effective hygiene

= reduce diarrhoeal disease incidence by two-thirds



Access to safe drinking water

India: 88%

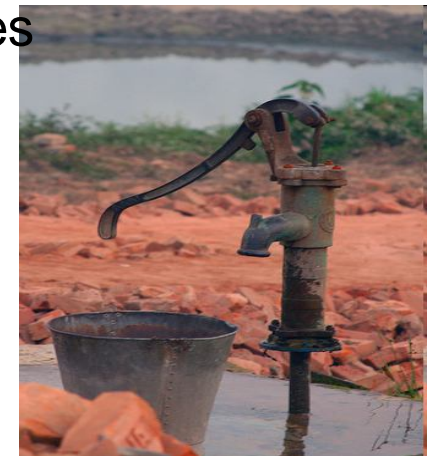
Assam: 77.55% (only 37.88% household has drinking water sources within their premises)

(Census 2001)

21% of communicable diseases in India are water related

In India, at least about 1.5 million children below the age of five years die every year due to various water borne diseases

(World Bank)



Drinking water



- Water borne diseases massive burden on society
- Most diseases are preventable by consumption of safe water



Dental & Skeletal Fluorosis

Arsenicosis and Fluorosis

- Assam is fifth arsenic endemic state
- First case of fluorosis confirmed in May, 1999 in Karbi Anglong district





**Fluoride in drinking water, 8.02 mg/l;
village Bagpani of Bagpani area, Karbi-
Anglong district, Assam**



**Invalid mother. The girl can not go to the
school but looks after the family. All
members are fluoride affected.**



**Skeletal fluorosis; fluoride in drinking water, 14.36 mg/l; village Nopak-Killing of Bagpani
areas, Karbi-Anglong district, Assam**

MULTIDIMENSIONAL ATTRIBUTES OF WATER GOVERNANCE

PRIVATE - PUBLIC
PARTNERSHIP: A Promising
Model

EFFECTIVE
WATER
GOVERNANCE



PARTICIPATION

TRANSPARENCY

JUSTICE

ACCOUNTABILITY

CONSISTENCY

INTEGRATION

VALUE SYSTEM

STEWARDSHIP

Water, that is to say water supplies, irrigation and canals, drainage and embankments, water storage and water power.....” is a state subject, as such an integrated approach can help mitigate the issues of water scarcity and water pollution!!!



Flood in Assam

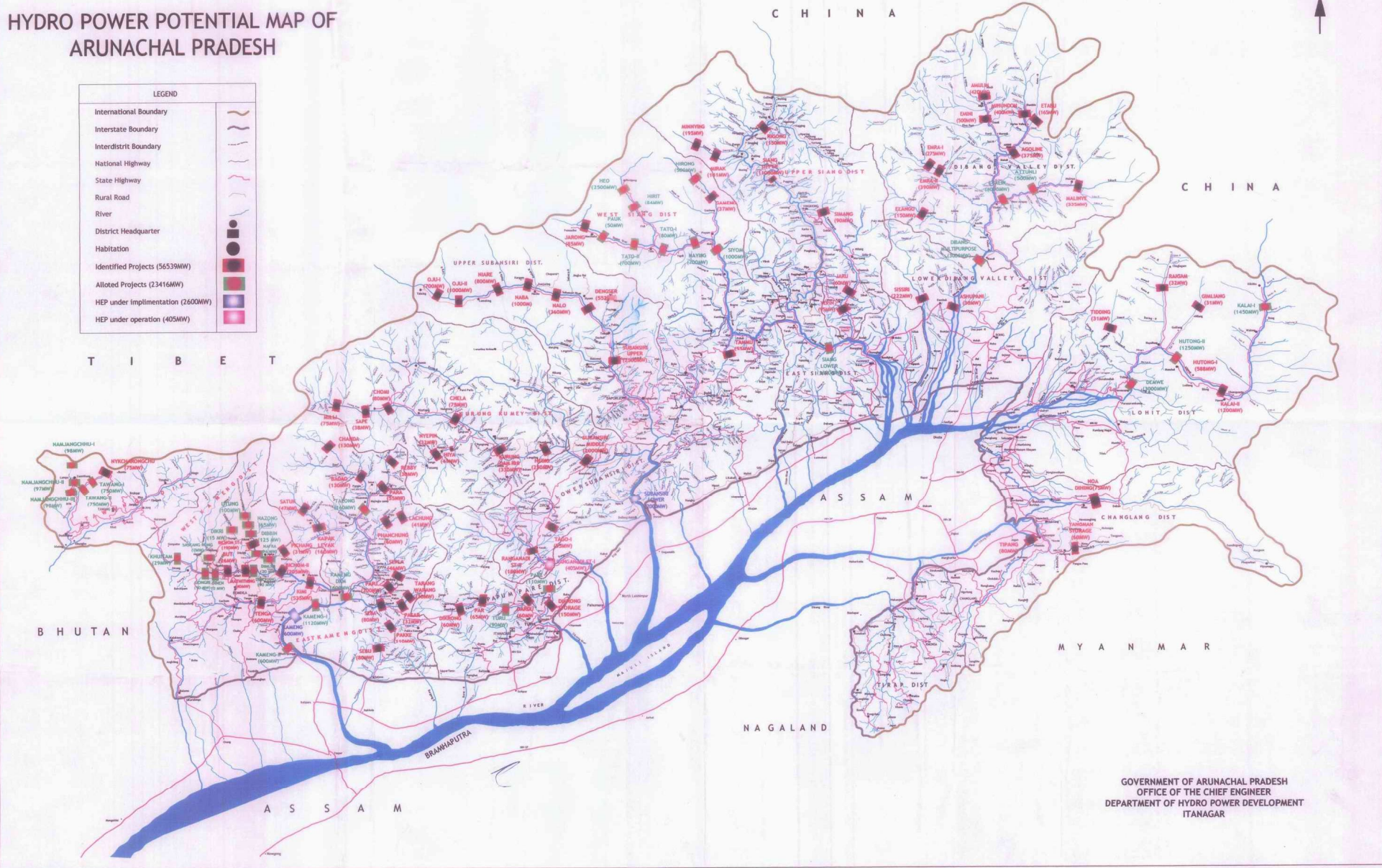
Feared outcome of all these is water conflict

- Inequitable benefit
 - Displacement of population
 - Disruption of community networks
 - Loss of cultural heritage
 - Difficulty of transition to alternative livelihood
 - Loss of unique biodiversity
 - Submergence of land
 - Loss of livelihood
-

HYDRO POWER POTENTIAL MAP OF ARUNACHAL PRADESH

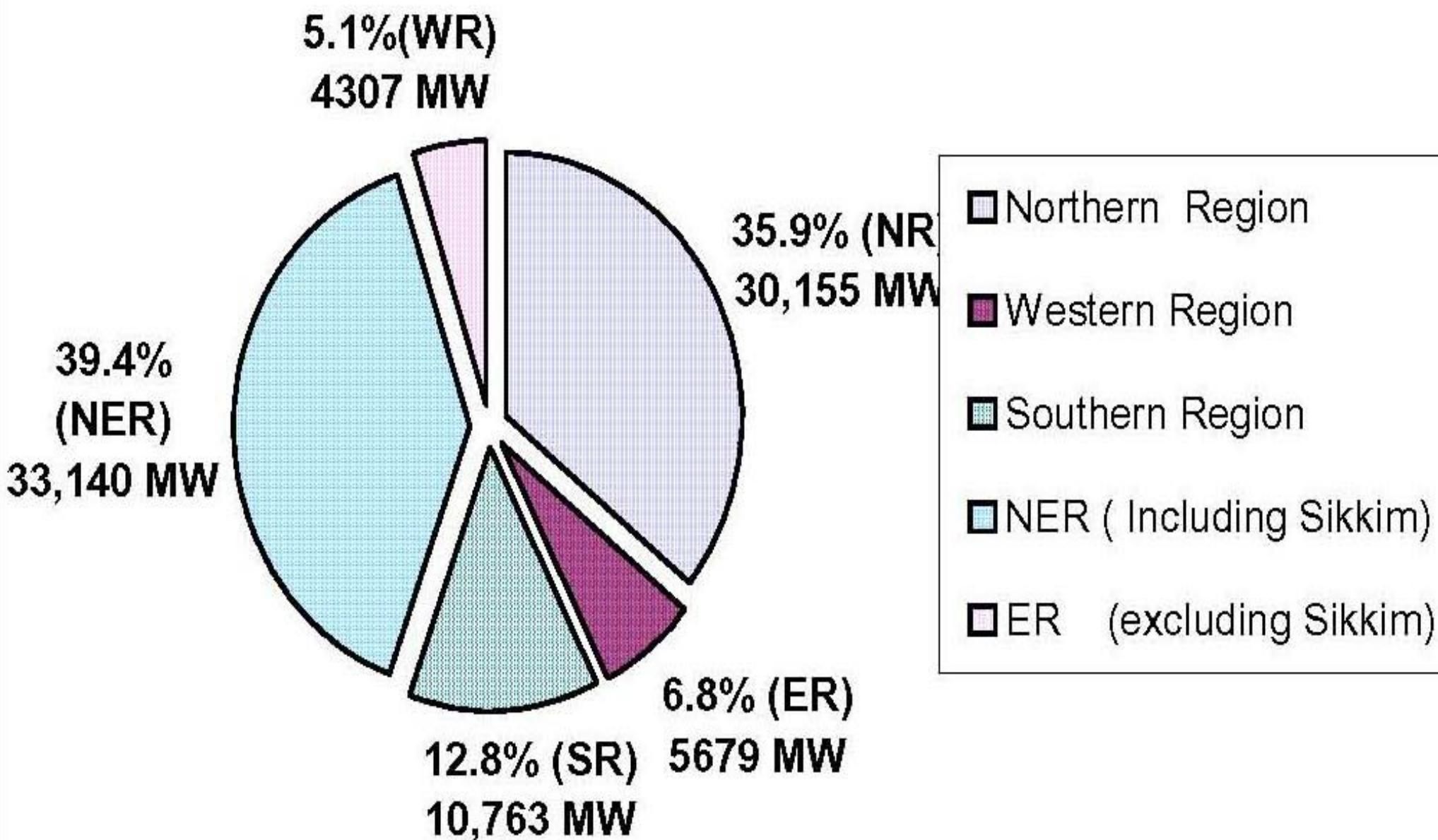


LEGEND	
International Boundary	
Interstate Boundary	
Interdistrict Boundary	
National Highway	
State Highway	
Rural Road	
River	
District Headquarter	
Habitation	
Identified Projects (56539MW)	
Alloted Projects (23416MW)	
HEP under implementation (2600MW)	
HEP under operation (405MW)	

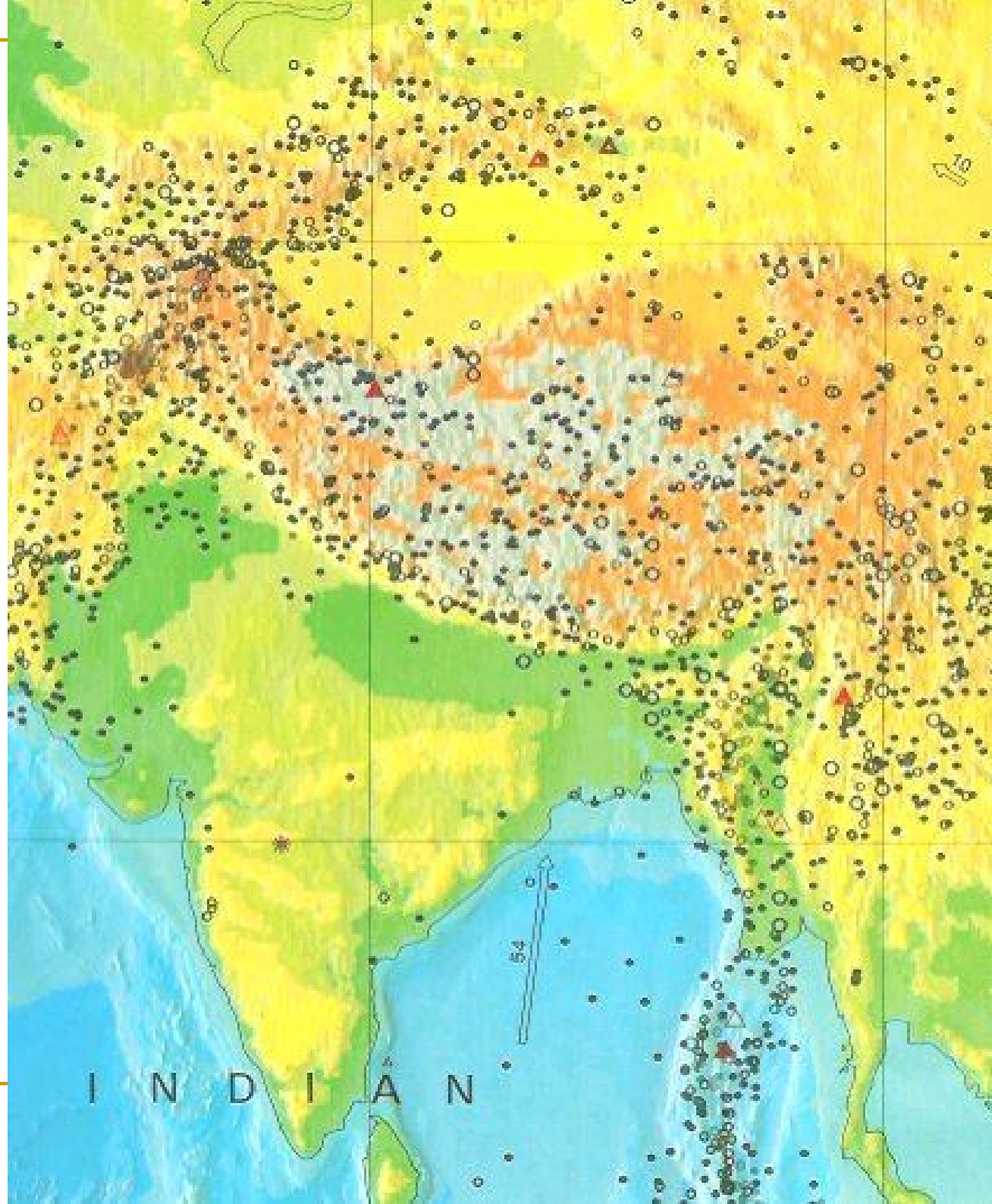


GOVERNMENT OF ARUNACHAL PRADESH
 OFFICE OF THE CHIEF ENGINEER
 DEPARTMENT OF HYDRO POWER DEVELOPMENT
 ITANAGAR

HYDROPOWER POTENTIAL (MW) - Regionwise Distribution



TOTAL POTENTIAL: 84,404 MW @ 60% LF



Key recommendations of WCD to review on-going and planned hydroenergy projects, ensuring that the review:

- uses stakeholder analysis based on recognizing rights and assessing risks;
 - enables vulnerable and disadvantaged stakeholder groups to participate in informed manner;
 - includes distribution analysis to see who shares costs and benefits of project;
 - develops agreed mitigation and resettlement measures to promote development opportunities and benefit sharing for adversely affected people;
 - Avoids any severe and irreversible ecosystem impacts;
 - provides for environmental flow requirement; mitigates or compensates unavoidable ecosystem impacts; designs and implements recourse and compliance mechanisms
-

Characteristics of HE Projects of NE

- Incomes, savings, education levels, farming intensity, off-farm opportunities are not reflective of mainland India
- Affected people less wealthy, less educated than national average
- More dependent on farming and government subsidies for livelihoods
- Political and social marginality compounded as vast majority are often very small ethnic minority groups
- Lack reliable access to alternative development models and to decision processes through which large hydro-power projects are legitimized
- Used to surplus water – less used to its absence

Characteristics of HE Projects of NE

- Equally important - the region is environmentally sensitive
 - Biodiversity hot spot– most biologically diverse temperate region of the globe
 - Places are fast losing pristine state – important repository of cultural diversity
 - Tectonic as well as reservoir induced seismicity can be critical; one of the six most seismically active regions of world
-

Characteristics of HE Projects of NE

- Fragile economy and diverse threatened cultures and species along ecologically sensitive trans-boundary rivers - EIA should be careful and comprehensive, but not so far
 - India's policy prevents sharing hydrological data on trans-boundary rivers
 - Publicly unavailable data/results fuel concerns and deny alternatives
-

Protest against hydropower dams in NE India



Reports on Subansiri Hydro power project:

The Assam Tribune
 Search Past Week Guwahati, Friday, November 06, 2009

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Dhemaji students' fast over Subansiri dam
 STAFF Reporter
 GUWAHATI, Nov 5 - The members of the All Dhemaji District Students' Union (ADDSU) today observed a ten-hour [hunger strike](#) at Gogamukh in Dhemaji district. The programme was taken up in protest against the failure of the National Hydro-electric Power Corporation (NHPC) and the Assam Government to honour the suggestions of [the expert committee](#) to keep construction of the Lower Subansiri Hydel Project dam in abeyance until the final report of the committee is submitted.

In a statement here, the ADDSU has said that its members would also take out torchlight processions in the subdivisional headquarters of the district in the evening of November 12 on the demand of honouring the suggestion of the expert committee.

It needs mention here that the expert committee was... an agreement arrived at a tripartite... Government with the...

The Assam Tribune
 Search Past Week Guwahati, Tuesday, August 04, 2009

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AASU, TMPK join hands against mega hydel projects
 STAFF Reporter
 GUWAHATI, Aug 3 - The All Assam Students' Union (AASU) and the Takam Mishing Porin Kebang (TMPK) today announced their decision to go for [joint](#) agitational programmes demanding safety of the life and property of the [people living in](#) the [downstream](#) areas of the mega hydel [projects](#). The agitational programmes proposed by the students' bodies will start with a three-hour satyagraha programme from 11 am of August 18 at [the district](#) headquarters of the State, demanding safety of the life and property of the people living in the downstream areas of the Ranganadi and Kureishu hydel projects.

The demand for holding up construction activities of Subansiri Hydel Power Project...

The Telegraph
 calcutta, india
 Tuesday, February 10, 2009

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Tussle over Subansiri projects - Plan irks green activists
 A STAFF REPORTER
 Guwahati, Feb. 9: Environmentalists are up in arms over the decision of the committee of the National Board for Wildlife, which gave its approval to construction of dams in the upper reaches of Subansiri.

A meeting of the committee held recently in Delhi has decided that any project of building of dams in the upper stream of the river would now be considered independently on its merit.

Interestingly, the Supreme Court in 2004 on the granting of clearance for constructing dams in the upper stream of the river would now be considered independently on its merit.

The National Hydroelectric Power Corporation (NHPC), executing both Subansiri hydroelectric project had put a condition that no dam will be built upstream of lower Subansiri.

The National Hydroelectric Power Corporation (NHPC), executing both Subansiri hydroelectric project, is interested in building the Middle Subansiri projects — two mega projects — in the upstream areas around...

Posted under: News
Erosion by Dikrong, Subansiri takes serious turn in Bihpuria
 NARAYANPUR - Though the flood situation has improved to some extent in Narayanpur and Bihpuria revenue circle, erosion by Dikrong and Subansiri has taken serious turn in near Kewamora, Sisapathar, Ahomgaon, Khora, Dongibil, Jamuguri, Bodoti causing panic among the dwellers of these concerned villages.

Date: 24/06/2008
 Source: Assam Tribune (Guwahati)
 Tags Flood Control, Bihpuria

Posted under: News
Arunachal's dam will wipe out many a livelihood in Assam
 Anand Sankar The 'thwack' of axes hitting wood and the periodic grinding of saws is audible as one enters the village of Sunapur in Lakhimpur district in Assam on the banks of the River Subansiri.

Date: 20/06/2008
 Source: Business Standard (New Delhi)
 Tags Arunachal, Assam, Dams, Hydroelectricity, Subansiri

More articles on Hydropower projects in NE India:

Any PROPERTY in Kolkata

The Telegraph

calcutta, india

Today's Edition | Monday, September 05, 2005 |

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Panel to study project impact - ASTEC asked to compile reports on river schemes

A STAFF REPORTER

Guwahati, Sept. 4: Dispur has asked the Assam Science Technology and Environment Council (ASTEC) to prepare a detailed project report on the cumulative environmental impact of the various river valley projects in the Northeast and the neighbouring countries on Assam.

The government has set up a committee to monitor the impact of the proposed dams on Assam's physio-chemical, biological and cultural environment.

As Assam is located on the downstream of all the power projects, it will face maximum threat to its biodiversity. The study will also determine whether it is necessary to redesign or relocate the projects to minimise the environmental costs.

?Environmental impact assessment might have been conducted before these projects received clearance. But the interest of Assam was not considered as the projects were located outside Assam,? said a committee member.

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THE HINDU

Online edition of India's National Newspaper
Monday, Jun 18, 2007
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Medha Patkar criticises mega dam projects

Special Correspondent

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The Assam Tribune

Guwahati, Monday, November 17, 2008

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NEEPCO blockade leads to drying up of Ranganadi downstream

CORRESPONDENT

NORTH LAKHIMPUR, Nov 16 - In what may be termed an early warning to an apocalyptic ecological disaster, the waters of Ranganadi dried up completely on its downstream course near North Lakhimpur, thanks to the blockade by the hydro-electrical power plant dam by the NEEPCO.

The dam, which is located in Yazali, inside neighbouring Arunachal Pradesh on the upstream Ranganadi, used to block the natural flow of the waters of Ranganadi during the dry season in winter in order to run its turbines to generate power. As there is no rainfall during this time of the year the water level of Ranganadi on its downstream area in North Lakhimpur recedes considerably resulting in complete drying of the river.

The blockade of the river waters of Ranganadi on its upstream by NEEPCO's power plant at Yazali has not only dried the river on its

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The Assam Tribune

Guwahati, Wednesday, September 02, 2009

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STATE

Warning on water release from Ranganadi plant given: NEEPCO

CORRESPONDENT

LAKHIMPUR, Sept 1 - The North East Electrical Power Corporation (NEEPCO) had warned the Lakhimpur district administration of any downstream affect of its dam of Ranganadi Power Plant in Yazali, Arunachal Pradesh two years before its released matters devastated North Lakhimpur on June 14, 2008. This was stated by Keshab Kishna Chatradhara, the secretary of the united front of thirty organisations opposing big dams and mega-hydro-electric power plants in the North East.

The statement was circulated among the pressman and public in a meeting held at Gogamukh college on August 19 while opposing the dam of Lower Subansiri Hydro-electrical Power Plant by NHPC. The statement says that the NEEPCO informed the Lakhimpur district administration by a letter on June 2, 2006 about the possible disaster that could occur in the downstream areas of Ranganadi river because of the release of water from the dam is Yazali.

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Conferences/ Meetings



What is needed...

- Presumptuous to suggest to restrict economic development aspirations, but efforts to maximize community benefit and minimize conflict mandatory
 - Transparency and inclusiveness of decision making
 - Environmental and social considerations
 - Monitoring of impacts during construction and operation as agreed by stakeholders
-

Required action towards policy

- Targeted thrust on regional governance, local communities and stakeholders
- Regional cooperation in water/energy/food security
- Increased accountability by different actors
- Decentralization of decision making
- Mechanisms for equitably sharing benefits from water projects
- Focus not only on broad-based, long-term growth, but also on complementary activities that ensure livelihood security at community level
- Incentives and disincentives that encourage initiatives consistent with sound policy objectives; discourage initiatives that direct benefits to a small group while inflicting social and environmental costs to community at large

The way ahead ...

- Documentation and resolution of conflict
- Typological methodology for NE conflicts
- Explore institutional change as a necessary first step
- Seek governance that focuses on equitable benefit sharing, spending of additional revenue on meaningful community development
- Transparency in decision making to increase accountability
- Support meeting challenges of protecting livelihood, cultural, and territorial identity of tribal communities and environment
- Promote long term inter-state or inter community cooperation in interest of mutually beneficial inter-dependencies and trade-offs
- Seek ways to equitably distribute losses and gains, arising from water projects

