

Workshop:

RIVERS, PEOPLE AND CLIMATE CHANGE IN SOUTH ASIA

21 April 2010

2-5 pm

Room 313

Indian Social Institute, New Delhi

A self-organised workshop preceding the
Assembly towards Union of South Asian Peoples (22-23 April)

Organised by the India Climate Justice Group

CONCEPT NOTE¹:

The countries of South Asia share cultural, social, political and geographical links. Rivers are one of the most important common resources of the region. The region also shares some of these rivers with other nations beyond its political boundaries. Rivers help share water services, biodiversity, climate and livelihoods for millions of people. Rivers are also crucial for the water, energy, food and agriculture security for the people of the region.

In the context of threat of climate change impacts, the sustainable existence of rivers has become even more important. In every sense, thus, it seems rivers should be a means of sharing, spreading and sustaining accord.

Unfortunately rivers these days are more known for creating discord, as can be seen from the statements of Government representatives across the region. Even if one were to put aside the completely false and unacceptable war mongering that some of these statements indulge in with increasing frequency, there is no doubt that the sharing of river waters has huge potential to create and accentuate discords. The role of civil society groups in the region becomes important in this context.

Impact of climate change on Rivers in South Asia

Climate change impact on rivers will be felt in multiple ways:

- Melting Glaciers will have significant impact in flow of rivers across a year and over the years. Major impact will be in the non monsoon flow regime of the rivers. For example, it has been found that the average contribution of snow and glacier runoff in the annual flow of the Sutlej River at Bhakra Dam is about 59%, 41% being from rain. The average snow and glacier contribution in the annual flows of the Chenab River at Akhnoor was estimated to be 50% and for the Ganga at Devprayag was about 30%.² These figures give some indications about the extent of impacts due to glacial melting. There could be some not so noticeable increased glacial melt-runoff initially, but significant decrease eventually.

¹ Note prepared for the India Climate Justice Group by South Asia Network on Dams, Rivers and People (SANDRP)

² "Dams, Rivers & People", Feb March 2010, page 16

- Broadly, climate change is likely to affect the hydrological cycle³, which will result in (i) more rainfall in lesser time, increased frequency of high rainfall events; (ii) decrease in number of rainy days; (iii) overall increase in precipitation; (iv) increase in runoff but less ground water recharge; (v) increase in flood events particularly of flash floods; (vi) increase in gap between rainfalls in monsoon, increase in drought like situations; and some other related issues like (vii) increase in landslide events in hilly areas.
- The warmer climate would also mean increased water needs for all activities, thus there will be more extraction of water from the hydrological cycle, impacting the water availability in nature in general, including in rivers and aquifers.

When do rivers start being seen as a source of discord?

Until large dams and diversion projects are planned or built, normally, one does not see any discord in sharing of rivers. The sharing of the Ganga river between India and Bangladesh post Farakka is one example. Till recently, the Barak river shared between India and Bangladesh did not see any discord. Now that India is planning its largest water storage reservoir till date on that river, the river has become a means of discord not only between India and Bangladesh but also within India.

A very interesting example in this regard is the sharing of the Teesta River between India and Bangladesh. Here again there was no serious problem till early 1980s when both India and Bangladesh started planning/ construction for a barrage in their respective territories to divert waters to irrigate several lakh hectares in respective command areas. India completed the work on the Gazoldoba barrage in 1990 (the irrigation component is still under construction, see below), some 105 km upstream of the Bangladesh barrage on the same river.

The abysmal performance of the Teesta Barrage project in West Bengal can be seen from the following figures from the Comptroller and Auditor General of India as of March 2004:

Project	Latest est. cost	Pre AIBP Expd. Incurred	Expd incurred under AIBP	Ultimate irrigation potential	Pre AIBP Potential created	Potential created under AIBP	Total Potential utilised	Potential Utilised created under AIBP
Teesta Barrage	1,177.00	553.03	367.17	526.70	73.366	45.744	66.200	9.250

(Cost in Indian Rupees Crore, Irrigation figures in '000 ha)

According to the working group report for the 11th Plan, the project was started in the 5th Plan (1974-78), and the latest estimated cost is Rs 2068 crore, the balance cost at the end of the 10th Plan (March 2007) was Rs 1017.04 crores, out of which the 11th Plan proposed to allocate Rs 410 crores, which means the project won't be completed at least till March 2012. What this means is that over three decades after the work on the project started, it had not achieved irrigation of even 15% of its projected command area of 5.27 lakh ha.

The project is thus a big failure in achieving the expected irrigation benefits. Reports from Bangladesh suggest that the Bangladesh Teesta barrage has also failed to achieve the promised irrigation. So in a nutshell, the river has been destroyed, (incidentally, the Teesta barrage project of India also seeks to transfer some water from Teesta to Mahananda river, but it is not clear how much water and with what objective) huge costs have been incurred, and discord has been created, where none seem to exist earlier.

³ See for details: *There is little hope here: India's National Action Plan on Climate Change*, SANDRP, 2009

This is typical scene in such projects. With the construction of a large number of hydropower projects in the Teesta river basin in Sikkim and West Bengal, conflicts over Teesta waters is likely to escalate in years to come.

As even a mainstream business newspaper editor like Swaminathan S Anklesaria Aiyar has now⁴ acknowledged, “What this (India-Pakistan) debate (on Indus Water Treaty) misses is that dam-based canal irrigation is an obsolete, wasteful 19th century technology that cannot meet 21st century needs”. But the countries in the South Asian region continue to pursue the failed big project agenda, neglecting the concerns of the poor, the needy, the environment, the climate and the future generations and create more conflicts.

There are other possible reasons that can also create river discords, including: Hydropower projects, Pollution, increasing urbanisation, excessive and unsustainable groundwater extraction, sea water ingress, among others. Lack of consideration of equity within and across borders is also one of the root causes of discord in sharing river waters.

Increasing role of Corporations:

The involvement of private companies in hydropower and other water related projects in India, Nepal, Bhutan and Bangladesh is increasing. Some of the big businesses involved include: The Tata Group, GMR, Reliance, Jindal and Athena amongst others. Since corporate bodies have little accountability to the people and since their accountability to the state is also on weak and State itself is largely acting in the favour of corporate bodies as against the interests of the people, such involvement of the private companies in river management is likely to create more problems.

Possible flashpoints in near future:

HYDRO PROJECTS ON THE INDUS BASIN:

India’s mad rush for hydro projects in the Chenab, Jhelum and Indus basin is likely to destroy the rivers within India and beyond. On the other side, Pakistan is also in this race to the bottom. In this context, a good example is the case of Kisan Ganga hydropower project taken up by India and the Neelam Jhelum hydropower project being taken up by Pakistan, in the same basin. Both are in a race to establish who has developed the project first, so that the other country’s project can be shown to be illegitimate under the Indus treaty. This is happening to the exclusion of the interests of the people and environment on both sides of the border.

- There is a lot of noise being made in the media in Pakistan in recent months about how India is violating the Indus treaty, stealing Pakistan’s share of water, diverting water illegally, drying up and desertifying the downstream country and so on. Most of these statements seem lacking in substance as to where is India taking the diverted water and so on. However, we can note some genuine grievances of Pakistan. According to former water resources minister of Pakistan, the downstream country does not have right to know the gauge level and regular inflow and outflow figures from hydro projects in India. Without these figures, Pakistan cannot ascertain if India is adhering to the Indus Water Treaty (IWT) stipulations.
- Secondly, it is claimed in a recent article *War or peace on the Indus* by Prof John Briscoe of Harvard University,⁵ that in its judgement on Baglihar hydropower case, “The finding of the

⁴ See *Checking the Indus* in the Times of India, April 11, 2010

⁵ <http://www.sacw.net/article1391.html>, accessed on April 12, 2010

neutral expert was essentially a reinterpretation of the Treaty” by removing the restriction on live storage at a hydro project and also allowing gates. This claim does not seem to be sound. The second claim of the article that, “This vulnerability was driven home when India chose to fill Baglihar exactly at the time when it would impose maximum harm on farmers in downstream Pakistan” is not entirely correct. However, though the Indian government claims that it followed the treaty obligations while filling the Baglihar reservoir, Sanjay Baru, editor of Business Standard, in a letter to Briscoe agreed, “The treaty permits India to complete the initial filling of any dam before 31st August. The Baglihar dam was filled before the 31st. The treaty also requires that during filling, the flows at Marala must be not less than 48000 cusecs; I believe this was not met on only ONE day during the filling when the flows at Marala did drop to 28000 cusecs.” So there does seem to be some violation here.

- However, the debate in Pakistan on this issue seems to be more of rhetoric and less of substance. As Khalid Hussain, eminent journalist from Pakistan noted, “A lot that has appeared in Pakistani press is factually incorrect, for instance the "theft" of water by India. It is sad that none of our reporters have ever asked the IWT bureaucrats if theft was taking place then where was India taking the stolen waters?.” More importantly, the debate there seems to miss the real inequities in that country between regions and between people.
- On Indian side, the role of the government and the media is worse in terms of not highlighting the real costs and impacts of the big hydropower projects that India is taking up and the questionable benefits of those projects, particularly for the local people.

RUSH FOR BIG HYDRO IN NEPAL:

There is a big push for large hydro projects in Nepal, many of them are being pushed by India for the latter’s energy requirements. These projects could create conflicts within Nepal and also between Nepal and India in future.

- **Pancheshwar:** A 6480 MW dam proposed on the Mahakali River on the Indo-Nepal Border has created tensions and opposition across the border. A Mahakali “treaty” was signed between the two nations in 1996, but the legal validity of the treaty has remained controversial in Nepal. More recently as per a Rediff⁶ story, “Nepalese Maoist leaders led by Ishwari Bhattarai are now up in arms against the Pancheshwar dam claiming the proposed dam was not in the interest of people of the landlocked nation. Bhattarai has also threatened to commit suicide over the issue. A series of public rallies are being organised against the dam in Nepal.”
- **Kosi:** This well known flood prone river flows from Nepal to India and when the Kosi embankment breached inside Nepal border on Aug 18, 2008, leading to unprecedented floods in parts of Nepal and large parts of Kosi basin in Bihar, in the initial days, both countries blamed each other for the mishap. However, even today no one has been held responsible for the mismanagement of the maintenance of the Kosi embankment that led to the breach. Now India and Nepal are discussing a gargantuan and unviable dam on the Kosi river for flood control. This dam is yet to be initiated, but if ever undertaken, it will invite greater disasters in the Kosi basin.

RUSH FOR BIG HYDRO IN BHUTAN:

⁶ <http://business.rediff.com/report/2010/apr/12/maoists-cast-shadow-over-pancheshwar-dam-project.htm?invitekey=b0f8eb498700391d9f8a817a56444120>, accessed on April 12, 2010

There is a push for big hydropower projects in Bhutan, mostly for export of generated power to India. These projects are increasingly likely to create conflicts within Bhutan and across the border in India. There have earlier been reports suggesting that there have been instances when sudden release of water from Bhutan projects has led to floods in India. The risks of real problems are likely to increase further with the proposals also to build big storage projects like the Sankosh project in Bhutan.

BANGLADESH AND NORTH EAST INDIA:

India sees a potential to build upto 50 000 MW of installed capacity hydropower projects, including storage hydropower projects in North East India. These projects are likely to create significant downstream impacts within India and further downstream in Bangladesh, creating fresh conflicts between the two nations. The projects would also create big social and environmental impacts in India and Bangladesh and also destroy the rivers, forests and rich biodiversity and livelihoods for millions of people. All this is bound to create fresh conflicts in the region.

- **Tipaimukh:** India is planning to build India's largest water storage capacity dam on Barak river that flows from India into Bangladesh. This project is to come up in an ecologically fragile, erosion and landslide prone area, seismically one of the most active areas and would submerge and destroy rich biodiversity in over 25000 ha of forests. It would be one of the most destructive projects of its kind and is likely to create fresh conflicts within India and between India and Bangladesh.
- **India Bangladesh Rivers:** India and Bangladesh share 54 rivers, but there is no treaty on any of the shared rivers between the two countries, except the Ganga water treaty of 1996, which is basically for sharing the water during five lean season months. There is no serious attempt at arriving at treaties on rest of the rivers and there is no involvement of people in the Indo Bangladesh Joint River Commission and other related bilateral arrangements.

OTHER ISSUES:

- **Interlinking of Rivers:** India has plans to link 37 of its rivers. This is to be done through some 30 projects, in the name of transferring water from surplus to deficit basins. This is a completely unviable, undesirable project and besides creating big impacts within India, it would also create international problems. There have already been big protests in Bangladesh against the project.
- **Possible Chinese diversion:** The Chinese government has often declared its intention to divert the Brahmaputra (basically Siang River, one of the main tributaries of the Brahmaputra) river to North China before the river enters India. The work on this project is yet to start and China has denied that the project is being taken up. However, at the same time, the Indian government is pushing more big hydro projects in Arunachal Pradesh, claiming that these will help establish India's prior use rights over the waters of these rivers when China does decide to take up its North South diversion project. However, such a push for big hydro in Arunachal Pradesh under the bogey of Chinese plans is only likely to worsen the situation for the people of Arunachal Pradesh and also for downstream areas in India and Bangladesh.

THE WAY AHEAD:

Share Information: One of the first steps required in this regard is to share available information on the various aspects of shared rivers. The policies of the governments of the region are not the same every where, but they are generally not very helpful in this regard. There is need to share available information

about various aspects of rivers, including the perspectives, policies, plans, projects, socio-cultural significance of rivers and its uses across the region.

Need for a Himalayan policy:

Box: 1

“An international peace park has been proposed in Siachen glacier so that each (India and Pakistan) army can pull back from their high altitude posts and, thereby, reduce casualties and damage to environment... the problems still persist because the governments (India, Pakistan and China) have not funded a system of monitoring or for enforcing regulations.”

Steve Swenson, working on a book documenting his 30 years of climbing in Kashmir in the Karakoram mountains⁷

Considering that the countries in the region share the Himalayan watershed on which numerous big and small rivers and millions of people and biodiversity depend there is an urgent need to have a regional Himalayan Policy for the common good of the people of the region. In view of the crisis of climate change this need has become even more acute. Today, there is no such policy and each country is developing projects on their own, and many of the so called development projects are actually accelerating climate change impacts. One instance of this was cited above in terms of the race to the bottom in development of hydropower projects and dams. Hundreds of such projects are constructed, or are under construction or are being planned across the countries in the region⁸. These projects, along with their paraphernalia of roads, townships, mining, tunnelling, muck dumping, blasting, diverting of rivers and dams are cumulatively having huge, though as yet unquantified impacts on the glaciers, forests, aquatic and terrestrial biodiversity and thereby impacting the climate as well. All this makes the need for a Himalayan policy very urgent.

Flood forecasting: One of the areas where information sharing is immediately required is in the area of sharing information about forecasts related to floods in the shared rivers. The governments in the region seem to have a number of agreements to share information in this regard, including Pakistan-India, Nepal-India, Bhutan-India, Bangladesh-India and China-India. Unfortunately, the shared information in this aspect is not in the public domain. We need to push to ensure that such shared information must be in public domain immediately. At the same time, there is a good case to initiate sharing of such information even outside government. An interesting example in this regard is given in Box: 2.

Box: 2

River Basin friends: People-driven flood forecasting

The River Basin Friends is a people’s network of more than 300 organisations located in the Ganga-Brahmaputra-Meghna basin. Official flood forecasting from the central government is often insufficient to predict impacts at the local level, and the information cannot usually reach people in vulnerable locations. So River Basin Friends began its own initiative to commence an early flood warning mechanism which reaches people all the way downstream in Bangladesh. It has more than 1,000 members of different disciplines, living in different parts of the basin, each of whom helps circulate flood forecasting messages from upstream locations to downstream locations, using phones and email. People in the central hub in Assam collect information from different sources, and the peoples’ network in

⁷ The Times of India, April 14, 2010

⁸ See *Mountains of Concrete: Dam Building in the Himalayas* by Shripad Dharmadhikary, Dec 2008, published by International Rivers

upstream locations of the Brahmaputra basin process and analyze it. The final flood early warning messages are then formulated for different vulnerable locations and disseminated to these locations. This has been going on quite effectively at least for the last three years. More in-depth study of this remarkable initiative needs to be done, as it has the potential to provide lessons for many other communities⁹.

Transparency and Participation in River Governance: There are elaborate, mostly bilateral inter-governmental mechanisms on governance of water and rivers in a number of cases in the region. A brief description of such mechanism is available on the website of the Ministry of Water Resources, Government of India, see: <http://wrmin.nic.in/index2.asp?sublinkid=365&langid=1&slid=368>. These pertain to the bilateral arrangements of India with Pakistan, Bhutan, Bangladesh, Nepal and China. These arrangements include basin level commissions, minister level committees, officer level committees, project specific commissions and so on. Unfortunately, there is practically no transparency in the functioning of these mechanisms, nor is there any role for any concerned actors outside the government. In governance of rivers, waters and related projects, there should be no doubt that people in general have the right to know what is going on in these committees and commissions.

Recently the need for such public participation was acutely felt in the aftermath of the Kosi Disaster on the Indo-Nepal border in August 2008. During the initial period of this disaster, there was the usual blame game between India and Nepal, showing how the bilateral committee had failed to achieve the maintenance of the embankment that breached with the flow of water in the river was less than 1.5 lakh cusecs (Cubic Feet per Second) even as the design capacity of the embankment was over 9 lakh cusecs. In the days that followed, it become further and acutely clear that if there had been some non government people on the Indo Nepal Kosi committees, that may have ensured that the embankment is properly maintained, and the embankment may not have breached at least on that particular occasion. However, the non government actors in the region have not been able to create sufficient pressure on the governments to achieve any success in this matter.

Recommendations of the WCD: The report of the World Commission on Dams, made public in November 2000 offers a useful framework to start the discussions for sharing rivers in the region. The Nepal, Pakistan and Indian Governments participated in the work of the WCD and many others in the region also participated in the WCD process. Some of the relevant guidelines from WCD report in this regard include¹⁰

- National water policies make specific provision for basin agreements in shared river basins. Agreements are negotiated on the basis of good faith among riparian States. They are based on principles of equitable and reasonable utilisation, no significant harm, prior information and the Commission's strategic priorities.
- Riparian States go beyond looking at water as a finite commodity to be divided and embrace an approach that equitably allocates not the water, but the benefits that can be derived from it. Where appropriate, negotiations include benefits outside the river basin and other sectors of mutual interest.
- Dams on shared rivers are not built in cases where riparian States raise an objection that is upheld by an independent panel. Intractable disputes between countries are resolved through various means of dispute resolution including, in the last instance, the International Court of Justice.

⁹ *A Dam-Made Disaster: How Large Dams and Embankments Have Worsened India's Floods* by Himanshu Thakkar in "Before the Deluge: Coping with Floods in a Changing Climate", International Rivers, 2007

¹⁰ <http://www.unep.org/dams/WCD/report.asp>, page 251, accessed on April 10, 2010

- For the development of projects on shared rivers, the necessary legislative provision is made at national and sub-national levels to embody the Commission’s strategic priorities of ‘gaining public acceptance’, ‘recognising entitlements’ and ‘sustaining rivers and livelihoods’.

The WCD report provides further description and details of these guidelines, these can be a possible starting point of discussion, providing useful initial framework.

Need for South Asian Mandela?: John Briscoe, Professor of Environmental Engineering, Harvard University, better known in the region as a former Senior Advisor in the World Bank, stationed in South Asia for many years, has recently written a piece *War or Peace on the Indus?*, which is doing the rounds among the highest policy makers in India and Pakistan. The article was sent for publication in The Times of India and Business Standard in India, but both rejected it, for the anti India bias in the article. Briscoe in the article suggests that what is needed is a Mandela or a Luis Inacio Lula (the Brazilian President) from India, when he finished the article with these words, “Who will be the Indian Mandela who will do this – for the benefit of Pakistanis and Indians – on the Indus?”

However, Prof Briscoe himself has had a rather questionable track record. Firstly, his former employers, namely the World Bank is known to have played key role in pushing destructive dam projects in the region and elsewhere and it is well known that Prof Briscoe was an enthusiastic advocate of that line. As we noted earlier, such projects many times have turned the tide in making rivers a means of discord rather than means of sharing and accord. So now Prof Briscoe pleading for peace on Indus sounds a bit strange when he and his employers were happy to sow the seeds of discord in the past. Secondly, after the WCD report was released, incidentally by Nelson Mandela in Nov 2000, the World Bank refused to implement the recommendations of the report. To achieve that objective, the then main World Bank officials played key roles to engineer an opposition to the WCD report from developing countries, including countries from the region by all the considerable means at their command. Prof Briscoe was part of this effort. That way, he has played a crucial role in trying to destroy the potential use of WCD guidelines to reduce the discord that could emanate from shared rivers. Now, Prof Briscoe is asking for a Mandela from India to douse the perceived fire in the river. His call is thus lacking in basic credibility.

The governments of the region also do not have policies or practices to ensure that rivers have freshwater all round the year. Thus, India does not mind drying up the river downstream of the various dams, hydropower projects and diversions. It was interesting to know in that context that the recent India Bangladesh Joint River Commission discussion on Teesta water sharing discussed a proposal to leave 20% of the water for the river. Provision for freshwater flow in rivers all round the year must be part of all international agreements.

Indeed there is no doubt that efforts are required from all countries and quarters to ensure that rivers indeed remain a means of sharing peace, accord and sustainable life and livelihoods. For that a sustained effort is required, from all concerned, particularly those from outside the Governments.