



NATIONAL LEVEL POLICY DIALOGUE ON THE MANAGEMENT OF BRAHMAPUTRA RIVER BASIN

Workshop Report



**The Transnational Policy Dialogue for
Improved Water Governance of
the Brahmaputra Basin: Phase II**



22ND JANUARY 2015

The Claridges, 12 Aurangzeb Road, New Delhi

PROGRAMME SCHEDULE

9.30– 9: 45 am	Registration with High Tea
10:00– 10:10 am	Welcome Address Dr. Anamika Barua <i>Executive Director, SaciWATERS, Hyderabad</i>
10:10– 10.20 am	Background of the Project Dr. Poulomi Banerjee <i>Senior Fellow, SaciWATERS, Hyderabad</i>
10.20 – 11:00 am	Panel Discussion: Session I “Issues and Challenges for Co-Management of Brahmaputra River: State Perspective” Introduction: Sumit Vij, <i>Research Fellow, SaciWATERS, Hyderabad</i> Chairperson : Prof. Chandan Mahanta, <i>Professor, IIT, Guwahati</i> Panelist 1. Tomi Ete, <i>Ex-Secretary, WRD, Govt. of Arunachal Pradesh</i> 2. Tapir Gao, <i>Ex- MP, Arunachal Pradesh</i> 3. Eng. Atul Sarma, <i>Executive Engineer, Brahmaputra Board</i>
11:00– 11:30 am	Open Discussion and Closing Remarks by the Chair
11:45am– 1:15 pm	Panel Discussion: Session II “Conflict and Possible Cooperation for Co-management of Brahmaputra River Basin: State & National Perspective” Introduction: Sumit Vij, <i>Research Fellow, SaciWATERS, Hyderabad</i> Chairperson : Dr. Sagar Prasai, <i>Country Director, The Asia Foundation</i> Panelist 1. Arun Roy, <i>Chief Engineer, IWAI</i> 2. Joy Borman, <i>Secretary, Brahmaputra Board</i> 3. R.P. Agarwalla, <i>Dept. of Forest & Environment, Govt. of Assam</i> 4. A. K. Mitra, <i>Ex- Secretary, WRD, Govt. of Assam</i>
1:15 – 1:30 pm	Open Discussion and Closing Remarks by the Chair
2:15 pm – 3:15 pm	Synthesis & Way Forward Chairperson: Prof. Sanjoy Hazarika, <i>Director, Centre for Northeast Studies, Jamia Millia Islamia, New Delhi.</i> Panelist 1. Dr. Partha Jyoti Das, <i>Aaranyak, Assam</i> 2. Dr. M. K. Pandit, <i>CISMHE, Delhi University, New Delhi.</i>
3:15 pm – 3:30 pm	Rapporteur: Safa Fanaian, <i>Research Fellow, SaciWATERS, Hyderabad</i> Vote of Thanks Dr. Aditya Bastola <i>Senior Fellow, SaciWATERS, Hyderabad</i>

Participants List

Sl. No.	Name	Email	Department/Organization
1.	Mr. Tomi Ete	tomiete@yahoo.com	Ex. Secretary, Dept. of Public Health Engineering & Waste Resources, Govt. of AP
2.	Mr. Tapir Gao	gaotapir@yahoo.com	Ex. MP Arunachal Pradesh
3.	Dr. Partha Jyoti Das	partha@aaranyak.org	Aaranyak (NGO), Assam
4.	Er. A. K. Mitra	akmitra48@gmail.com	Former Secretary, Water Resources, Govt. of Assam
5.	Prof. Chandan Mahanta	mahantait@gmail.com	Professor, IIT Guwahati.
6.	Mr. R. P. Agarwalla	rajendra.agarwalla@gmail.com, pccfwlassam@gmail.com	Chief Conservator of Forests, Dept. of Forest & Environment, Govt. of Assam.
7.	Mr. Arun Roy	arunroy1@yahoo.com	Chief Engineer -Inland Water Authority of India, Guwahati
8.	Prof. Sanjoy Hazarika	cnesjmi@gmail.com	Director, Centre for North East Studies and Policy Research Jamia Millia Islamia
9.	Mr. Joy Borman	bbrd-ghy@nic.in	Secretary- Brahmaputra Board
10.	Mr. Atul Sarma	atulsarma77@gmail.com	Executive Engineer-II -Brahmaputra Board
11.	Dr. Satya Priya	spriya1@worldbank.org	World Bank
12.	Dr. Sagar Prasai	sagar.prasai@asiafoundation.org	The Asia Foundation
13.	Ms. Mandakini Surie	mandakini.surie@asiafoundation.org	The Asia Foundation
14.	Mr. Vikrom Mathur	vikrom@orfonline.org	Observer Research Foundation
15.	Ms. Sonali Mittra	sonalimittra@orfonline.org	Observer Research Foundation
16.	Dr. M. K. Pandit	mkpandit@cismhe.org	Professor and Director, Centre for Interdisciplinary Studies of Mountain and Hill Environments (CISMHE)
17.	Ms. Paula Hanasz	paula.hanasz@anu.edu.au	Communications Manager, Food Energy Environment Water Network (FE2W), Canberra, Australia
18.	Dr. Anamika Barua	anamika@saciwaters.org	Executive Director, SaciWATERS, Hyderabad
19.	Dr. Poulomi Banerjee	poulomi@saciwaters.org	Senior Fellow, SaciWATERS, Hyderabad
20.	Dr. Aditya Bastola	aditya@saciwaters.org	Senior Fellow, SaciWATERS, Hyderabad
21.	Ms. Safa Fanaian	safa@saciwaters.org	Research Fellow, SaciWATERS, Hyderabad
22.	Mr. Sumit Vij	sumit@saciwaters.org	Research Fellow, SaciWATERS, Hyderabad

Background:

Taking forward a dialogue on co-management of the Brahmaputra River, a workshop was organized in Delhi to bring together the states of Arunachal Pradesh and Assam along with national players in India. The purpose of this being to bring together these key players on the same platform to ensure vertical integration of voices and interests of policy makers at State and National level.

The workshop sought to address the following key questions:

1. What are the issues and challenges that states of Assam and Arunachal Pradesh face towards effective co management of the Brahmaputra River?
2. What are the challenges and opportunities in creating an enabling environment for dialogue amongst state partners?
3. What role and strategies can the central government play to provide the impetus on the center-state dialogue for the management of the Brahmaputra River Basin?

Introduction

Dr. Anamika Barua, the Executive Director of SaciWATERS welcomed the participants and gave a brief overview of the main events that occurred in the first phase of the dialogue. She stated the importance of having a dialogue that begins with understanding perspectives from each side and forming bonds of goodwill that will enable future action.

Following this Dr. Poulomi presented the highlights of phase II. She stated the four main objectives that are to be covered in Phase II. They are as follows:

1. The first objective is to understand the conflicts and cooperation in the management the Brahmaputra River. This would cover the states of Assam, Arunachal Pradesh and, similarly within Bangladesh.
2. The second objective looks to understand the do's and don'ts within the Brahmaputra basin. This will be brought together through a literature review.
3. Conducting interviews and discussions with water diplomats, bureaucrats and government officials working on governance and management of Brahmaputra basin.
4. Conducting country level dialogues in track II diplomacy with special focus on integrating regional and nation approaches on water management.

She reinstated the importance of vertical integration of perspectives. Also on request, she gave an overview of phase I of the dialogue. It was initiated through track III dialogue among civil society across India and Bangladesh. The first phase brought out several recommendations, many of which have been carried forward to Phase II. After this the sessions of the day began.

Session I-Panel discussion: “Issues and Challenges for Co-Management of Brahmaputra River: State Perspective”

The session’s chairperson and panel members were introduced and invited by Mr. Sumit Vij (SaciWATERS).

Chairperson: Prof. Chandan Mahanta -*Professor, IIT, Guwahati*

Panelist

1. Tomi Ete, *Ex-Secretary, WRD, Govt. of Arunachal Pradesh*
2. Tapir Gao, *Ex- MP, Arunachal Pradesh*
3. Mr. Atul Sarma, *Executive Engineer, Brahmaputra Board*

Prof. Mahanta welcomed everyone, especially the panel members present. He then went on to further mention his experiences of working with Brahmaputra River as a scientist. He brought out the plight of the people and the river within Assam. Those living on the banks of Brahmaputra spend most of their time coping with floods thereby limiting the time and efforts that can be spent on river bank development projects. He pointed out the need for integrated studies on the river so as to balance development plans.



“It is too late to have this kinds of meetings but not too late to start...” Mr. Tomi Ete, *Ex-Secretary, WRD, Govt. of Arunachal Pradesh.*

“There is a need for regional cooperation... where we can sit together, share the knowledge, share the experience...” - Mr. Tapir Gao, *Ex- MP, Arunachal Pradesh*

Following this, Mr. Tomi Ete spoke of the need for such talks to be held, even though he mentioned “...it is too late to have this kinds of meetings but not too late to start.” He mentioned that in Arunachal Pradesh there are 157 dams planned to be constructed on the river. However, none of these have been built due to traditional land right issues and their resulting conflicts. He also further stated that there is need for Arunachal Pradesh to develop and water resources are its main natural capital. However, he iterated that any development on the river has to be thoroughly studied along with its potential social and environmental impacts downstream. Because we are all stakeholders of the river and all need to be considered including Bangladesh and Nepal.

Mr. Tapir Gao mentioned in his talk about the importance of development in Arunachal Pradesh however not at the expense of the environment or downstream users. He mentioned that floods, erosion and earthquakes are prevalent in the region and any dam construction needs to take all these factors into consideration. Otherwise the damage that can happen will be enormous not only for Arunachal Pradesh but also Assam, downstream states and nations. He further also stated that these dams have been agreed

on and money has been paid for them, if they are not taken further, who will bail Arunachal Pradesh from this debt?

Mr. Atul Sarma mentioned that the Brahmaputra Board was put together through an act of parliament and given authority to bring together master plans for the Brahmaputra River. He pointed out that within India, water is a State

subject. However, when cross boundary issues arise there is a provision within the constitution which provides a clause stating, if the number of states involved is large then it is deemed for the Center to intervene. He also pointed out toward adopting a basin wide approach for managing the river. He indicated the main challenge upstream states face is hydro-power whereas downstream users grapple with floods, erosion and sedimentation therefore individual approach to management of the river is not efficient. He applauded talks on treating the river basin as a whole unit. He further stated that in the same spirit then “...the benefits of the river should also be shared on equitable basis rather than territorial.”

Following this Prof. Mahanta summed up the learning and mentioned that we need to build capacities at the local level to be able to overcome difficulties, study and coordinate the challenges that arise.

Open Discussion

Q: Ms. Mandakini Surie (The Asia Foundation) directed a question to the representatives from Arunachal Pradesh about the importance of China and its hydropower development potential for Arunachal Pradesh.

Mr. Tomi mentioned of the clause in international policy where each riparian’s right to utilization of the river has to be acknowledged. He further indicated importance of the Centre communicating with the State, to increase awareness of the Centre on issues the State considers important. He also mentioned that currently the laws in Delhi are made without consultation of the state.

Another question was about China and its new development projects near the boundary along with possibilities of Arunachal Pradesh constructing near border. To this Mr. Gao and Mr. Ete mentioned that Arunachal Pradesh has not even constructed the proposed dams, new ones near the border would require long tension lines which altogether is too expensive to construct. However, they also mentioned that if such a power project is done in collaboration with China for power to be sold to China, this can contribute to new arrangements and chances for cooperation over common business interests.

Q: Dr. Anamika Barua raised a questions toward the traditional property rights and how are those issues handled?

To this Mr. Gao and Mr. Ete mentioned that each village has an administrative council that has power and authority and this councils gives the final verdict. These councils are respected and their decisions carry influence over the community.

Q: A question raised towards the Brahmaputra Board representative queried about the preparation of master plans for the basin and if states are consulted during the plan preparation? There were also questions raised about the real-time data, data availability and data sharing for flood forecasting and what the Brahmaputra Board is doing in that regard?

“A coordination between different organizations and States is required for a comprehensive and holistic approach (for management)” – Mr. Atul Sarma Executive Engineer, Brahmaputra Board

To this Mr. Sarma stated that the Board collects data and secondary information from different agencies and States creating a draft and sends it to the riparian states. Including these inputs a final draft is made and circulated to the concerned states. This draft is sent to the Government of India for the final approval which together makes the master plan. Regarding flood forecasting, he mentioned that the Government of India has taken up flood forecasting and there are probably many interior areas they can cover. Hydrological data should cover the entire basin and the Central Water Commission (CWC) has taken up this responsibility.

Dr. Satya Priya (World Bank), stated that the CWC needs further information on flow for more accurate flood forecasting. The World Bank, he also mentioned is moving towards a hydrology phase III of data generation and collection with major focus on Ganga and Brahmaputra. He also stated that this data is to be placed in the public domain with a push to states to share their data as well. He stated that data generated from this avenue can be further utilized as deemed for the Brahmaputra basin studies, and forecasting.

Q: Another question was raised regarding the communities in Arunachal Pradesh and their response towards hydro-power developments occurring, especially with some communities agreeing to these developments?

To this Mr. Ete and Mr. Gao, shared that the communities are being educated by hydro-power companies regarding the benefits that they can avail along with the compensation packages that they can receive. The communities’ perspectives are slowly changing towards hydro-power developments, many are becoming pro hydro-power. Confidences of communities are being raised through information and also observation of other areas where compensation and developments have been made.

With these questions and after thanking the panel members the first session concluded.

Panel Discussion: Session II- “Conflict and Possible Cooperation for Co-management of Brahmaputra River Basin: State & National Perspective”

Chairperson: Dr. Sagar Prasai, Country Director, The Asia Foundation

Panelist

1. Arun Roy, *Chief Engineer, IWAI*
2. Joy Borman, *Secretary, Brahmaputra Board*
3. R.P. Agarwalla, *Dept. of Forest & Environment, Govt. of Assam*
4. A. K. Mitra, *Ex- Secretary, WRD, Govt. of Assam*

Mr. Arun Roy initiated his presentation with an overview of the Brahmaputra basin along with its specialties and its peculiarities that makes it so unique. He stated that volatility of the river with its floods and erosions adds another point of conflict and contention among states and countries. He mentioned of the plans for development projects that were to be designed by the banks of the river. However, due to the volatility of the river those plans had to be put aside, as even the existing roads and projects within Assam are being washed away by floods.

Mr. Roy further mentioned that we all work in isolation which does not allow sustainable development of the river. Since 1972, there has been a treaty between India and Bangladesh for ships to traverse. This is one example of fruitful utilization of the river and till date it is working well. He suggested that if we plan for the river in an integrated manner through one nodal agency which oversees, hydro-power, navigation, transport, irrigation, etc. this can facilitate effective utilization and expenditure towards the River. This would require a study of the river along with a nodal agency that will decide allocation utilization and management.

“...this type of dialogue participation, it takes time to come to a conclusion. The Mekong River Commission took 39 years to come to a mutual consensus” – Mr. A. K. Mitra, Ex- Secretary, WRD, Govt. of Assam

Following this, Mr. Mitra gave his inputs on his work on the Brahmaputra since 1975. He stated that Assam which is downstream faces the problems of erosion, floods and sediment transport. Then, there are the earthquakes that also deposit massive amounts of sediments. Most work done in Assam on the river till



date has been on erosion and flood management. All through, Assam did not know that Arunachal Pradesh also faces problems with the river, in terms of traditional ownership, development and growth. The problems of Arunachal Pradesh then move on to Assam, then Bangladesh. The idea of co-management then requires much work.

Mr. Mitra, applauded the effort for a Dialogue but then also reminded everyone that, “...this type of dialogue participation, it takes time to come to a conclusion”. The formation of Mekong River Commission took 39 years. He reinstated the importance of an apex body governing the river basin, as there are many opportunities for cooperation over the river. One such opportunity is navigation however, due to sediment transport this needs much attention within Assam.

He also mentioned that the Brahmaputra Board is a good effort but lamented that this body has not been given enough statutory powers, hence it remains a watchdogs of the activities that take place on the Brahmaputra. He also stated an avenue for cooperation can be flood forecasting, there are possibilities of saving more lives by arriving at more precise predictions through non-structural equipment and modelling. There are efforts being taken to learn and build capacity from experiences across other basins such as Mekong Basin. He ended his talk by stating that States are doing as much as they can. Now, further actions have to be taken by a high power body with enough finance which can bring tangible and sustainable solution to this perpetual problem.

Mr. Borman from the Brahmaputra Board also shared his experiences. He spoke of utilizing the river in a manner that conserves it for our future generations. He mentioned that the Brahmaputra board was established in 1980 by an act of Parliament and it started functioning since January 1982. All the northeastern States including Sikkim and northern part of West Bengal are under the Brahmaputra Board.

The Board he mentioned is already empowered and mandated by the act prepared by the Central Government and the National Water Policy. He mentioned that there is no conflict between national water policy and, the aims and objectives of Brahmaputra Board. There are enough powers given to the Brahmaputra Board that have not yet been utilized.

"...we should pool our minds together as to how we can go for a strong institution... the perspective of conservation simultaneously with the development." Mr. R.P. Agarwalla, Dept. of Forest & Environment, Govt. of Assam

Till date, he mentioned that the Board has prepared 60 master plans. Each master plan addresses the problems of erosion, floods, sediments along with solutions and requirements of hydroelectric stations within the basin. He also stated that there is no lack of studies, there are about 46 different studies carried out by esteemed institutions. He also mentioned that until now there have been several efforts by the Board to bring States and countries together for planning. He concluded by saying "...if we learn from nature, in the same way that the Brahmaputra river is formed by joining different tributaries, so can all the riparian States can come together to form an authority to manage the Brahmaputra".

Mr. R.P. Agarwalla in his talk stated that the Brahmaputra Board plays an important role in maintaining the economy of Assam, as this is closely linked to the Brahmaputra River. The Brahmaputra River is not only essential to people but also wildlife, especially Kaziranga National Park. The Park requires small floods and dry periods to maintain wildlife. However, the high floods also cause damage to wildlife as they drown in the river during floods. Beside the main river, there are also the tributaries which need all disciplines to work together. He stated that even though the Brahmaputra Board may have prepared 60 plans many of them may not have been properly implemented which can be due to lack of resources or takers.

"...if we learn from nature, same way that the Brahmaputra river is formed by various tributaries joining so can all the riparian States can come together to form an authority to manage the Brahmaputra"- Mr. Joy Borman, Secretary, Brahmaputra Board

Perhaps this requires better coordination between departments of water resource of States and the Brahmaputra Board. He stated that "...the development of Brahmaputra basin in the North-East States is important and we should pool our minds together as to how we can go for a strong institution and also take on stakeholders with the perspective of conservation simultaneously with the development." He said that we need a balance of both conservation and development.

Open Discussion

Q: Questions were raised about the regularity with which States met with the Brahmaputra Board and about the kind of discussion that took place before master plans were made? It was also asked if there were any conflict of interest between the State and Centre.

Mr. Mitra stated that there were regular meetings and close interaction of the ministry with the Brahmaputra Board along with exchange of ideas and discussion. Regarding the conflict of interest, he mentioned that the complexity of the problem makes it difficult to be handled by the State alone and need Centers' assistance in terms of funding and resources.

Q: The Brahmaputra Board reconstitution that is set to occur was questioned? Whether there would be much reconstruction or this would simply result in changing the name only?

To this it was answered that the Board already has many provisions and powers that have not yet been used. Mr. Borman stated that the Brahmaputra River Valley Authority was conceptualized with some modification of the earlier rules and regulations. Then last cabinet note was circulated in 2013 with a name of Brahmaputra River Basin Authority also more power was proposed towards this body. However the main challenge he mentioned is that, water is a State subject and if the States don't come together to work on these plans even with its new powers the Board will not be able to yield results.

Q: A question was raised for clarification of the whether Brahmaputra Board will become a regional authority within the river basin? There was also a question raised about the functionality of the Brahmaputra Board and whether it would be better if another authority altogether was created?

To this it was answered that there is much provision within the master plan of the Brahmaputra Board that is not being used. There is about one lakh crore rupees provisions within the master plan that has already been approved by Government of India and circulated to concerned States. The States have to come forward with their proposals, which has not been happening except for few. Within the plan they have approved; 1000 crore for flood management activities and a sanctioned 8000 crore floods plans to which only States such as Assam, Sikkim and Arunachal Pradesh has so far come forward with plans. State agencies are only eligible to come forward with proposals.

Mr. Ete, to this suggested that if there was a session or dinner organized after parliament sessions to educate the Members of Parliament of these provision and budgets then there would be more possibilities of proposals coming forward.

Summing up the session Dr. Sagar stated that this issue is a multilayered, involving local, state, national and transboundary interests. Addressing all these interest could require a nodal agency, however if the people collaborating in this agency are not involved then regardless of its powers it will crumble. Addressing this would then require finding new ways of collaboration and working principles.

Session III: Synthesis & Way Forward

Chairperson: Prof. Sanjoy Hazarika

Panelist

1. Dr. Partha Jyoti Das, *Aaranyak, Assam*
2. Dr. M. K. Pandit, *CISMHE, DU, New Delhi*

Dr. Das summarized the learning from the discussion. He stated that there are multiple dimensions and avenues related to Brahmaputra, main among them is lack of information and knowledge. Along with the lack of data there is a lack of access to data and mechanisms of data sharing. This he stated, is nothing new. However, what is new is that although there is a paucity of knowledge, there exists pockets of substantive knowledge. The Brahmaputra Board and the Central Water Mission are storehouses of knowledge and there needs to be mechanisms where we can access the knowledge from these sources. This access and sharing of knowledge can lend to cooperation on several fronts.

From the previous sessions he summarized that everybody agreed that resources of the river need to be used sustainably and go hand in hand with development. At the same time, the ecosystem cannot be compromised. This understanding is present at every level. There are frequent references to Integrated Water Resource Management (IWRM) and basin level management. These ideals are good to pursue, and require instruments to follow.

Environmental consideration need to be taken up and it should form the core principle in management of the basin.

Dr. Das phrased that the whole region suffers from water induced hazards, hence the mitigation of these hazards should form an important part of management options. Flood forecast has to be understandable



“...desertification and climate change are huge problems they are not restricted to borders of Arunachal Pradesh and Assam or west Bengal or Bangladesh” - Prof. Sanjoy Hazarika

and has to happen at every level. There was reference to resources that are available however, utilization and exploitation of these resources can in addition lead to undermining of traditional institutions in the long run. To take ahead the discussion and cooperation on Brahmaputra there is a need to bring in political actors and executives to this sector of water management. Involving government officials of different states and center through increasing spaces for sharing and exchanging perspective can be

beneficial for further collaboration.

He further shared that the river is one continuous body and there is necessity for upstream and downstream collaboration. One avenue for collaboration that is presently obvious is that on flood and erosion mitigation between Arunachal and Assam. He also mentioned that other avenues for collaboration is through cultural exchange and sharing by means of arts.

Following this, Prof. Sanjoy Hazarika shared his view on importance of having discussions on the Brahmaputra River. He stated that the problems are not always within borders, many times they originate elsewhere and are only going to increase. He stated that “...desertification and climate change are huge problems they are not restricted to borders of Arunachal Pradesh and Assam or west Bengal or Bangladesh.” This requires discussion of states with a view of how track 2 can evolve into track 1. He mentioned that the one thing that unites us is the lack of information and what each is doing about the problems they face. The only way, he mentions to solve this is through sharing of information. Prof. Hazarika mentioned one common thing that requires least work and least resistance, and each feels a partner in, is music and culture. This

“...the villagers do not understand the language of forecasters, it has to be converted into very simple, very simply explained” - Dr. Partha Jyoti Das, Aaranyak, Assam

integration should be done in a way that strengthens each other but not create greater wall of suspicion and distrust.

Prof. Pandit took the stand and mentioned about the balance that needs to be made between dams for development and conservation. On one hand he mentioned that around 30% of the Indian population does not have electricity and one of the best way, for now, is stated as hydro-power. However, research has found that through the construction of dams roughly 25% of biodiversity will become extinct. He emphasized the distinct need to look at the pros and cons in this developmental processes.

The conflict he stated arises because of information asymmetry. He also suggested that the decision making should necessarily include domain experts who know and have data. He questioned as to how can we still continue to say we don't have good data? He brought out two main concerns first being, how do we bring information into the system. Second, there is a source sink relation between riparian and catchment states. The sources in relation needs to be understood clearly.

About the sedimentation he stated that from his experience, sediment is required for building landmass however, on the flip side sediment also blocks rivers. He then further stated that we must treat the river as an ecological system, the same way we treat the forest. He ended his talk with a gentle warning, stating that is are going to be more rains, more floods, and more trouble on the Brahmaputra River and that the river is difficult to tame.

Prof. Hazarika concluded the session by stating that even though the river provides for growth and development, the river in itself has a right. The river has a right to flow and survive. Further he stated that we need to help the government overcome its reluctance to share data and information. There is a growing consensus, however there also needs to be an understanding of the broader picture. This could require an agency that assist States in coordinating their activities on Brahmaputra.

Conclusion

Dr. Aditya Bastola from SaciWATERs along with Prof. Mahanta made some concluding points on what needs to be done next.

Dr. Bastola mentioned of the need for an integrated ecosystem based approach to study the Brahmaputra basin. Along with this, the knowledge that gets generated needs to be shared. Right from the local community leading up to policy makers. Sharing makes the dialogue process better in the long run. Towards this he stated that there needs to be stronger coordination between state and national governments. In this process the dialogue is a continuum. Two important things that we need to take to

"...people continue to look at the problem like a blind looking at an elephant. Somebody holds the tail, somebody trunk and everybody tries to justify it that this is what I feel." - Prof. Chandan Mahanta, IIT-Guwahati.

consideration then is recognizing institutions at local level along with their knowledge systems and capturing those local knowledge. Along with this also recognize that there are social councils that have ownership rights. Much culture is shared between these states, it is then also important to recognize this and integrate it into the dialogue.

Prof. Mahanta added that from now on we need to bring more specificity to the dialogue. As previously mentioned, if there is enough power with the Brahmaputra Board, the changing the name will not make a difference. We need to bring in more cross-disciplinary studies and integration of North-East onto one platform, we need to bring an understanding of how to collaborate together. Comprehend what is wrong with what was previously done and how do we go forward from there. Bring in very specific suggestions on the role of the Brahmaputra Board before its reconstitution. Also bring in a review of the entire water resource and development paradigm and conduct a truthful review of it. To the Brahmaputra Board, Prof. Mahanta stated, there needs to be given specific bullet points on what can be done along with requirements. Then only, he stated, can things be done and credibility of further work be gained.

He also suggested that there be cost benefit analysis and assessment of what can be better options towards development. A status report of where we stand right now in terms of resource and where do we want to go, would add a road map. We should create and develop models of the Brahmaputra River based on which judgments can be made on feasible developments that can be done on the river. All of this, Prof. Mahanta stated needs technical support which is currently lacking. Much of the work and development on the Brahmaputra River is currently based on the 'rule of thumb', there is a need for a more scientific approach. He mentioned if we continue with the rule of thumb it will become like "...people continue to look at the problem like a blind looking at an elephant. Somebody holds the tail, somebody trunk and everybody tries to justify it that this is what I feel." He also emphasized that the Brahmaputra is too big for one person or a set of persons to understand. There is a need for collective scientific action and there is much traction towards it already.

He raised a joint call for ownership of the process of research and bringing collective research into the picture. The population within Brahmaputra Basin he stated also faces several formidable issues of health and education.

A vote of thanks was given by Prof. Sanjoy Hazarika and further Dr. Aditya Bastola specially thanked the participants for their time and presence and also the coordination team from SaciWATERS for its efforts.

