

Water Sector in India: A Critical Engagement

K. J. Joy: The goal of this seminar is to felicitate, acknowledge and celebrate the contributions of Prof. Iyer to the water sector. His work has come to symbolise an alternative world view of the water sector. His has been a dissenting voice against the mainstream attitude towards water. Two key issues that he has been associated with are the alternative water policy, and the working group he headed for the Planning Commission to draft a water frameworks law for the country. This not only provided a critique of what is happening, but also provided a vision of what is possible. We also hope to use this opportunity to take a look at what is happening on different water-related issues in India. The positive response the idea of this meeting received is an indication of how people working in the water sector respect Prof. Iyer, and the debt we owe him; most people working in water today have learnt from Prof Iyer's teachings.

Rohini Nilekani: When Arghyam first started, the first person we consulted was Prof. Iyer who was very generous with his time. I owe him personal gratitude for being himself. The way water discourse is being polarised is not good for the country. While Prof. Iyer is a dissenting note, we can learn from his attitude and his generosity towards those he disagrees with. There is a need to look for alternatives to what is happening, to present a concrete vision of what can be; this is what we can learn most from Prof. Iyer.

S. Janakarajan: **The obvious context of this conference is to felicitate the pretty long engagement of Professor Ramaswamy Iyer in the South Asia's water sector. Ramaswamy R Iyer, formerly Secretary Water Resources in the Government of India, was the principal architect of India's first National Water Policy published in 1987. After joining the Centre for Policy Reserarch as Research Professor he became much more aggressive in writing on water in particular on transboundary issues, water policy and water laws. Without much exaggeration I can state that his contributions by way of presentations, papers and books on water have generated keen interest and debates across South Asia. This is essentially what has prompted me and Joy to propose to Professor Bhanu Pratap Mehta to join us to organize this conference and eventually to bring out a book in his honour based on the papers presented during the course next two and a half days.**

We thought the most appropriate title for the conference could be "Water Sector in South Asia: Need for a Critical Engagement" for the simple reason that water is becoming more and more contentious and a politically more sensitive issue. The subject has become even more critical ever since the debate over global warming induced climate change turned out to be a hot enough cutting across disciplines and continents. There are issues relating to glacier melting, extreme weather, food security, transboundary issues, floods, ecological and environmental security, debate over development versus sustainable development and so on. Let us not forget, in all these debates water takes the centre stage. Water plays a much more significant role in the over-populated South Asian economies for, there are raising concerns on falling or stagnant agricultural growth, rapid but distress induced urbanization, hurried and unsustainable industrialization process. The direct impact of these changes is the escalating demand for water for non-agricultural uses creating tensions between

agricultural and non-agricultural water users. There are also enormous concerns on pollution of water bodies mainly because, for Indian hydrocracy, used-water management is never a part of water management strategy. The sustainability of present industrial development and high economic growth very much depends upon how the environmental and ecological concerns are addressed by the South Asian polity and civil society. The water management challenges in South Asia should, therefore, be more complex and delicate and need to be seen in this larger context. The conference and book being organized in honour of Professor Ramaswamy Iyer need to be viewed in this larger South Asian context.

What is our expectation? Taking advantage of the occasion of felicitating and honouring Prof Iyer and his contributions to water sector the idea is to bring together academics, activists and others together to deliberate on some of the issues discussed above and also take the discourse at least one level higher than what is today. This can also pave the way for outlining an alternative pathway to restructure the water in more sustainable, equitable and democratic lines.

First Technical Session: 10:30 to 11:30

Chairperson: Rohini Nilekani

Rapporteurs: Depinder Kapoor and Veena Srinivasan

Mihir Shah: *The Indian Water Sector: Winds of Change in the 12th Plan*

Thank you to all for paying tribute to one of the great figures who has worked relentlessly on issues concerning water in India and the world. My association with Prof Iyer is probably the longest. I studied with his son, and so know him since I was a schoolboy. There were many issues where I looked at him as an intellectual mentor, and this continues today. He was working in the government, but always found time for his reading and his passions. It was a great opportunity for a young person to have someone like Prof Iyer to guide him.

We have tried to make a change happen in the 12th plan.

The principles:

1. The recognition that all wisdom does not reside in government alone, and it is the power of partnerships that we need to put forward. For the first time, all working groups were headed by people outside the government. There was tremendous resistance to this move. The avowed principle of the Planning Commission is that it would be a participatory process. There was also resistance from the NGO sector. The idea was that things would change. When I approached Prof Iyer, he agreed readily. His attitude was that we should forge forward and do what it takes to arrive at a consensus. It was a struggle, today it is still a work in progress, but a beginning has been made.
2. Water must be recognised as a multi-dimensional and a multi-disciplinary issue. And its management must be taken out of hands of civil engineers working in irrigation- the composition of working group reflects this diversity. It comprised of various experts and stakeholders. At the end of the day, everyone was not happy. This is an indication of success as it shows that everyone needed to move out of their comfort zone
3. Move out of the silos that we were working on.
4. A more participatory approach to water management. The 12th plan is based on devolution of water management

5. The lack of sustainability has been the single most problem, especially in the case of groundwater.
6. We must invoke the best minds, the best practice, and the best knowledge. Government policy should be deeply informed by all that is happening on the ground. The ability to show dissenters that a particular initiative is working in a particular area is important to bringing successful practices into the mainstream.
7. How to make it happen? The planning commission is looking at incentives as opposed to command and control. Build in a structure of incentives to get people to move towards the direction of devolution.

There are 10 principles of the paradigm shift in the Planning Commission.

1. What are we doing with large irrigation infrastructure? Is there not a way irrigation can increase without building dams? The working group for irrigation showed huge potential for improving irrigation. It showed the water guzzling done by rich farmers with bananas and sugarcane. They were able to prove to the CWC that the goals of this infrastructure are not being met. There is a need to bridge gap in capacity and achievements. If control over water resources can be shifted to people in command area in the framework of Panchayati Raj Institutions, instead of bureaucrats, then we have the opportunity to take water to the people for whom it is meant. To enable this, there is a provision that the national irrigation management fund can only be accessed if states prove that they have devolved the management of infrastructure. Irrigation departments must change in character and have other disciplines represented such as hydrogeologists and social scientists.
2. When I entered the Planning Commission, not many people had heard the word aquifer. We are dependent on groundwater, but do not have maps of aquifers that can direct participatory groundwater management. We now have begun this process. By the end of the 13th plan, we hope to have plans that are amenable to managing water in participatory planning. We have a national aquifer management programme. Our work has only begun
3. breaking the groundwater energy nexus. The general view among economists is that groundwater is wasted because we provide free power to farmers. We took the view that we cannot take away livelihood of marginal farmer, but need to break this nexus. Separation of feeders to farmers, will create a possibility of better and more sustainable use of groundwater. There is evidence that this is happening
4. There is a groundwater crisis in the country today. A massive program of groundwater recharge and restoration is needed. Recasting NREGA to recognised watershed principles has been done. This requires capacity building within nrega framework.
5. Hydroschizophrenia exists in the government structure and is finally being recognised for what it is. The same aquifer is being mined for irrigation when it was supposed to be kept for drinking water. Habitations are slipping back, because sources are dying, and the maintenance is not in hands of local women, who have proved to be the best managers of their water supply.
6. We need a conjoint approach to drinking water and sanitation. This is our greatest shame..the 'token sanitation campaign' has not taken on. To counter this, sanitation measures are being included in NREGA, and more subsidy is given. We are also doing away from the apl/bpl division. Peoples' rights should not be dependent on this imaginary line. We are now working on the habitation

saturation approach. Instead of the earlier policy of recommending one design for all regions, we now have diversified options in sanitation infrastructure. We have now left it to districts to devise solutions to sanitation. This conjoint approach should also work in urban areas. Any water project should have a waste water component attached to it. Cities should pay attention to safeguarding their local water sources. The first choice for the source of water in a city should be local. Plan is saying this but implementation is a huge battle to be fought on the ground. Inequities in water access within cities must be minimised. For reducing costs, innovative low cost approaches should be mainstreamed in JNNURM.

7. The Indian industry is probably the worst in terms on water footprint. Our consumption of fresh water even in cases where reuse of water is an established fact with a short payback period is inexplicable. It is in the long term interest of industry to develop alternative and sustainable sources of water. To continue to rely on fresh water and then dump polluted water will inevitably lead to conflict. It is now mandatory for companies to provide water footprint along with energy footprint
8. The thousands of embankments that we have built have aggravated the flood problem; but now there is an increasing realisation of this fact. The Chief Minister of Bihar has showed incredible openness to explore alternatives. There is pressure from local people and from engineers. This is natural, but we now need to work on more 'room for river' approaches which work on using local drainages. The 12th plan had endorsed this approach, but the work needs to be done on the ground by NGOs and others. Also better warning systems are required, this is something that the 12th plan is going to invest a great deal in.
9. We have a working group devoted to water database management. This was done for the first time ever. This report describes the situation in great detail, is comprehensive, and looks at all aspects of water. Funds have also identified for this.
10. We need new institutional and legal frameworks for water. Moving forward as a nation is not easy. The National Framework Law is not an attempt to centralise water; on the contrary it is about emphasising the principle of devolution. But this principle needs to be accepted by all states. Then only does it become a common ground to move forward. We have decided on taking the article 252 route where it needs to be endorsed by two state assemblies. This will ensure buy in by states. We are still governed by British groundwater law which allows people to withdraw all they want. This is unacceptable. Now we are moving towards the Supreme Court approach which tries to see that extraction by one does not endanger the lifeline of another.

The policies are in place, the funds are in place, now work needs to be done on the ground; now the struggle is beginning. I appeal to all of you-it is good to be sceptical , but not cynical. It is time for all of us to get together to keep the momentum going, and make sure that the change which we have wanted to see does happen.

Discussions:

Janakarajan: we are concerned with food security and deltas are our food basket. But deltas are degrading. We have no plan to protect the deltas from saline ingress and floods. You spoke of water recycling, the paradigm shift should also be towards decentralised water supply. All cities have a centralised water supply and treatment system, which is not really working. We need to decentralise. There is no recommendation for protection of small water bodies-not just tanks, but small water sheds. These need to be

protected. Also, how can we control groundwater extraction as long as the old Act is still alive.

Bharat Patankar: In the new approach, there is no base for livelihood connected water distribution. The approach does not take the principle of guaranteeing livelihood or ensuring equitable water distribution. As for devolution of management to PRIs, these are dominated by people who misuse water. In addition, the Panchayat is a political body. It is better to depend on water users associations. Even minor water irrigation projects and groundwater is used for water intensive crops by elites.

MS Rathore: The major thing to put this paradigm shift in practice is to put in place a land use policy.

Mihir Shah: Agrees but emphasises that a lot of work needs to be done on the ground, The direction is now clear. If a movement towards taking the power away from elite to those who need the water is begun, then this shift will be possible. Conflicts will happen, but participatory groundwater management is the direction in which we need to go.

Achyut das: I welcome the paradigm shift but there should be some non-negotiables. Is enough being done to restore the river systems? Is there a guarantee that the last man will get the water that is his entitlement? On one hand we are talking of privatisation agenda, and on the other water security for all; these two are not compatible.

Iyer: As far as industry is concerned, we should be very stringent. We should move industry towards a zero net water budget. For groundwater management, feeder separation is good but not enough. Power pricing also needs to be done. Aquifer mapping is good, but aquifer management groups need to follow. Graded water pricing needs to be done, where water for survival is important, but water for livelihoods follows. Water after a certain amount should not only be priced steeply but followed by denial of service. There is perhaps a separate need for the protection of rivers. Today very few rivers are living, and those are also under threat.

Nafisa Barot, Utthan: Right to water, to drinking water: what does it mean? There is no clear definition of what is right to sanitation or right to water. How do we ensure that devolution of power will happen in all states. It comes to state policy, how do we overcome resistance at that level.

Mihir: There is no magic bullet to protect rivers. The elements spoken of whether watershed management or sustainable groundwater management, are all crucial to saving rivers. In the national water framework law, we are talking of saving rivers. I am sceptical of how far legal change alone will effect change without social mobilization.

Brij Gopal: Unless Indian government can make hydrological data available, water management will remain centralised.

Medha Parkar: So many things are going wrong. Attention needs to be paid to conflict resolution. Ultimate unit needs to be the river basin. We talk of micro watershed management, but don't stop at river basin management and this allows interbasin linking. What is Planning Commission's position on this issue? No review of audit and plan changes are being done. Water energy nexus is not just for ground water, but also for surface water. The large dam issue is going under review, but hydrophone is out of control. Till that water energy nexus is not highlighted, sustainability will not be addressed.

Mihir: Planning Commission has taken a critical view of dam construction in the Himalayas..especially after the Uttarakhand disaster. Have had several scientists testify to danger. Now the result of that needs to be seen.

Technical Session Two: 12:00 to 13.30

Chairperson: Maria Selath

Rapporteurs: Yash Shethia and Dr. Parthasarthy

A. Vaidyanathan: *Water Sector Data: Making it an Instrument of Informed Public Participation*

The report of the working group on water data management was a large and comprehensive group, which leads to a rich interaction. There was also great openness. All agencies that provide data are conscious of the shortcomings and are keen to improve. There is a difference between information and data.

Data is quantitative, generated by well defined criteria, and is validated. By that criteria, the entire system fails. We have layers where considerable data is put together, such as estimates of rainfall, and water available. These are not validated, but are estimates. We have 50 years of rainfall data collection. The total estimate of rainfall in the country has remained the same for 50 years. The density of rain stations in high rainfall areas is very low; these are the areas that contribute the most. This situation is the same for surface water estimates which depend on questionable devices. There is some work done in groundwater, but this cannot be applied to a vast and diverse country. All data is dependent on measurements but very few actual measurements are done. For irrigation, we only look at the number of reservoirs and size. There is no actual measurement of what flows in and out. Also for planning, crop requirements are considered but actual use is not looked at. This is a complete blank. We do planning with no sense of what the ground realities are.

Thus data must be generated. Do go through the task force report critically, including the appendices. Specific things have been mentioned such as improving the network and improving gauging. But this data is not accessible to the user. It is only in the last 10 years or so that the CWC has been putting out a water data book. But this is sanitised since we cannot talk of the Ganga or the Brahmaputra. A lot of data is collected, but not used. Every reservoir is supposed to record daily information; this can tell you a great deal. When we looked at it, we realised that the kharif water supply exceeds the rainfall for some reservoirs. But this data is very rarely collated. No irrigation engineer is interested in this kind of data.

There are also problems in data collection. All data is imperfect and noisy. It is only when you get the data sets and put them to analytical use that we realise the potential and the limitations. Potential exceeds the limitations; no data is rubbish. Minor irrigation survey gets village level data about the number and depth of wells. This can give an accurate picture of what is happening over the last 10 years. However, there is little interest. Researchers complain about a lack of data, but do not use the data that is available. There is no interest.

Mihir spoke of a central system where data is easily accessible. Even if the data is of poor quality, we will still know what is available. There is a considerable amount of interest in the departments.. The present document is an extraordinary departure from convention where the plan document summarised the report on data and promised support. I would like to know how much has been done.

Have researchers been invited to use the data? Water is a state subject, and states are in principle completely autonomous. The ease with which major revisions in large projects are done are supposed to be monitored by central committees, but this is not being done. Once the project is complete, one is supposed to do a completion report- what we set out to do, what changes were made, what actually happened. This is not being done. In the 50s and 60s, the Planning Commission supported surveys to examine the impact of infrastructure projects. This interest evaporated in the 70s, and did not reawaken in

the next 40 years.

The information that the states collect on water deliveries is not shared. Information like this is used to strategise interstate disputes and manage with the centre. The database that the tribunals use rely on the official experts. The veracity of this data is never questioned. This is a huge problem of governance. The states are at the receiving end of enormous population pressure for increase of irrigation. Every one wants to irrigate, but there is only so much water. How to manage this situation? This is often done by promising a water project that is shabbily designed and planned. The review process is also circumvented. Why is there no discussion about what happens to these projects? These are fundamental governance issues. Unless you address the basic problems, we cannot succeed. But sharing water data, which puts quality information in the public domain, can redress governance issues. We need a network of public institutions which survey projects post-completion. This will track the use of these projects, and the efficiency of the money outlayed. If we have to exert informed pressure, the creation of a public data sharing system and research that uses this data is crucial. Responsibility also lies with researchers and NGOs to analyse this data.

Sumi Krishna and Seema Kulkarni: Women and Water: Taking the Discourse Forward

it was thought that more taps, more access to water will revolutionise the lives of rural women. It soon became clear that engineering solutions, though necessary were not enough. Then community participation was raised, and has continued. Perhaps the most important was one-third representation of women in PRIs. We have anecdotal evidence that greater representation did shape women's voices in water sector. While this increased in the domestic sector, it did not in the livelihood sector. For the hundreds of water users associations, a criterion of membership was ownership of land. This excluded women and landless people. Thus the old land user's issues still influenced new attempts to ensure equitable water use

Because women are seen in the domestic area, community participation was equated with women's participation. We tried to develop a close relationship of women with water and nature. This continues. There is a critique of this essentialising of women as having a nurturing relationship with nature and the home; this locks women in the nurturing role and does not open new avenues. This is a problem with certain strains of eco-feminist thinking. This continues with the changing paradigm, though there has been change since the Dublin principle which look at women's role in management of water. This was reflected in India, where decentralisation sat comfortably with talk of pricing and privatisation. What impact does it have on different groups of people?

Developers still work on different categories of people. Now there is a realisation that we cannot not look at gender. However this is a simplistic way of looking at a group that has several sections. Our policies allow for representation, which is simplistic. This is one space where you can enter and engage with states. But this tendency to create a political category of women has undermined an overhaul of the water sector. When you look at water allocation agriculture- either food crops or export crops -what has happened to women's labour? What happens beyond representation? We need to explore the impact of changes that are happening. Caste and gender differences are seen as something happening within the domestic sphere and not as a state subject. The state cannot be absolved of its responsibility with the management of caste discrimination and patriarchy. Looking as caste or gender as a category limits involvement to representation. But we need to look at the changes, at what is happening to crops, to

labour, and then what happens to different groups of people. This is an avenue for research, which will make a strong case for not looking at macro policies as something different from the social structure.

Jayanta Bandyopadhyay: Framework for a New Approach to the Himalayan Rivers

Ecological processes are the fundamental for a new approach. Only after ecological processes are stabilised that we can talk of economic management. Water availability shows continuous high rainfall area in the Himalayan foothills. We have been using the Himalayan rivers of Ganges, Indus, Brahmaputra. Southasian countries depend on water from the Himalayan rivers. Draft national water policy of 2012 does not give much information on the international IGBM rivers. It is very difficult to see what is being done with these rivers that provide 70% of river flows in India. Research on Himalayan rivers has been stunted by lack of data. Himalayan river data is also scanty, and is not of peer-reviewed quality, leading to weak Himalayan water science. This is despite that water provisioning for diverse issues will become a national issue in the face of increasing demand for water. Himalayan climate model is important, but data is not valid.

Economists have connected scarcity with poverty but in the GBM excess water is leading to poverty. We have moved from 16 to 70 % of ultimate irrigation potential, but ecological impacts have not been assessed. While we have built structures across them, we do not know enough about these rivers. The overall water demand indicates that we can meet it till 2050, but after then we need to deviate from BAU approach or face conflicts.

India has high annual water availability with limited water storage options. We need to use this to get higher supply and stabilise ecosystem functions. Even with all dams built on the Ganga, only 10% of peak flow can be stored. So even all dams will not affect the floods. This is also done by ecologically blind approach. Flows in the Himalayan rivers are composed of water, energy and sediments. Engineering reduces this to water alone, and plans for water alone, which creates problems. We cannot ignore sediments and energy, and their power. Ecological water engineering is crucial. The world's highest sediment load is carried by Ganga and Brahmaputra. This is enough to cause the rivers to shift by hundreds of kilometres, but our structures not designed for that. This means that sediment is reducing storage of dams and barrages, while at the same time, the Sunderbans are being consumed by the sea. Shifting of river courses is integral part of GFM system. Major shifts in all these rivers are recorded in maps from the mid-18th century onwards. This sediment load and the resultant shifts are making the Farakka barrage redundant. Now the left channel carries 75% of flow and may connect with Padma away from the barrage. If we do not understand rivers, our engineering ideas doomed to failure. We have been motivated to follow the European path, and lack of data make it difficult to move away. But it is now time to strengthen our move towards higher efficiency in use. Water needs of deltaic systems need to be protected. This needs to be kept as the focal point

Janakarajan: whenever we make observations about data, the data we talk about is only water flow. But what we need is the utilization of river flow in a basin, we do not have this data. From reservoirs we are releasing huge amounts of water. We don't have that data either. Our rivers are dead, but what data do we have? Survey of water bodies and associated structures and the area of the river were all done during the British period. No survey has been done after that, which makes any estimation of changes difficult.

Shripad: The most problematic thing is to show water used by private sector. We have

no access to that. In Tirupur (Tamil Nadu), we are trying to get basic data of how much water is being withdrawn and supplied to users for the last 5-6 years. With private thermal power plants, there is no way to get that information. Even RTI does not help in this case.

Deepa Joshi: We need to examine the culture of science that we have inherited and the effects of that on what we do and practice. There is also the issue of ontological politics, the politics of knowledge. There is enormous gender fatigue. We still need to decide what qualifies as gender data, what sort of knowledge qualifies as data, what sort of data qualifies as science. Who is collecting this data? With what intent? This is not questioned, but is crucial. We have gaps, but we have not paid attention to institutional culture with the Block and district offices who are tasked with collecting this information. If CSOs will remain in the periphery, how do we move ahead?

Vimal Bhai: The reason for the floods in Uttarakhand is not the arrival of a large amount of water; that always used to happen. The reason is the many dams constructed in the river, the muck that is now stuck in the river. Who is monitoring these? The SC recommendations are not followed, not monitored. The Srinagar HEP has led to the entire area being buried under hills of muck. Who holds these officials responsible? The Vishnugad Pipalkoti dam is being given clearances despite the SC order. If activists go to file a FIR, then no one listens to us.

Bharat: the double data presented by each state in their contest for water is a serious issue and needs to be stressed. States are deceiving on how much water is to be stored on the basis of dependability.

Joy: gender is being brought into as an external attachment. We need to reconceptualise women-water relationship. In the last 20 years, what are the issues that the discourse has been able to contribute to?

Private use is a much bigger problem than has been mentioned. Water theft- pumping from rivers, extension of private lifts, over withdrawal of groundwater – these is a huge institutional problem. There needs to be a focus on water research, with a focus on Himalayan rivers. If proper precautions are not taken, we will have perpetual flooding of northern India.

There is in the last 20 years, a more nuanced and complex vision of these gender issues. But where is the capacity in the system on the ground to understand this? This has contributed to greater visibility, greater representation, but there is something missing at the ground level. Who can rectify that? The government, the civil society, movements? All of these are in their own silos. We are looking at networking and dialogue across sectors and levels of understanding.

There is evidence of increasing feminisation of agriculture..it is worthwhile to look at what role women have in these contexts.

Technical Session Three: 14:30 to 16

Chairperson: Brij Gopal

Rapporteurs: NC Narayanan and Varghare

A. Latha et al: *Environmental Flows in the Context of River Basin Management in the Indian Context: Issues and Prospects*

Since the morning, we have been talking of how the river basins are being affected. Since 1998, nine river basins from India feature among the 30 most threatened in the world. Dams are the biggest threat to rivers. Several have come up before the environment protection act. The Periyar river basin flows are completely diverted by dams. Since the

80s, people have been living in the river bed. Even after the act, rivers are being threatened. 60 km of the Sutlej will be lost by the Luhri, only 3km of the river will flow in the river bed if the HEPs planned on the Ravi are commissioned, the last free flowing stretch on the Teesta (only 10km) will be lost forever if Teesta IV is sanctioned. These are only a few examples. In the name of development, more and more flows are being lost. Along with flows regulation, we have encroachments, pollution- there is simply no room for the river to flow. However, dams remain the most direct and irreversible impactors of flows. To look at the Lower Demwe dam, the daily fluctuation will be between 1729 cumecs and 35 cumecs. Athirappilly HEP will create daily flow fluctuation of 1:17.

Flows decide the fate of the river- ecological, evolutionary, morphological, socio-cultural . Dams are direct modifiers of flows, Dam cascades fragment ecological continuity and integrity. Inland fisheries are declining. There is not criteria for spacing of dams in such a way as to maintain ecological integrity. Flow interruption also makes it difficult to maintain quality in the river. What is the right perspective towards flow management? Prof Iyer had asked, 'who are we to decide how much water should flow in a river?' Environmental flows are ultimately a compromise, it's true. There needs to be an allocation for flow regime. River basin perspective is needed. The government of India has accepted the BBM, which is an objective based prescriptive approach. The reality in India is that it does not involve community consultations, socio-cultural needs of people are not included, does not take entire stretch of the river and connectivity between river and flood plains are left out.

Objective setting of eflows is very important. Some challenges we face are that norms for developed and heavily degraded river basins to be different from those for relatively undisturbed basins and the legal and policy aspects.

Chandan Mahanta: *Water Quality: Extent, Issues and Way Forward*

Water quality has been hijacked by kits- by marketers who sell ready to use kits. This does not facilitate learning about the science of water quality monitoring. Also, there is not guarantee of how reliable these kits are. About 29% of the water sources tested in Assam were found to be contaminated by arsenic. There has been a benchmarking of laboratories. How can we elevate the worst to the level of the best? The government has opened a separate ministry to look at water quality. The funds have been made available how do we ensure that these are used well? A partnership may be the answer.

Under the national river conservation project, we need to look at surface water quality. There is a lack of data- what are the pollutants entering, what happens to them, what is released into the river, what are the flows in the river. There is also a need to adopt decentralization for waste treatment. We cannot rely on only one plant and run the risk of it failing. There are opportunities being created. The NRCP is creating opportunities, we need to take ownership of these and of our rivers. There needs to be a concept like 'friends of rivers' for our urban rivers. We need to talk of tendering for the life cycle of the treatment while commissioning water or sewage treatment plants. This is a positive step as it increases accountability and strengthens systems. The monsoon diarrhoeal camps were an excellent example of working together with the government. It also showed how taking a few steps together increases the chances of government initiatives working. We are also looking at improving remuneration for people working in water quality. There is a need to build up systems to deal with seasonal fluctuations. The extent of water quality issues is tremendous, and is adversely impacting health. Assam is now looking at a project called low arsenic safe aquifers which looks at identifying

aquifers that have low arsenic and working to keep them that way.

Water quality needs its own share in the whole paradigm of water discourse. Eventually I see water quality frameworks being owned by PRIs and this will be a very positive step.

Abraham Samuel and K. J. Joy: Watershed Development, Drought Proofing and Livelihoods in the Changing Agrarian Context: Their Relationship, Issues and Way Forward

There is a rural transformation in the last couple of decades after the opening up of the market. Urbanization is not as fast or as prominent as in other South Asia countries, though urban aspirations are increasing. We have to make a shift in the way we look at, and assess rural issues. There is also a change in the physical context, occupations and production systems. This is a reflection of the socio-economic changes that are happening in the area. The government projects being implemented need to recognise this.

Why choose watershed development? There is a fairly long and consistent history of implementation. It also tries to look at both environmental and livelihood sustainability. Financially, the expenses are not very large, but its impacts have been far-reaching. There are also some problems with the scale, the conception, the application of science, sustainability of institutional mechanisms. These challenges are part of the discourse. There are also challenges from outside. These are change in the land use, change in agrarian profile, change in occupation. Watershed development needs to reassess who the stakeholder is, and what are the needs today.

Land under non-agricultural use is increasing; barren and fallow land is decreasing. The latter is that land on which herders and marginalised people depend. Loss of this land to SEZs will severely impact livelihoods. Land which is going is the livelihood source of the landless people. Watershed development never did address their concern. Now, even if it were to focus on it, the land itself is going. Agriculture is itself on a decline, with a degree in the share of GDP as well as a decrease in the working population. There is a reduction of agriculture growth primarily in the high-irrigation states. There is some increase in the low-irrigation states. How can we reposition Watershed development in this situation? For the first time in 2011, number of agricultural labour has surpassed the cultivators. Dryland crops, especially millets, are reducing, whereas water intensive crops are increasing. This impacts the water scenario.

WSD needs to move from conservation to land use planning. Incorporate small farmer business models such as production and cropping plans, forward and backward links, and strategies for the growing non farmer/farming livelihoods.

Can we train villagers to test water quality to avoid the hijacking by private consumers? There is a nation-wide neglect of water quality. The more affluent people find ways to cope with this, but the poor are unable to afford safe drinking water. What is the nation's stand on that?

There is a lot of data on land ownership and land use change. How does it affect water use?

Day Two: 26 November 2013

Technical Session Four: 09:30 to 11:10

Chairperson: A. C. Bhagabati

Rapporteurs: Pranab Choudhury and Partha Das

Prof. K Rangachari: *Cooperation in the development and management of South Asian river basins*

As Jayanta Bandopadhyay said, more than 2/3rd of water resources is in Himalayan zone. But there is a fallacy in our claim. Each nation claims that all the water coming in is theirs; Nepal says it is theirs, India counts the same inflow as theirs, and so on. This leads to double counting. There needs to be agreement within all the countries that share water resources. Riparian shares etymological root with rival. I am pointing out not the rivalry, but the possibility of cooperation.

It is not possible to plan for water management without involvement of our neighbours. The logical direction therefore is for cooperation. Unlike the middle East where water is scarce, here there is no such scarcity. The possibility for amicable sharing is high. The problem with new nations is a focus on sovereignty- not just with nations, but with states too. The problem is to overcome nationalistic sentiments, and realize that there is more to be gained by international cooperation. There is evidence that each nation can give more to each of its citizens by cooperation than by doing it alone.

So far we have not been dealing with water in an optimal manner. We have a problem. We refer to the Tibetan plateau as the water tower or the third pole. The reality is that each country thinks that it is the upper riparian and does not need to cooperate. Upper riparian states think that cooperation means giving nuggets of information to the lower riparian. We had a good relationship with Bangladesh, but complicated it by not meeting some commitments, which was a mistake.

Nepal is a mountainous state with a large drop, it has hydropower potential but no market. The logical market is India. It also needs an outlet to the sea, and that is only available through India. The problem is that each country is looking for its own pound of flesh. Nepal is facing chronic power shortage with power outage for 20 hours a day. Nepal and Bhutan shared this status, but Bhutan had improved. Nepal is still besieged by internal disputes; there is potential for cooperation. Bangladesh is at the receiving end of floods. They are looking for some protection. They put in the same embankments that India did and got trapped. Embankments are a political palliative, not a scientific one. Bangladesh is looking for storage in Nepal. I am not saying that dams should be built, but that it is important to keep the larger picture while making any plans. There is also need for cooperation for water quality and pollution abatement.

Environmental flow requirements is a difficult subject. Karnataka states that water flowing into the sea from the Kaveri is a waste, but environmental flows are that which are required by the river and not the bare minimum we are willing to waste.

Water is the key to prosperity. 60% of Bhutan's plan is based on the power they are selling to India. There is an optimal level of development to enhance the quality of life of our citizens. There is an abundance of wealth which is locked up, we need statesmen to plan for 20-30 years ahead, not till the next election. We need a vision that is not myopic. J Nehru pointed out that the problem is not the border, but the narrowness of the mind. I started my career

with the Indus water dispute. J Nehru lambasted the engineers for not keeping their promises of releasing water to Pakistan. 'Are they not our own people?' Today no one would say that.

If we are able to do only a part of what we are able to do, then Asia will emerge as a stronger, better region.

Narendar Pani: *Interstate Water Conflicts and Linguistic Identity in India: The Case of Cauvery*

Water disputes are no longer about water, they become social conflicts. We need to recognise when this happens. When the Kaveri dispute was being discussed, there were riots in Bangalore, despite the cable networks being shut off as a precaution. I can testify that these were at par with the worst communal riots. While there is an ideological aspect, there is also a social aspect.

To get a meaningful look at this conflict, we need to understand the structure of conflict itself. With most river basin conflicts, the focus is

- structural source: sharing a scarce resource
- group formation: primacy of interests of states
- group dynamics: bureaucratic domain, political domain, judicial domain.

If we look at this, we miss out a lot else. A politician in touch with society reflects social demands. This is usually seen as an externality. However, a more inclusive approach presents a more accurate view of conflicts.

Society is not to be reduced to a system, but seen as a series of interconnected negotiations. Conflict occurs when these negotiations are unsuccessful. Thus the conflict has hydrological and non hydrological sources. Gandhi explained that Swadeshi is that spirit in us that restricts us to the use and service of our immediate surroundings to the exclusion of the more remote. This was said in a religious context which removes this definition from the merely territorial to the conceptual. The processes of negotiation as visualised by him depended on empowerment, options and fairness. This perception in the Kaveri dispute gives us alternatives.

Structural sources: With return to indirect rule in Mysore in 1881, linguistic divisions arose in Mysore bureaucracy. Under colonialism the linguistic divisions got further alienated. When the British returned Mysore presidency to the princely state, they established a cantonment, where the language was Tamil. When they returned power too, the dewan was from Madras. This linked Tamil to the colonial power in the popular mind. This division continued.

Due to the topography, there was large scale irrigation in Tamil Nadu for a 1000 years or more. However in Karnataka, this was only possible through large dams, which was never a possibility, especially now. Protection of prescriptive rights in Tamil Nadu meant that expansion in Mysore was only possible with permission of Madras as per the 1892 agreement. By the turn of the century, the technological possibility of large dams, meant that there was a need to revise 1892 agreement. The 1924 agreement gave permission for new dams, but retained prescriptive rights with madras. Earlier though, this agreement worked with cooperation between the chief ministers of Karnataka and Tamil Nadu

Mobilisation: one of the largest community mobilisations was that of farmers over the Varuna camanl. The next largest was on language. The 1980s were the period when the linguistic sub-nationalism was heightened. Once it took root, the post 1974 informal agreements were no longer viable, and the issue took a contentious turn. This led to an

absence of distress sharing formulae, which further led to riots in 1991.

Dynamics: Identification of Madras with colonial power remains prevalent.

Visvesvarayya, the great engineer, also led to the rise of Mysore nationalism.

Implications: Approaches to negotiations strengthen linguistic categories. The Cauvery tribunal only consists of states, not of districts or individuals with interest in water distribution. The approach to policy with focus on state governments has strengthened linguistic categories. The Cauvery river authority is mainly technocratic with no real sense of the basin. Whenever the political authorities have been distanced from the basin, the conflict has been worse. Whenever Chief Ministers have been from the basin, solutions have been obtained; when from outside it, conflict has been pronounced.

Bharat: The talk mentioned that sharing scarce resources is the source of the problem, but no mention of that in presentation. Linguistics cannot be the source alone.

Abraham: can Cauvery issue be limited to linguistics issue, and can we move forward to nationalistic and natural resource issues.

Vijay Krishna: You made the point the Chief Ministers outside the basins exacerbate the problem, but will a detached voice not help?

S. Janakarajan : Urban and Peri-urban Inter-phase and Emerging Water Concerns

I will take up from where Mihir Shah left off, talking of decentralized water supply and treatment systems for cities. That is not happening, and this talk describes how it can be done. Urban- periurban water security is emerging as a serious problem. Periurban is categorized as neither urban nor rural, but a governance vacuum. In Tamil Nadu, the degree of urbanisation is one of the highest in the country. With climate change the stresses are going to be multiple, cumulative, and large. This is the context in which the vulnerability lies. All mega cities in South Asia are living with a huge slum population. This results in people living in poor hygienic condition in environmentally degraded cities. What are the coping and mitigating strategies of the people? What are the government responses?

The government response is generally to increase supply by exploring new sources including inter basin transfer and in Tamil Nadu, by use of desalination plant. Is this sustainable? Can't there be any other solution?

If we look at urban-periurban dynamics, the trend of cities is to get the best from them, and dump the waste back to periurban and rural areas. The city of Chennai is set to include the three neighbouring districts. Considering land use and land cover over the last decade illustrates this. The net area sown has come down to 12100 ha from 150000 ha. Water demand has increased from 1326 in 2006, 1481 in 2011, and estimate in 2012 is 1763 MLD. Sources of supply, considering all available, and proposed sources is 1230 MLD. However, the supply has never exceeded 600 MLD so far. There is a mismatch between supply and demand already. At the same time, Chennai is in a region of very high rainfall. The area has 3628 tanks in Kancheepuram and Tiruvallur districts which are now part of Chennai city. These are in danger of being encroached upon. 1383 tanks have been surveyed to see if these can increase supply. If we really use the local tanks, they give us some 1945 MLD. Further, tanks are important ecological units and traditional watersheds, and they need to be protected at least for recharging groundwater. Why do we not focus on restoring and using these tanks instead of the ecologically dubious inter-basin transfer and the desalination plans.

Using locally available water supply options requires a multi-pronged approach.

- Use the local available surface and groundwater sources

- Act with a motive of zero transmission and leakage loss
- Enduser should stop wasting through leakages
- Recycle used water- to the domestic and industrial- which is cheaper than desalination.
- Use local water supply options
- Use decentralised and smaller used water treatment systems to reach potable quality

Vijay Krishna: when you talk of tanks, they must presumably be used for irrigation. How will transfer to urban use be managed. Use of treated water as irrigation- cities as irrigation systems. How do you see that?

Janakarajan: Agriculture on decline, and districts are linked to urban agglomerate. As for cities as irrigation, not advised. Along with sewage, industrial pollutants also join waste. Iyer: question of linguistics dimension is important. We need to take into account these extra-hydrological dimensions, but not allow them to distort the argument. The Cauvery issue cannot be solved unless we forget history. The unfairness of the earlier agreements have been nullified by Karnataka building dams that lead it to controlling the river, now the aggrieved party is Tamil Nadu, not Karnataka. Restrictions are imposed on the upper riparian, not the lower- the restrictions on Mysore are for this reason as much if not more than the political strength of Madras. Upper riparian needs to recognize the needs of lower riparian, and vice versa.

Narendar pani: issue of Cm's positions. Ministers that come from outside have a linguistic stake, and not a stake in water. As for ignoring history, it cannot be wished away.

***Nimmi Kurien:** Transboundary Water/river as a Transboundary Public Good: Implications for Water Governance and Institution Building*

China's water policy directions

Tibet is the source for major international rivers in Asia- and so the source of livelihood to 1.5 billion people. This is also the home of global warming and environmental degradation

China is the most prolific dam builder in the area. Reversal of a nine year halt to hydropower projects began in 2013. There are more than 25,800 dams in china and increasing. This corresponds with plans to expand hydropower generation to 25000 MW in 2020. China motivated to impose the nine year moratorium largely due to pressure from fledgling civil society. Nothing is static, and this year is the end of that ban. More disturbing is the discourse of making up for lost time with a great push. Controversial for India is the South to North diversion plan, with 28 dams planned on the Brahmaputra. There are fervent talks about another Three Gorges dam being planned.

China's record on Transboundary rivers. Is its reputation as a hydro hegemon justifies? There are subtle shift in China's public diplomacy on the Mekong. China is committed to a fixed inflexibility on state sovereignty. They rejected the UN commission on non-navigable uses of rivers, because it did not unambiguously state the sovereignty principle. Mekong is shared by 6 countries. China and Myanmar stayed out of the Mekong River Commission. But now they have gone on to engage with the MRC as a dialogue partner. There is a cascade of 6 dams on the Mekong in Yunan. China took the decision to sacrifice the lowest, the Mengsong. While this does not have a very large impact, it is a harbinger of things to come. China also shared lean season flows for the first time. This happened due to great resentment against China when there was a long drought in

South Asia in 2010. It has taken officials from lower riparian countries on visits to dam sites. Is this the behaviour of a hegemon?

For a rising global power, rising regional sentiment and opposition has a certain intangible effect. China is responding to that. That level of legitimacy is needed, and might direct China's actions. The domestic factor is that many of these issues are intensely debated within China. This is including official critiques at the highest levels on the Three Gorges dam. This is interesting, since it is China's flagship project. Political authorities have acknowledged its limitations. The former water resources minister has gone on record to protest against the diversion projects. There is a new wave of voices urging caution.

Water quantity is not the only avenue for discussion of transboundary water. The 2005 case of Songhua river in Russia illustrates this. Here 100 tons of benzene were spilled by an accident into the river, which poisoned water supply of hundreds of cities in Russia. Similarly, mining activities in the Gyama valley just above Lhasa has led to heavy metals being dumped into the Lhasa river, which is one of the major tributaries to the Yarlung Xangpo. Chinese scientists have come out with evidence of deleterious impacts not only in China, but also downstream in India.

In a seismically active region, dam induced earthquakes are a concern. Chinese scientists have traced the Sichuan earthquake of 2008 to the Siping pool dam in Sichuan.

We need to open up the black box of India and China and look at friction not only between India and China, but also within countries. When India would speak to China and ask for norms from China, would we be willing to subscribe to the same ourselves as an upper riparian country.

Shripad: This talk mentioned the sensitivities China is showing to regional voices, why is a similar sensitivity not being shown to India by China? How much will the South-north link actually impact India in terms of quantity?"

Nimmi: India has been downplaying the issue, saying there is no need for panic as there is no diversion. How can we predict the intent of another country?

Rangachari: Only 25 % of flows in Brahmaputra from Tibet, but what is important is that these are snowmelt- and so come when we need the water. China is assuring us that the big bend dam will not come up; but similarly, India assured Bangladesh that barrage will not come up, till Farakka was actually built.

Jayanta Bandopadhyay: The South-North transfer has implications. What are these implications? I do not see any implications for India. On Mekong, the cascade dams are all hydropower dams. The Yarlung Zangpo is a minor contributor, which only contributes 20% of flow at Bahadurabad to Brahmaputra.

Nimmi: Any activity on a river will have implication on the river downstream. These may not be in terms of quantity, but there are issues that our knowledge gaps do not allow us to predict. The criticality of dry season flows is one issue. Sacrificing the mesong river, illustrates the criticality of perception. Upper riparian has a responsibility to allay suspicion. This is more important in India which has an elected government

Latha: what is your opinion of first user rights claimed by China? And what is opinion on cumulative impacts? China has held strongly to the state sovereignty principle. How is this contraindicated by China's actions, which are inline with the sovereignty principle?

Joy: Have studied 150 conflicts..and can support that while water is one of the factors, is not the only cause for conflicts. Caste and other social conflicts contribute a great deal.

Iyer: sovereignty principle cannot simply be linked to moving water. China has a water problem, and they will need to talk of diversion. It is true that only 30% of Brahmaputra

originates in China, but this is not the only factor. The difficulty is, how can we tell China not to interfere with the Brahmaputra when we are doing it ourselves. We will need to include Bangladesh in these negotiations, why will they support us. Official Chinese statement: any diversion from the Brahmaputra is technologically difficult and is an inhibiting factor. Second is cost. Third is concern for state to state relationships. This was echoed by academics. They added a 4th point: we don't need it. China has been reducing its water consumption drastically.

Technical Session Five: 11:30 to 13:10

Chairperson: Kanchan Chopra

Rapporteurs: Mamata Dash and Gorky

A. Vaidyanathan: *Water Resource Development in India: Achievements, Shortcomings and Remedial Measures*

We have heard of the achievements of water resource development and the concerns about water resources today. We are now exceeding the limits of sustainability, in this extremely conflict ridden sector. There is some functional anarchy at the ground level rather than governed use. Why is this?

There is enormous pressure for more water. This demand is fueled by:

- productivity of irrigated land is several times that of unirrigated land
- growth of demand is reinforced by government policy. In the case of large public systems, the user does not need to calculate capital cost and the benefits of this investment. That is an invitation to demand large projects
- the government actively seeks to reduce cost of water to the user. The lower the cost, the higher the returns and so the higher the demand.

This demand leads to conflicts- between users, regions and communities. The combination of this scarcity and the politics that create demand create conditions for violations of rules, irregular use of water, and necessity of mechanisms to control. These mechanisms cannot cope with the problem. This is because the state has undertaken the responsibility of managing the resource, and its distribution. The second structural feature is the non adherence to the subsidiarity principle. Water is a state subject, since there are trans-state basins, we cannot effectively apply the subsidiarity principle which gives a state exclusive right to develop water. The Centre has certain rights to interfere: in case of interstate rivers, asking for information, and conflict resolution. In all three, the Centre has not been able to exercise authority. When the same party or group of parties hold power, it is difficult to antagonize the state. The lever it has, the Planning Commission is the nodal body for clearing projects. In practice, all projects had to go through a clearance process with the CWC. The whole process has been vitiated because of the lack of professionalism, the Planning Commission refusing to ask tough questions. The approval process is lax. The Planning Commission is able to review the projects every 5 years. This process is limited to seeing how much money has been spent. There is no process to see what is happening on the ground. Even this limited assertion of authority has led to stated defying the process.

Once projects are implemented, each surface system has operational rules. Entitlements are not defined in terms of period or volume, and is an unenforceable right. Though now SC has accepted public trust doctrine, earlier it has ruled as per Eminent Domain. Irrigation authorities create, enforce and oversee rules and manage conflict. This gives immense power to po-

litical authorities. Where conflict potential is high, there is conflict not only between legal users, but also with unauthorized users. This is undocumented, except some anecdotal evidence. Activists and researchers need to document this and put it in the public domain. Our irrigation systems are unique due to diverse cropping patterns. This exacerbates conflicts. There is no institutionalized mechanism for grievance redressal, or implementation of cropping patterns. The entire scene is highly politicized.

This is compounded by the policy of providing water very cheaply. Even the best managed systems cannot monitor every individual's actions. A combination of clear rules, a transparent process to safeguard rules, and a scheme of incentives to induce individual users to use the water with care and efficiency is needed.

To reform the system, we need to address this problem of conflation. Autonomous user managed systems are far away; the political class and the irrigation bureaucracy are not willing to let go of this. If a system is managed by stakeholders, it can be managed by negotiation. If outsiders come in, their interests become paramount.

Well defined, and enforceable entitlements are necessary at the system level. Each system consists of WUAs. The system deals with these WUAs on an explicit contract. If this is violated, then the players are liable for penalties. This reduces the burden of administrative policing and maintenance. Our bureaucracy is not a cheap bureaucracy, this is the reason costs are high.

There is an inherent problem with ensuring optimal water regimes to users using different crops. This should not be the responsibility of the administration. They promise a certain amount of water to each association per season. The further management is the responsibility of the WUA. Users also need to be responsible for O&M and a portion of the capital cost. This will encourage users to use water efficiently and intelligently.

Joe Madiath: *Rural Domestic Water and Sanitation: Issues, Prospects and Way Forward*

India takes pride in being a technologically advanced society. We have a Mars orbiter, are planning to send a person to the moon; but 40 % of our children are malnourished. Over 60% of open defecation in the world is in India. Most families in sub-Saharan Africa may have a pit latrine. We tend to visit our pavements and lake sides. We call ourselves an advanced country.

Do we need to? We can be a country with proper sanitation. But this will not happen without proximity to water. In rural India, we need a private bathing facility as much as we need a toilet. Gram Vikas has initiated MANTRA against a background where 80% of morbidity in rural India is due to a lack of protected and safe drinking water and sanitation. In addition, collecting water is a hard work, which is also gender designated. Exclusion is the bane of our rural areas. Exclusion by gender, by caste, and marginalized persons like widows. Water and sanitation can be a vehicle for social inclusion. MANTRA looks at 100% coverage of villages. A 100 rupees per family is donated to create a corpus. They come together to collect sand, gravel and make bricks. Unemployed men and women are also trained as masons. The toilet has a bathroom, and there are three taps- the toilet, bath, and one in the kitchen or just outside, depending on preference. There are institutional mechanisms to make sure maintenance and operational costs are met. This is all taken care of by the village. This is the only wat-san project in Orissa where the people pay for initial costs to a certain extent, and all of O&M. The challenges in working in remote areas was overcoming the lack of electricity with induced gravity, solar pumps, and bio-diesel.

The initial construction of toilets led to people realising that their toilets are better than their houses. This led them to build disaster resistant houses with loans from HDFC. The biggest gainers were women. They gained public space, respect and a little time.

Livelihood opportunities: mason training, and agricultural support.

Results: 85% reduction in water borne diseases.

People are ready to pay where they are guaranteed quality. Money is not the question where we have passion and fired imagination.

Seema: differences in social groups in accepting and benefiting from MANTRA; what were the constraining factors. What are the social and cost implications of decentralised systems, especially concerning caste.

Jasveen Jairath: The problem with autonomous water user associations is that they have failed to take off. The democratization within these units seems to be missing. Urban waste water mentions zero liquid discharge. CPCB says that this is a myth. Companies that claim zero liquid discharge circumvent this by injecting polluted water into the aquifer. For determining water footprint, what we need is a consumption analysis which points out who uses how much water and for what.

***N. C. Narayanan:** Re-imagining the Centralised Solutions for Urban Water and Sanitation Services in India*

Two cases illustrate the impact of centralised solutions: Kandi and Ganga.

Kandy is precious for Srilankans. The Kandy City water supply and augmentation and environmental improvement project is being implemented at a cost of 14 billion SL rupees, donated by Japan. Nearly 50% of this donation goes back to Japan including construction costs and consultation. The sustainability depends on Sri Lanka agreeing to laying sewer lines, importing materials for repairs and replacements, including areas etc. Institutional weakening begins with hiring of foreign consultant and continues with opacity of the project.

Heterogeneous composition of waste water, reliance on continuous power, centralised treatment, and dependence on piped system raises questions about whether the technology adopted for Kandy is appropriate. Tariffs and institutional gaps raise questions about the viability.

The Ganga Action Plan used Dutch aid and technology. Is it justifiable? Why did states fail in pollution reduction? Prescriptions for increased efficiency now focus on public private partnerships. However the root cause of this failure is the focus on centralised wastewater treatment which is capital, energy and management intensive.

Policy shifts in UWSS in India

Many policy documents favour the public-private partnerships. Investments have increased from 3700 crore to 43000 crore on UWSs. Average cost of building STPs and sewers is about 5 to 7 crores, which means the Ganga needs 57000 crores and a running cost of 8000 crores. This translates as Rs 13,329 per capita for capital. Huge investment is clearly needed. The Ganga basin environmental management plan recommends zero liquid discharge and design-build-finance- operate mode. The policy group criticized the centrality of ULBs in facilitating this, and how it does not address the issue of governance failure.

Alternate policy suggestions:

Planning Commission and NGRBA: cost cutting, recycling, transparency are all needed. NRGBA also stresses on recycle and reuse using decentralized systems. CSE and DEWATs are all recommending decentralized sanitation systems. The 12th FYP recommends using a variety of technologies to treat waste as locally as possible. This depends on technological efficacy, financial viability, social acceptance, and community participation. Our challenge is to develop an independent regulatory system that ensures transparency and accountability to make water and sanitation services efficient, affordable and sustainable to all.

Narayanan: Kandy study clearly shows the limitations of the decentralized model. Decentralized solutions are not universal; they are much more contextual. Here we can design solutions to meet various conditions. The process is complex. We need to reclaim control from the consultants.

Biksham Gujja: Reducing Water Footprint in India

India is set to be water-stressed by 2025. The 12th plan states that pricing water and electricity will reduce depleting aquifers. How will this work? Agriculture is using far more water to produce far less. India is the only country still looking to allocate more water in 2050- they are allocating water that does not exist. Since 1950s, there is a 680 time increase to irrigate one hectare of land (surface water). The 12th plan allocates 1.5 million rupees for each hectare irrigated. Privately invested irrigation is actually improving the area. Farmers using groundwater are considered to be villains. But they deliver actual irrigation at lower cost.

However, with 10 million electric and 5 million diesel pumps, the whole country is a pumping machine. India uses 688 billion cum of water, China uses 400 bcum; China's production of wheat and paddy is 40% more than India's. Water use efficiency for dams (overall) varies from 45 to 22%. Average is 38% efficiency for 28 dams surveyed. Are we investing in that? CAG report on Jalayagnam states that cost escalation is nearly one-third. The 12th plan allocates Rs 4,22,012 crores for water. India's ground water uses 30 million structures and pumps 251 bcum, which is equal to the storage of all the dams in the country. 84% of total addition of net irrigated area is from groundwater, or from private investment.

SRI and SSI can easily reduce 25% water consumption by agriculture. This needs to be invested in. Solar energy, innovation in drip irrigation, incentives for better practices, better prices for low water commodities, all need to be done. Using less water and increasing efficiency is the key to avoiding a crisis of water scarcity. To achieve this, can we implement a Plan holiday from investing in surface irrigation in the 13th plan and focus on water efficiency instead?

Vijay Shankar: Groundwater irrigation is incorrectly considered to be private investment. A huge amount of public investment has gone into electricity which has made groundwater irrigation possible.

Saroj: 80% of farmers are marginal, they do not benefit from groundwater irrigation. Surface irrigation is not happening, private investment will exclude a large section of people.

Veena: We do not know how to manage groundwater, this is not being discussed. Is there a way to consider conjunctive use when we look at efficiency of water projects?

Parthasarthy: Lack of earmarked funds of O&M is a major problem- what is the way out?

Achyut Das: How far is the suggestion that privatization is the solution for everything correct? To change the water footprint, we need to harvest rainwater.

Basin level efficiency can be calculated using conjunctive use. There is a need to differentiate between true groundwater irrigation, and groundwater irrigation in command areas, which is basically recycled surface water. To improve efficiency, we need to control conveyance, evapotranspiration and on field losses.

Technical Session Six: 14:00 to 15:40

Chairperson: Navroz Dubash

Rapporteurs: Latha and Pradeep Purandhare

Vijay Shankar: *Out of balance: Management framework for groundwater in two backward states of India.*

There is a clear turnaround in growth rate of Indian agriculture since 2005, with higher growth in hitherto slow growing states. This includes a high share of rainfed agriculture. A clear reason seems to be aggressive tapping of groundwater leading to overexploitation. This has worsened groundwater balance in Rajasthan and Madhya Pradesh. In Rajasthan, the extent of groundwater exploitation has risen from 59% in 1995 to 135% in 2009.

Is there an inevitable tradeoff between poverty eradication and environmental balance? MP and Rajasthan have taken up strong farm support policies while targeting groundwater. There is a need for framework for management and governance of groundwater in high poverty states.

Issues with groundwater management :

- a mobile resource, difficult to see..is invisible
- open access, common pool resource, subject to reducibility
- right to water is linked to land ownership
- absence of clear legal framework and institutions
- water energy nexus- power pricing policy
- scale issue: disconnect between the scale of information and scale of action. Action takes place at the level of aquifer, but we do not have information at that level
- Defective methodology of CGWB for GWD. Community needs to be brought to the forefront for groundwater management.

Framework for participatory groundwater management:

- participatory aquifer mapping
- evolving aquifer typologies
- data on groundwater flows
- crop water budgeting
- protocols- location specific rules and norms or water use
- empowering community institutions with information for decision making

Essential elements of the framework

- community, science and law are three limbs
- participatory community based alternative
- communities and community institutions are empowered to take informed decisions
- scientific input complements community knowledge systems
- central role of peoples institutions in devising rules and managing conflict

- backing of an enabling legal system of water rights and water use (not command and control)

Subodh Wagle: *Independent Regulatory Bodies in the Water Sector: Issues and Prospects*

Emerging context:

There is now an ongoing diffusion of water Independent Regulatory Agencies across states (MWRRA, Arunachal WRRRA, UPWRRRA etc). The genesis of this is the World Bank with its supported water restructuring/reform projects at state level and conditional grants by 13th finance commission. They are also a concrete policy recommendation in the 12th five year plan.

What is IRA? A statutory body constituted by laws, that is autonomous and delegated with regulatory functions, and comprises of members who are experts.

The main question is of institutional design of IRAs. This is the ultimate step in the chain of delegation, with considerable autonomy and no direct political control. This raises the question of balancing autonomy and accountability. What is the basis of this accountability? Standard economic model of IRA was created with the mandate of regulating private sector in monopoly situations. The Water IRAs deviate from this standard model since they are expected to provide a mix of economic and social regulation.

In MWRRA, institutional transplant meets local context.

Nature of design of MWRRA

Certain market principles such as tradeable entitlements and cost-recovery are present. But this is restricted to operation and maintenance costs. Certain social policy principles such as equity in allocation are included. However private sector investment and its regulation is not included. This has led to a dissociation of IRA from the ongoing service privatization projects. This mix of social and economic rationales in the IRA model is a strong deviation from the traditional IRA model.

Nature of implementation:

Social criteria influenced water tariff model, with distributive implications which led to subsidy awarding. There is no method for offsetting subsidies for ensuring recovery. The MWRRA provided a non-partisan political space for critical engagement and influence. This was the first time where water tariffs were openly discussed. Project review and clearance is within the purview of the authority, which needs to be exploited to its full potential. .

Water allocation: Ministers bypass MWRRA while diverting water from agricultural to industrial use. The campaign against water diversion was termed illegal on grounds of sphere of the MWRRA. The ministers amended the MWRRA act by legalizing past diversions, allocation powers restored back to the cabinet. The IRA is now to regulate the use as per determined allocations. The MWRRA did not recognise privatization of nira-deoghat dam. A regulatory purview was ensured for the future.

Problems and Prospects

Water IRA defies standard model by interplay of local contextual factors. This can be seen either as innovation, or confusion. There is a conceptual confusion on IRA design. This might lead to an institutional lockin where we have no means of opting out of an incorrect design. We need a policy framework to preced institutions. A model bill of state water regulatory systems is required.

The question of conceptual fit is summed up by asking why' independent' RA if resource is held publicly.

Himanshu Thakkar: Dams and Environmental Clearances: Learnings and Way Forward

The paper goes through the process and highlights the problems at each state. Level of environmental governance is dismal. We are on a learning curve, but we show no signs of getting off that curve. Not all big dams require environmental clearance. A number of large projects- interlinking projects, large dams, flood control projects- do not require them. According to a recent notification only large irrigation projects and hydropower projects less than 25MW do not require clearance. This assumption that these projects are benign is incorrect. Environmental governance means that we need to assess the impact of a project. To determine pro-rata that certain projects are benign is a mockery of the principle.

Expert appraisal committee is the first state of environmental governance. Who comprises this committee? The chairman of the expert appraisal committee on river valley projects was the coal secretary, and has no involvement with water. He has gone on record to say that 'India can either have tigers or electricity'. The first problem is who is on the committee, who selects them, what is the criteria for selection.

How do the EACs function? We have done a study of the committee for the last seven years. We find that it has never rejected a single one of 262 projects, either at the terms of reference stage or the environmental governance stage. To look at the way it functions, the EAC never looks at the representations made by civil society. Civil society are never invited to the meeting, only the developers are. In a number of river valleys, we have bumper to bumper projects where water from the upstream project flows into the reservoir of the second project. It assumes that for a river to flow is a crime. The Abhay Shukla committee recommended that there should be at least 5km of flowing river between projects. He emphasises that 5km is just a norm, what is required is a study of the length that a river requires to rejuvenate. The EAC ignored this for a long time, when they did pay attention, they recommended one kilometer- and even this was considered to be negotiable. Even today, the EAC ignores its own recommendations.

This is even true in case of environmental flows. They refuse to acknowledge environmental flow regimes, and are still fixated on minimum flow. Due to pressure, it has been evolving, but the implementation is not governed.

The functioning is a problem. The chair of the EAC was on the board of several power companies. The other big issue is the quality of the EIA. The EAC is supposed to govern the quality of the EIAs. We know that the EIAs are all inadequate cut and paste jobs. The EAC has never rejected a single EIA. They have never blacklisted a single EIA agency.

The public hearings are a sham, and orchestrated by the companies. The functioning of the Ministry is also in question. After the recommendation of the EAC, it goes to the ministry. In cases where the forestry department has refused a plan, the ministry has overruled that. Where governance fails, the court has a role to play. But in terms of environmental governance, the court has not functioned the way it is expected to do.

Way forward:

- Clearly defined norms on constitution of EAC should be there with a number of criteria.
- A clearly defined process of ensuring that a shoddy EIA is rejected, and the agency suffers
- A process for ensuring public hearings, a prior process of disseminating the EIA.

Broadly, what is needed is much greater faith in people and much greater transparency and accountability.

Panel Discussion: 16:00 to 18:00
Topic: Water Framework Law for India

Chairperson: A. Vaidyanathan

Rapporteurs: Kanchi Kohli and Gourav Dwivedi

Radha D'Souza

Dinesh Kumar Mishra

M S Vani

M. K. Ramesh

Shripad Dharmadhikary

Radha: Prof. Iyer's inclusiveness is the one thing that we need to learn from him. One of the things that we need is that kind of inclusion.

As a nations, we are at a crossroads. Globalization has changed the context for a lot in very significant ways. The two trajectories that have brought us to this point are dysfunctional governance and the model of government. These are not confined to water, but are national problems. Can we talk of water without talking of the nation?

Certain neo-liberal concepts have been naturalized and become part of the discourse. These are being taken as normal. Some of these terms are 'framework laws', 'stakeholder participation', 'regulatory authority'. These are concepts that have come through neo-liberal reforms. These have been applied since the nineties, and have failed. In a framework convention, the rules become the issue; these are always created behind closed doors. This is where negotiations happen, and we cannot see it. Regulatory authorities are quintessential neo-liberal instruments which focus on rolling back the state. But what takes its place?

Footprinting is also a huge problem. The question is about quantifying, and once quantified, it turns into a market instrument. It is important to understand the legal instruments that go into the regulation using market.

Gatwatch has a slogan 'don't leave it to the experts'. Framework negotiations leave far too much to the experts. As a democracy, we need to reclaim this.

We have a pattern of knowledge production, where the concepts and philosophies are created in the developed countries and the fieldwork is done in third world countries. We are making huge strides in data, but need to interrogate theory.

The character of the state has changed. The state does not exist with all the global agreements. The idea of bringing property law concepts into natural resources is fundamentally problematic. Water is no one's property, it is a condition for human life. We are guardians of water. Indigenous people everywhere are promoting this concept.

KP Soma:

The need for framework law arises from our understanding that water is a state subject; to guide this legislation in the interest of a constitutional framework is the basis of the law. It is located in the conceptualization of water as property. This is explicit in the articulation of price allocation. It also looks at water as a resource. It articulates water management and water governance from a market framework. They recommend preemptive prioritization of a minimum of 25 litres, but do not speak of a maximum. It talks of water for production, productivity, and maximization of gains, but not of water for life. Ramaswamy Iyer's water

for life framework is a much larger concept and aligns itself to ecology, to environment, to sustainability. Scale, context, bedrock quality are all been debated. The framework law uses a basis of project management for issues that are much larger than that. It talks of how peoples views would be considered, but are not the primary consideration. The Iyer draft locates the framework law within a human rights framework.

MK Ramesh: One of the qualifications of a legal academic is to be a skeptic. When you think of a framework law, you are referring to an overarch that sets the contours for maneuverability, that brings in clarity, supplies omissions, and gives an architectural governance, delineates positions, powers and functions.

The law should be far more broad based than being confined to one single sector, especially when there is abundant scope for overlap. There are a number of difficulties with respect to the framework law. There are several parallel tracks and trajectories of development, one of these is the constitutional. The state and regional imbalances of development should have been factored in that. Policy planning and formulation should be accounted in these.

Himanshu Thakkar: We need to recognise the danger of national framework law: The centre has been looking for a way to gain control over rivers. The main thing slowing down interlinking is the fact that water is a state subject. If the National Framework Law is manipulated, it can give centre authority over rivers.

There is also a preponderance of laws over water-are we adding to the mix? Is there a need for another law?

Ramaswamy Iyer: The law was labelled 'framework' to stress that it is not for administration. The idea was just to provide a statement of national consensus, similar to the national policy but one that is justiciable. The law is not to be administered by the state. It clearly mentions that water is a heritage, public trust. The purpose of this is to move away from eminent domain.

Day Three: 27 November 2013

Venue: "Casuarina", Habitat World, at India Habitat Centre (IHC)

Technical Session Seven: 09:30 to 10:30

(20 minutes for each presentation)

Chairperson: Kuntala Lahiri Dutt

Rapporteurs: K. P. Soma and Viren Lobo

Pratap Bhanu Mehta: *Withering of the Conception of Public State and Problematising the State-Citizen Relationship:*

The public state does not make sense in the context of a whole lot of institutions. How will RBOS be nested in the context of local and central government? This holds true for education and for everything. The institutional architecture that the state is putting up seems to be the lazy way of deflecting criticism. What do they all add up to? My fear is they will be less than the sum of their parts. Two problems stand out in democratic discourse in India. One of those is what do we think democracy is for? Democracy does not produce decisions that people think are widely legitimate. Legitimacy means that people whom a decision affects freely accept it. That concept of democracy to make that concept of legitimacy work. We need to accept that democracy is the praxis of finding mutually acceptable agreements. One tends to think of it as a gladiatorial contest, a strategical appropriation contest. The big challenge is that we have not found the ethics to turn the praxis of democracy..this affects the groups in democracy.

This is compounded by the attitude 'we are going to be the authoritative mediators of knowledge'. Mutually acceptable agreements rests on a range of credibly authoritative truth producing processes.

Think of what we have not produced on a whole range of issues. Our institutions have zero credibility in mediating the task of gathering knowledge. Civil Society been successful in this task. What it cannot do is mediate the creating of agreements. How are social meanings of things like water going to be adjudicated? The abstract view is clear, but once you move beyond the level of abstraction, the question becomes which side has power and can inscribe its view into law. Judication tends to cut short the difficult process of finding a mutually acceptable agreement. There is an ethical dimension to decision making.

Navroz Dubash: *Climate Change and Water: An Indian Agenda*

Climate science: We are half way through the IPCC movement where we are told what to think of climate change. The latest says that climate change is unequivocal. In terms of south Asia, it says decreased water availability. The broad brush is we will be dealing with increased water scarcity. There will also be other impacts: storm intensity, coastal vulnerability, more water borne diseases. The context in which we look at water is going to change in the next few decades; some say it has already changed.

Challenge: We have very little ability to predict local and regional impacts. That is where we need to be thinking harder in terms of our investment in science.

We know we need to: increase water efficiency, recycling, basin level management, desalination, increased recharge. The hard part is, how do you make it happen?

In terms of implementation, the national water mission has hardly moved. 22 states have put state action plans, some have been implemented. These have been studied. And several

of these are unarguably informed and basic. There is a different arena now where water issues are being thought about, which need to be engaged with. There is not a lot of movement on the national water mission and the state action plans for climate change. There is no evidence of new institutional developments so far. To what extent does climate change make a difference to what we think about water?

We need a framework that takes advantage of potential opportunity, and cognizance of potential risk. Climate change leads to distinct threats, which it is important to study. Climate change also requires a broad sustainable agenda. It is important to separate these two out. This is an opportunity to concentrate the mind, opportunity to integrate institutions and planning across sectors. Climate change is forcing people to get together across their silos. The state plans demonstrate this. SAPCC are becoming a de facto state sustainability planning exercise.

What the debate/policy process has been so far:

Climate change acts as a priority shifter with better science, better down-scaled predictions. Does traditional supply side focus make sense in a world where river flows are likely to become unpredictable. In a water scarce world, prioritizing efficiency becomes paramount. There is talk of a bureau of water efficiency along the lines of energy efficiency. Climate change is not an important point in itself as far as governance is concerned; it's effects intersect with the social points of concern, which draw attention to climate change. Points where climate change can focus our minds is in realizing the potential of IWRM, role of water regulators, and addressing groundwater anarchy

Climate change is also an integrating force. Water, energy, and health are all affected by climate change. SAPCCs can drive this integration. Do we want separate local level institutions for water energy, health? It is in their scope to bring them together. These are all debates that have the potential to be harnessed by climate change.

We have to have better science about what all this means in biophysical terms; but now it is an opportunity to prioritise things we would be doing anyway- a means to focus.

Mehta: Besides the question of civil society interaction, the basic objective of some government institutions are not defined well. If these are, then their interaction with others also becomes clarified. My concern is therefore basic. It is only after this basic definition is made that other issues such as extension, efficiency, roles, and inclusiveness can be discussed. Institutions are created because they sound good, but the functionality is not defined.

If academia does not provide the necessary evidence, how do you expect civil society to reconcile that? Is there a route for renegotiating our institutions and movements? It is time for academicians to take on the challenge. Sociology of science is worse than the sociology of law. How do you see the agenda for science changing for climate change.

Science and technology is not embedded in our government at all. Our planning processes are economics and bureaucracy heavy. We need to link science and society at all levels, the sociology of science will be done by including those links at government.

Iyer: If climate change had not happened, we would still need a radical transformation. This new complication increases the rate of transform.

Pratap: what has to be true of participants in a conversation for results to be legitimate? You have to come to the discussion with a view that here is a problem, and the aim is to find a mutually acceptable solution. Our cultures of negotiation at any level are not oriented to

that. That aspect of democratic practice is under-institutionalized in all the forums that are required. Or we can say that this is a contest. It is something hard to articulate what is needed- it requires a different anthropology of democracy. There are protests, but what to do if there are rival methods of conception. How do we handle these negotiations?

Final Plenary Session: 11:00 to 13:10

Topic: Restructuring the Water Sector in more Equitable, Sustainable and Democratic Lines: Critical Insights from the Conference

Chairperson: Mihir Shah

Presentation by the rapporteurs (*Excluded from the report since they summed up the sessions which have been reported in full here*)

Resolution read out.

Panel discussion:

R. Parthasarathy

Huge variations have been seen in the past discussions, but oft repeated concerns are surface water, some groundwater. Underlying issue is water management. Fundamental problem is that the PIM act and subsequent acts deal with water distribution. This is useful in water scarce areas, but not in water surplus areas. What is the alternative? Participatory irrigation management remains the answer; the alternatives are even less integrating. We need to bring out a model. Young farmers being not motivated and changes in landuse are building blocks for our model. We cannot afford to lose sight of the decentralisation goal.

Bharat Patankar

Equity is a catchword in discourses, but we are not consistent in right to livelihood and right to life. What kind of equity are we talking of? Are we talking within the frameworks of the established development paradigm, or do we have an alternative one? This is not clarified. Civil society is a catchword as if it is a unified entity. Same for stakeholder. What is our concept of ecological sphere? In which framework are we talking of water resources? Without talking of forests, or mining, we cannot talk of water policy and the conflicts which it has with policies relating to other aspects of the ecological sphere.

Achyut Das

State is against its own policies. All discussions going on under the patronage of the state will be against the people. My disenchantment with academics has been going on for years; to fight a state, an alliance is required. How do you go about this?

M. K. Prasad

Two contributions, that of Mihir shah and Vaidyanathan suggest that restructuring water sector is important. Present policies are not encouraging water resource management. It is interesting that the Planning Commission proposes a paradigm shift in water management.

Ashish Mondal

If water can be extended into natural resources, we see that the issue is extremely complex. There is confusion over how to address these issues. Programmes and initiatives have been evolving, but there is no comprehensive assessment of the impact of all these on the ground. However, we do see that some of these schemes have lost momentum. Although allocations have increased, implementation concerns remain. Government institutions still act in a compartmentalised way; quality of our research has come down, Delinking between academic and implementation, institutional issues remain, these issues need to be addressed.

Lingaraj

This meeting indicates that the country has an intellectual section that is arguing for the rights of the people. The crises are becoming apparent in parts of the country; solutions are being sought. A national framework law definitely is needed, I do not agree with some of the discourse on it. We are going through a point in time where a dialogue between two or more opposing points of view should be encouraged.

We never thought that we would have to face conflicts over sharing of water on the Hirakud, but we needed to do it. In the last 20 years, when it was declared that the next war would be over water, the concept was difficult to understand. But soon, we saw the reality of that in increasing conflict throughout the country. In the last 20 years, we have seen some acts- PESA, FRA. PESA, RTI, have become weapons in the hands of the people. We know the motives behind the land acquisition act. A law that sets down principles – like the NFL- is essential to provide a guide for the country. Mineral based industrialisation, unbridled urbanization and chemical agriculture are not a favourable background for negotiation over water.

Sumi Krishna

Missed a deeper engagement with questions of gender and caste. There is literature dealing with these issues in the Indian frameworks. Gender issues are only being discussed within customary boundaries. No integration. Why is this so?

We are not moving beyond abstractions; there are hardly any attempts to deal with issues of equability in the papers discussed here. The motivation is there, why is it not openly engaged with.

Himanshu Thakkar

At the GOI level, the most influential institutions are the MoWR and CWC. They have influence and power at the national level and also at states. We have failed to make them more democratic, more sustainable. It should be on our agenda to make them more responsible, democratic, accountable.

The TAC (technical advisory committee) which meets every month and sanctions projects of 100s of crores. We went through the minutes and realised there is very little attempt to evaluate the desirability or the need for these projects. We had written to the Planning Commission, and there was some impact.

We state that the functioning of this committee should be in the public domain: agenda and minutes should be disclosed, and people from public sector should be on the committee. Also for international relationships there is some exchange of data and so on. But is there any space at all for citizens? What is the use of the flood related data if it is in the files of the government? Why is it not out?

More than 5,000 crores have been spent on the Lower Subansiri dam, but work has been stalled because of peoples' protests. This is a precursor of things to come. :argely

what is happening to our rivers and reservoirs capture the crises and the face of things to come. Increasingly, the state is working in the interest of corporates. How do we ensure that it does not happen to the exclusion of the interest of the citizens and of the ecology.

Reflections by Ramaswamy Iyer

Two or three different kinds of transformations are required:

The relationship between humankind and nature: when we intervene with nature, what are we doing? People say that there is no conflict between environment and development, this is too facile a statement. There is a conflict between environment and the sort of development that we see. This currently hinges upon economics and technology, we need to include sociology and ecology. Minor changes will not do, major are required. This statement leads to accusation of 'eco-fundamentalism'. There is nothing more fundamental than the earth we live on, the water we drink, the air we breathe. In that respect, climate change is forcing this major shift in our thinking.

Social justice and equity: Assuming that our policies and sustainability are all right, you can still be causing problems with justice and exclusion. This is also a fundamental debate. There are substantial inequities in caste, rich and poor, gender-these need to be looked at.

Relationship between state and society: We have strong movements for empowerment of society. But it is becoming conflict. This empowerment cannot come at the cost of disempowerment of state. The public trust doctrine is the answer to this conundrum, where the state is empowered to act as guardian of resources for society. Public trust does not necessarily imply property. You can have public trust doctrine in exclusion of the concept of property. The community has the right to use resources, it does not mean that it owns it. This has been recognized, the SC has mentioned in several judgements, but is not clear that it is part of the Indian law. The Plachimada case judgement when it comes out, will be a watershed judgement. If coke's right is upheld, then it will be a major blow. The rights need to be argued, and there should be greater public interest in this.

Right to water is already there, implicit in the right to life. But it will an advantage to have it declared specifically. One opening is the National Framework Law which can explicitly recognise things that are now tacitly recognised. Gandhi said that there are no rights, only responsibilities. In today's scene, we cannot discount rights, but at the same time, we need to recognise obligations. This recognition will give an ethical perspective to the rights dialogue, which by itself is a language of contestation. This needs to be moderated by bringing in the language of responsibilities.

There is the possibility of a dangerous centralisation, if there is a central law. But a new law cannot be dismissed on general thoughts, on the argument that we already have many laws. Each law needs to be examined. The second argument is more dangerous-that what is the use, laws are tough to enforce. There is a problem with enforcement, but the solution is not an absence of laws .

Given the vital importance of water, the crises we are facing, it is necessary to have a constitutional declaration of the states' and the citizens' responsibilities towards water. The NFL should in no way change the centre-state relationship. It is not an attempt to centralise governance of water. There can still be a central act on water using article 252. This will not be an operational law, with machinery to administer it, but a statement of principle. It will be justiciable in this sense that if somebody departs from the principles stated in the law, then a citizen can go to the court. The present draft is

not a framework law, it goes beyond that. But it is upto the states to accept it or not. A debate should definitely take place. It is in the public domain, but requires greater publicity.

Chairperson's remarks

Corporate takeover of water is the primary challenge water resources face today. The second challenge, in which we are all complicit, is the one where we speak in the language of tokenism. The incorporation of rights, concerns of gender, class-the inclusive agenda can degenerate into a token acceptance of an inclusive agenda. We should move towards a common ground. While striving towards an agenda, the substantiation of this common ground needs to be ensured. The issue cannot be resolved at the level of discourse. It is only on the ground that the difference between what is meant by certain terms may become clear. There is a worry that the paradigm shift should not remain in the plan document alone, but be realised in actuality. What could be done through a plan process to a large extent has been done: shift in policy, change in programmes, allocation of funds. The allocation for aquifer mapping is no small issue. This is a provision that facilitates action by all of us. The nature of the state- we debate it as fostering corporate interests. Yes, it does-this shift was a battle against contending forces. A democratic process is essentially a process of fighting for a voice to be heard among the other voices which also deserve a voice in democracy. It depends on us now what we make of this shift. Real possibilities have been opened up. The sanitation program has been completely recast by the work done by Joe Madiath. The BPL/APL distinction has been broken down as a move towards universal coverage. Equity can only happening through strong mobilisation at the grassroots. The Emergency will not reopen, but new dangers are always present. There is a cry among the youth for a strong fascist leader. But this can only be contested through an agenda of deepening democracy. This is something we can make each government accountable to. In our scepticism, and cynicism, let us not lost a great opportunity that this shift has opened up.

Vote of thanks: 13:10

Lunch : 13:20

The End