

Show Notes

Annual Assam Floods - Climate Change or Embankment Politics?

We hear of floods in the north-eastern state of Assam almost every year, sometimes multiple times in the same year! And with increasing rainfall intensities because of climate change, are the existing embankments in Assam a good adaptation mechanism or are they adding to the problem? Anupam Chakravartty, an independent journalist based out of Guwahati, reaches out to the experts and most vulnerable communities by travelling to Kaziranga and unearthing the reality of situation.

This ground report brings to you perspectives that are hardly discussed in the Media.

For instance is the govt policy to build concrete houses good adaptation mechanism or going against age old practices of building houses on stilts?

While every year Kaziranga is flooded we see animals being rescued but we see very little about tribal communities which live in harmony with the animals.

Why is there very little discussion on the need for people living around Kaziranga?

Are Embankments just another fraudulent practice for speculative profits?

Anupam discusses this and more.

Hi I am Rakesh Kamal, Production Lead and Host of "Climate Emergency". This weeks episode is brought to you by

Anupam: Over the years, floods in Assam have become an annual fixture in the disaster calendar of the country. This year, over 5.6 million people were affected by the deluge that drowned large swathes of fertile agricultural land in just one week. The impact on people, animals and agro-economic resources of the Northeastern state are expected to be felt long after the waters recede. Several families continue to live in relief camps and some parts of the state continue to be under water. In fact, as we record this podcast, lower Assam is facing a fresh spate of floods.

Hi! I am Anupam. I am an independent journalist based out of Guwahati. As floods engulfed the Kaziranga National Park and Tiger Reserve and surrounding villages, I travelled to Bokakhat, a small town which borders the eastern front of the National Park. Over the next few days, I explore the factors that lead to the flooding and the reaction to the floods. I also try to understand why and how our assessment of the issue needs to be looked at from a fresh perspective.

I am with Ritupan Pegu who lives close to the Eastern Range of Kaziranga. He earns his living as a farmer and as a guide during tourist season in the winter. Over the last one week, Ritupan and his family had to face several hardships because of the flooding in his village. We talk to him about his experience right from the time when floodwaters started coming in.

Voice over Ritupan interview in assamese:

Ritupan is from mising community in Agortali in Assam. This community lives in houses that are on stilts. . He says that the water started rising from the 9th of July and started increasing rapidly. On 13th July, he says he saw his whole village get submerged in one day. They rushed to get cattle and grains but in two days they lost everything. The only place that was not submerged was around a narrow strip of the embankment. He believes in all these years of living there, this is among the worst floods to hit them and believes that this disaster is because of the haphazard and unscientific plans to control the river without considering the natural flow of water.

Ritupan says that while the water is receding, it is taking longer than usual. The paddy seedlings and nurseries are damaged and it will take them at least a month and half to recuperate from the losses. He says they are unsure if they will even harvest this year.

CHAMPA SAIKIA, DIPHOLUPATHAR

Anupam: Thank you for joining us Champa didi. Tell us about your experience with these floods.

Voice over for Champa interview in assamese:

Champa sent both her kids to relief camp on the day after the floods hit their village. She and her husband packed bags the next day and moved to the camp. She and her family returned from the camp after 8 days only to find the wall of their house damaged and utensils and seedlings lost. She says that this is the biggest flood she has ever seen. She feels good that the embankment protected them from further destruction but was scared that it would have been disastrous if the embankment failed.

Anupam: I am with Pranab Doley who lives in Bukakhar. He is a member of a mass organisation called Jeepal Krishak Sramik Sangathan. In 2017 Pranab started a campaign for local farmers infected by pest attacks. He along with Jeepal campaign for revision of state disaster relief fund compensation for the flood affected communities across Assam. Thank you for joining us Pranab.

Pranab: Thank you, thank you for giving me This opportunity to talk with you on very important issue that's been plaguing our lives historically and which also determines the future of generations to come.

Anupam: For what i understood, the flood here has been more about providing relief and rehabilitation rather than talking about the causes that bring this kind of floods to you and your community. Why is this aspect regarding the factors that contribute to the flood of this region, why is this been ignored, ahat is the larger discourse here?

Pranab: From my understanding from the field, like working with the people and being an individual who comes from within the community, the mising tribe, bekhon, is a riverine tribal community and their knowledge in itself sees that we have the heritage and culture has gone with the people. But in today's time what we see the floods and the coping mechanism which the community uses or which the riverine community across the state uses the relation is no longer same with the river. And that i would say has been done deliberately, it's a long protracted mechanism by which the government of Assam has

managed to disrupt, break this relation between the communities residing here with the land, with the river and through the embankment politics basically. So the embankments has historically been used to popularise people here, to disrupt the normal life of people the flood is seen sustainable livelihoods of the riverine communities across Assam, the embankments have been used to break down these people, so that we produce more broken people who could fit the industries and companies and cities and other peripheries and other spaces. So it's also a field where you produce cheap labour for a thriving labour market. So that's the mechanism that's working. So we cannot see the floods in terms of only it's naturality. So it has lot to do with the manmade and a lot to do with the policies and the practices of the government.

Anupam: As you know from what I understand, embankments are supposed to across the world, embankments are supposed to protect the people from floods, how does it change here, what has been done that has brought so much of destruction to your community?

Pranab: what has happened, now in the village that I was born, it's no longer there. Right now it's the bed of the river Dhangri which is tributary of the Brahmaputra. And multiple times my parents have been evicted, my grandfather was evicted, my great grandfather was evicted, everyone has their story of eviction, a live history. So what i see like nothing has changed since then, it's only like we have lost our own lands, our homelands our cultivable lands, livelihood, our culture, our heritage, in a lot of ways and we have been displaced multiple times because of the floods policies, the government has never done anything, the policy makers have never done anything to look into the real problems of the people, how they could, because people have been living here with the floods for centuries and with the aggravation of floods, due to this flood policy of the embankments, the damming of the river on upstreams what has happened is the flood system is not what it used to be the natural process, like huge section of it can be contributed to the man made disaster happening now and as we see the floods that recur every year the only way the institutions of the government mechanism or the policy makers are used to seeing it as a mechanical problem and thinking it can just lay down an embankment and block the river and that's gonna solve it or something but they have failed miserably in it. So the factor of being 9 embankments washed away near Kaziranga proves that the embankments, the way they have been making it, it's not resilient in the state, so we need to think of and what has happened as a result is like they have kind of summarily and systematically erased and also forcefully displaced the people from their own coping mechanism. Like the traditional ways in which they could deal with the floods. So these are been in the last 50 years there have been able to annihilate and erase a lot of this practices of the people. So from a self sustaining and a resilient community, people from community around the river have been driven to become the broken people who have completely dependent on outsiders. So now we see a gradual shift of the government, so we know that for us as the mass organisation our basic demand is that the government need to sit with us before deciding what should be the policy. Us and not me as the people who have been living with the floods, so this practice has never taken place.

Anupam: You just mentioned something about the traditional coping mechanism. If you could elaborate on that like what sort of mechanism were there and still are there to cope with floods?

Pranab: So basically what the communities, the housing patterns, the architecture, was one of the primary example of how the people made flood resilient houses. The houses on stilts were made of bamboo, like the material that could be locally sourced, locally found, and so earlier we had system of building stilts houses and now the government with the policy change of providing cheap household or housing to everyone, what they have done is they have build up concrete houses in the places of traditional bamboo stilt houses. So what has happened as a result is like the concrete houses cannot withstand the force of water which should come by and due to this a lot of houses get washed away, on the other hand the Bamboo stilt porous houses were just washed off, like the water could just permeate through without destroying much. And besides like there were practice of building the houses in a manner that the water level in a building though it has a certain level of current in it would not erode the space so there was a sudden formation, like the shape that they would give to the base of the house so that was also there. So there would be a conical kind of structure. Here people say it's kind of (kasa kethiya) which means it should be designed like the back of the turtle. So the (kasa pethiya) is like where the water would go away without washing land or uprooting the house. So this form of practice are no longer there. And besides like the communities they would have highlands for the animal, they would build community highlands for the animals and every household will have boots as well, but now no longer people have all those things because in the policies that they build there are no longer place for this kind of traditional knowledge. So instead they are promoting say concrete houses, they are promoting like massive highlands, like which are not conducive to the flood plains over there which is also in a way like disrupting the flow of the water. So that is in a way hampering the process and erosion and hampering how the floods are affecting the communities over there.

Anupam: So what we also see quite a bit, i mean your campaign was also centered around providing quite a bit and adequate compensation not just to the farmers but also to the people living Very close to these flooded areas and what we have also seen is that you know Kaziranga being very close to Kaziranga, while there is a lot of effort on protection of the animals in Kaziranga there is very less, like you keep saying that there is very less that has been done about the people living there. Like you know about the construction of the highlands and all those things that you just spoke about. So there's two part to this conversation basically, one is that what I am trying to understand from you is that you know what should be the adequate compensation for persons affected by floods? Which also includes their agricultural fields and what is the politics behind the relief that has been given to the people. And the second part is that is there a case of you know the relief, is there a effort of putting more towards areas or protected reserves such as Kaziranga or ignoring the people or something like that and not enough been done for the people living around these areas. If you can tell about this.

Pranab: So here we see what is happening is very true like it's very clear, it's outrightly there on your face the importance that Kaziranga has. And the people here living around Kaziranga definitely kind of blacked out. Say the imagery or picture of media or even the government and the policy maker. What's happening in Kaziranga is that the floods definitely they are forgetting the very fact that it has to be the both. Like the way the people, the locals know here. So if the animals need to survive it has to be the people who

need to protect them. And that is where they are making the fundamental mistake. Here they are creating a divide between the humans and the animals residing Along Kaziranga, communities residing Along Kaziranga, the whole emphasis on heed and international NGOs and government working together in collusion for the protection of animals, is more dominant than the idea of working with the people. So here when you try what is happening, the result is that they are trying to save the animals but without protecting the people who actually live around Kaziranga. And who are the ones who have to give the right of places to animals, so once the humans are safe there, definitely they will have the capacity to protect the animals as well. So it should not be say pitting humans against animals which most of the people are trying to do, like the wildlife NGOs, the agencies, so that's a wrong policy or it's a wrong way of addressing the whole issue. So what will happen as a result of this is that it will only divide, so it's also like dividing the attention of the government. So what is happening it's like the politics see here is like the Kaziranga is so good and say who are hampering this place, it's the local people, this is the major image that goes out or looks like the people who are not giving them space, who are not protecting or saving the animals, that's not true that's a wrong picture, here both the humans and the animals like which has build the fact. So the people like need to be given equal attention as well, where as a result of which there will be people to give more space to the animals, which is not happening, here the whole flow fund is also very unequal, here you see like on the one hand there is like huge amount of funds been given out to the animals, but you don't know how it's like. So the park authorities gets fund but you never know how that been utilised. And as locals here when we go around, we don't see that impact, we don't see the say you, see the amount of effort that needs to go there. So there is a lot of talk about it all around the press and media but in actuality the numbers that they come up with this number of things that are happening inside Kaziranga is very questionable. Like here what is happening is very alarming what is happening inside Kaziranga and to the animals and in order to secure the security of the animals we suggest is the people living in the vicinity of the kaziranga needs to be given private space and it's only then they will be able to work for the forest which is not happening in today's time, there is like rampantly building highlands inside park which is not proving to be fruitful, it's not attaining it's goal for what it's been build and these are thing without consulting the people living in the vicinity. Ao if the consultation, process happen with the community and the community is given stake which they have historically over the place then definitely a more cohesive and a more sustainable process of protecting the forest can be geeked out. But the policy makers don't want to do that. And they don't want to do that because there is a huge political econoy, there is a huge capital involved in it. So it's lot of people who are making money out of it. There are lots of NGOs, there are government offices, there are government policy maker, there are different sects who are profiting from this divide between the humans and the forests. And we have condemning this and we have been working against this.

Anupam: So i mean then we see that very same families living very close to the park have not very adequately compensated for the previous floods. So can you draw that comparison for what kind of money one person who has lost his probably fields or his gravery or his house to the floods, what is the kind of money do they get as you know compared to the money that they get for the park? If you can draw a comparison, or if you can throw some light on what is the kind of money that is been put for the people who are affected over

here and one of the main campaigns has been to revise the state disaster relief fund, compensation that people should get. So if you can elaborate on these points?

Pranab: Yeah one of the primary long-standing demand of the flood affected communities in Assam since floods are an annual affair in this part of the country. And one of the primary demand has been to revise the state disaster relief manual, i mean which they did they did revise in 2015, but then the revision process which we saw its not been collective, they have not taken the consent of the people, they have not contacted kind of consultation with the people, so they have not done any process of understanding actually the losses that happen that give to people. So as a result lot of things have missed out of it. So when we talk about a community it cannot be like a community in isolation, it needs to be seen in relation with its common properties, not only its individual properties, so here our demand has always been to see it holistically and also understand the ethos of the tribal communities and also other marginalized communities that needs to be given, the centre of articulation in this whole while drafting the policy. This has not happen in the disaster relief manual, this came up like in 2017, earlier it used to be the state disaster relief fund, it was never actualised, floods happen every year but people didn't know, but in 2017 there was an incident where there was a worm attack, like there was an army worm which has been previously seen in countries like South America and Africa where overnight this pest attack could completely decimate completely eat off like acres of land and that's like same thing happened here and there was standing crops of farmers of the peasants here and thousands of hectares of land overnight were completely eaten off by pest and then people came up, we came up in big hoards and like started a protest demanding a proper compensation mechanism needs to be built, a robust mechanism to come up so that people who are affected by natural disasters can again like rebuild their lives without having to be thrown into the backdoors and be forgotten. So we wanted them to get proper compensation so that they could start their lives from where they have left. Because this has been a process, the backbone of the community have been broken down because of these regular occurring of floods and these disasters in the field. So our basic demands were that, whatever in floods, so like in today's time in tribal communities the main economy is livestock, the main form of livelihood is livestock and farming. So in today's time when your standing crop of a bigha is lost, actually when you earn around 10-20 quintals of rice, and in today's time the rice compensation lost in one bigha is less than three thousand which doesn't justify the amount that a farmer accrues because of lost of one bigha of land. And if this loss of land due to erosion, which has not been addressed, so we have demanded that this community land or private land if it is eroded away by the river you should have a mechanism of compensating the farmer. If need be you have to rehabilitate them as well which has not happened in Assam. So when the land the family definitely, the farming community's main source of livelihood is this piece of land and most of the time when the land is eroded away, this has happened categorically if we look at many hectares of land has been washed away and people have never been compensated or rehabilitated properly. So our demand stands that they need to take into account the lost of land, the need to take into account the market value of livestock, so if a goat dies or a full adult pig dies, they give you around ₹3000 but the market value of it will be around ₹15000, so this lacklustre or this money which does not justify the loss should not be taken from people, they should think about updating the manual and giving proper money to the farmer so that they can also sustain themselves.

Anupam: Another thing that coming to the last question, so in such a scenario this was just the first wave of floods we experienced in Assam, usually you get about two or three waves of floods. So what does the future of this place looks like to you with the existing systemic flaws which are there, i mean how does one go through this kind of a situation?

Pranab: As the tragedy of the people of the state of Assam has been the flawed policies. So i mean the embankments they have never have been a holistic policy of addressing the issue. So it has been very selective. And now you have embankments have there been now for more than 60 years. Still the devastation that happens every year has not diminished an ounce. So that itself proves that the embankment policy is a flawed one. So they need to have this rather than selective policy of building embankments in the areas which they think are of important for the interest of the government, national interest which they think. So now we see here we see with kaziranga, the EDB fund is given to kaziranga, it's been given to Dibrugarh town, it's been given to palash valley, all these are prominent places and just by giving three embankments they are trying to prove that they are working against the floods and erosion and they are trying to address this issue but that's just like throwing dust in the eyes of the people, so they are trying to hide behind these gimmicks and this they are doing in order to only protect the areas which they think are important for them which gives them profit, which holds a certain amount of importance in the global capital, but the majority of these spaces are not been taken care of, there are embankment breaches every year, so you have these embankments only in patches and what is happening is you are leaving places vulnerable. So the embankments which you build from lots of money which need to be built in a particular mannerz the standards with which they are supposed to build its not happening and we don't know where the money is going, but this only trying to tell people that we are making an effort, but in actuality they aren't. It's only wastage of public money. So this system is only going to aggravate from here, aggravate on a day to day basis and the aggravation between communities is also growing as a result of this. So there is like pressure on land because of this the erosion that the rivers carry out or happens in the region, so here, so it's a conscious effort of keeping this problem alive. So this helps in 2 ways, coming from people's point of view it helps in keeping people unsettled, so that an active, unified, resilient community doesn't come up, like this has been a practice that has been there since Colonial times and this practice is they are seeing now. So embankments can't be seen in isolation with the nation building process and the politics of the region. So it's definitely an attack on the democratic spirits of the people, they don't want people to come together, to stable enough, to progress, they want people to live in constant poverty and penury so that the unified, the egalitarian, a homogeneous culture that people always had inherently doesn't come together and it doesn't move towards better progressive days. So this is what our reading is and also if this problem resides annually you can ask for funds, central funds, global funds, now ADB has been funding, World bank has been funding, Japanese bank has been funding, so if you resolve the problem how will the money flow into spaces, how will you keep this people colonised. This has been the main factor behind not resolving the problem of this region. And this has been something we have been fighting against, we have been demanding that the government address this and the people have been coming together that we want permanent resolution of floods, so it's not about embankments, we want respite from the erosion, for that you don't need to build an embankment, for that you need to build some erosion control measures, which can be done through different scientific measures which they are keen on doing, on the other hand they

are talking about building expressways, building highways, around the Kaziranga, around the state, which we know cannot be actualised and in a way going to exploit people, devoid them, building embankments and putting people into jails, you know like, you know how embankments are, you can see the clear segregation of different communities, how it's played out on caste and class lines as well. They have been using embankments to keep the problem alive and justify it on caste and class lines.

Anupam: Thank you so much for your time and it's really lovely talking to you in understanding what are the main issue

Anupam: Today we have with us Mirza Zulfequr Rahman, we met in Zul haq, he is one of the revered researchers and he has written on the border issues as well. We are going to talk to him about the present flood scenario and if Mirza can tell us more on the lines of you know, this whole idea of you know what according to him, what according to him, people have told about these recent floods, these recent floods and what is the media and the stakeholder, a lot of commentary has been made, what is it that is missing from this discourse, you know around the present Assam floods?

Mirza: Yeah hi actually when we talk about the floods in Assam, i have been working in this region for sometime now for a decade and I have been following the river as it flows in, working on transboundary rivers brings me to different rivers around the region, including the ganges, the Brahmaputra, the mekong. In a larger context when we talk about floods we also need to understand what is the attitude towards the floods, what is the attitude of the people and what is the attitude of the state towards floods? I was once visiting Majuli some 3-4 years back and there was this sub divisional officer. At that time Majuli was not a district. I interviewed her and she had told me on one question that I asked her, is that how are you prepared for the coming floods? We all know that floods happen annually, how are you prepared for the coming floods and she is like, do we really prepare for floods, it was something like a misnomer for her, it was something that came out of the blue and that is the basic attitude that we need to answer and address, is that how is the state bureaucracy, what is the attitude towards floods? The basic attitude is that there is no preparation for floods. We just have to..... Floods will come, we just have to provide relief, and then move back and once the floods are over, no one talks about floods, be it the state government officials, be it the communities are left to themselves to build, to rebuild and rehabilitate themselves. The relief part is the only aspect that the state government provides and the entire bureaucracy is revolving around that, that kind of aspect.

Anupam: Okay, so in that context only, what sort of, i mean now that you know we have open this up topic, what sort of infrastructure changes are required to tackle with the floods? I mean what is it that we have ignored in so many years that you would want to talk about in the context of present floods?

Mirza: I think the risk involved for communities in annual floods, everyone around India knows that Assam faces floods annually and the intensity has been increasing with the climate change and you know variable flow of rivers in region, what happens is we also need to understand the history of how floods basically became more intense in the region, in the sense when the great earthquake happened in the 1950 and from there onwards the water resources department and the relevant ministries actually had on their hands the task to

actually prevent floods and Nehru when he had visited Dibrugarh for example and said that embankments will actually help the Assam from floods and the bureaucracy took it up really built a series of embankments and this network of embankments is evident across Assam, we actually rebuild them now, it is almost become a sort of an embankment economy which has thrived over 5-6 decades now and there are vested interests in those embankments, there have been multiple studies on how embankments actually aggravates more floods, make floods more intense and really cause misery to the people and this embankment economy, when you actually design the system without studying it properly you actually add on to the woes and therefore the whole water infrastructure setup of Assam at present is on the embankment economy, there are contractors, there are politicians who earn out of it and it makes perfect sense for them, floods actually bring more money to the contractors and politicians and actually take out more resources from local communities. People suffer but the politicians and the contractors do not suffer, and this money that contractors earn will also be put in election funding when the elections will come every five years, so it has been happening overtime, there is nothing new, everyone knows about it, people are not talking about it during the floods and during the floods these issues do not come up after the floods also people forget about it, move on and next year floods will again come up and people will talk about it again, but the basic idea is to have an attitudinal change, as to we are living with risk, ok, these societies that are around Assam can be termed as risk societies, the whole concept of risk societies and who is creating this risk, by actually accentuating this embankments, one mistake over the another mistake and that has been happening over time and that is the real problem.

Anupam: So what do you mean by saying is more and more population in the state are becoming more and more vulnerable to these floods. How much of this do you think is a result of you know factors like climate change and weather phenomenon?

Mirza: Yea yea, climate change has a role to play in the sense that there is a variable flow, now in the rivers rainfall occurs at certain times, for example two years back in August there is a big flood happen, this time it has happen in July, so you know months have changed, people are underprepared when floods come, earlier communities use to have the knowledge about how the floods will come, how the flood will arrive and how the flood will go, because of this embankment and other infrastructure and the climate change now the people really don't know as to how the flood would have been in the different parts of the state and therefore the adaptation also has to change. When we talk about the fishing community for example their entire social history along the river has been to move along the river as the river has moved. What we have now trying to do is to move river along as how we want to live. And that is the root of all the problems that we see related to infrastructure, water infrastructure. I am talking about the embankment economy today and after ten years from before we have been talking about the dam economy. And as 5 years back the Assam government has been talking about the treaching economy. So all of these 3 economies, the embankment, the dam and the treaching economy, all has speculated profits. But then is there any proper research done as to how all of this combined or individually will actually help mitigate floods and the effects in the region, it has not been done.

Anupam: Coming to the, you mentioned about the dams, and even yesterday it was announced that our government is going to Fastrack the construction of dams and it is going to push for more dams in the upstream of the Brahmaputra, do you think the dams will really control floods in north east India?

Mirza: I don't think, the central government is trying to push for dams, I think Assam government has not come out with a statement to actually say that we are for dams in lower regions. For example, from 2013 onwards it has been a kind of a tomb of the dam economy in a sense, everyone is waiting for that to progress and only then the people will also invest their money, other companies will invest their money in other dams so that is a test case in a sense. But dams are not the solution to all of these, we have seen in Kerala for example, last year floods dams actually aggravated the situation much more in a sense. And we have seen dam collapse is Laos for example, what is the variability in the flow in Mekong for now, what is happening in Mekong right away, they are protesting in a Jai budi dam and all across the world, you know there has been this hydropower, even in Bhutan for example, in upstream Bhutan where India is itself helping Bhutan build many dams there is actually affecting Assam downstream in Manas National park. So we are now caught between this debate of how, what will happen upstream, downstream and within the larger space how we make this water infrastructure work towards the development because I think that the economy that the local communities here is an economy on stilts. Like missing built houses on stilts, it's a economy on stilts. By what you know that six months of the year they are actually going to work for their development, but the rest of the six months they are dealing with floods and getting out of floods, you know 6 months of the year is soent on that. How do you think such economy will thrive when 6 months of the entire year is wasted in actually tackling floods and coming out of floods.

Anupam: So we are coming on the rehabilitation part also. You spoke about compensation without rehabilitation. So can you explain how these aspects get ignored by both media as well as different stakeholders?

Mirza: See these are very smart workplay, the government has many smart work plays. For example, i will talk about the Ranganadi dam, the mekong dam when it was initially bought into discussion, the public hearings and all of that it was termed as the run of the river dam. Later on the design was changed to become a inter basin transfer dam where again a public hearing was not seem to be done. So you can actually get stuck in the interplay of words, run of the river dam anyone can say the run of the river dam, we are not stopping water, whatever water stops it gets back to the basin. Now you see how the Ranganadi has effected the downstream. People are talking about and I have written about it saying that this is run away with the river dam not a run off the river dam. You actually completely run away with the Ranganadi rive dam now there is more river water in Dekong than in Ranganadi and that's the living example. The only dam in Arunachal Pradesh is creating so much havoc. Imagine how other 168 dams and the MOUs that are being signed if any beguile comes what affect it will become. I am actually happy that the Ranganadi dam is there for everyone to see what effects people. And it was a very bad example of a dam to be made.

Anupam: Pushing like you say Deban project which is like supposedly the tallest dam and everything how does it play it you know in the larger north eastern, in context of North East as a ot was been planned in the previous years, very few has come up so you earlier also spoke about the speculative Economy, so if you can explain those points?

Mirza: I think it is speculative economy the Deban dam, like in the earlier case of Roy subhanshree dam(not sure about this word) it has become what you call half built dam and it is a half built dam and can be used a bunker to signal to China saying that you know we are actually rivalry and signalling, strategic signalling happening between India and China. And what at the end of the day who suffers is the communities who live downstream and upstream. NHBC in the middle of this floods this year has come out with elaborate advertisements about you know how they are encouraging livelihood in different parts of Arunachal Pradesh and how is it doing, is there any evidence, it's not there and basically what we have to ensure is that no longer there should be any more half built dams. One thing that we do not need mega dams we are not against small dams , we are against mega dams in the region and that is how communities have voiced the opposition. And Deban is a mega dam and we do not need any other half built dam for India to use to strategically signal at China because the Brahmaputra as I have studied, my PHd was on Brahmaputra on India China relations and signalling, the dams on the Brahmaputra have been used as a strategic choice more than actually how the economy or hydropower generation. india is also building dams in Nepal, India is also building dams in Sikkim, Bhutan all the ecology Himalayan belt. I don't see how and India and China basically dam in this region will actually destroy the Himalayas and the communities living in this region and that is going to be irreversible.

Anupam: Coming to my last question what according to you should be done in case of better management of floods in Assam, what should be the next thing people should look at rather than, as you already said that there is a lot of planning and that is completely missING from the politics. So what other factors should we taken up?

Mirza: Probably a proper focus on Integrated water resource management with basically the fundamentals of which is lost on the state government and their ministries involved. I think there is enough expertise in the world now which actually can bring into focus om rivers such as Brahmaputra and actually start building the blocks one by one towards a larger basin land where we can actually mitigate the effects of floods. Disaster reduction should happen and in face of climate change it anyways happen. Today some extreme happens we again start talking about it and then we forget about it. Again any other event happens after six months we again start talking about it. If the flood water level rises in the river we talk about it. So climate change will definitely happen and we have been prepared about it. Again i come back to my first point that there has to be an attitudinal change in how our water bureaucracy the hydrocracy functions. We cannot just say that we know the solutions, we press the river it will all be solved. It just an alibi for another economy to try it, another speculative economy to try and we have to actually ask our government to actually have the accountability to come back and answer our issues you know and say that you know with IWRM definitely these issues can be solved. But we are not doing it.

Anupam: Also there is you know quite a bit of i mean in across Assam now there's another solution they are suggesting is building of construction of highlands especially in the flood plains. Do you think that these you know interventions go out like building of highlands in different areas and how it, or is there a highland economy?

Mirza: No, i think see the singular most highland affecting the Kaziranga area is the highway itself. So I've seen my own lifetime how floods have been in that region that's not been sentenced. So the construction of highway this has kept on growing up and now you see this whole enumeration on each side become much worse. Highlands are just a temporary fix. This entire national highway that runs is actually running anti thetical as to how the river is flowing. Rivers are flowing from North to South, this highway is going right across it and is a major disruptor. Government doesn't look at it as a disruptor. We have to look at the landscape how things are been designed, it is been designed as to how the main centres of economy are. The government is only considerate with that and now you are building bridges between Dibrugarh and Lakdhimpur and suddenly you say that the we connected it and the region will develop. It will not develop because a bridge has been built. At the end of the day this was earlier, before the 1950 earthquake that the lifeline of the economy was the river. Now the whole narrative has changed to the main highway and that highway is creating much more misery to the people living along this region and that is a fundamental issue that needs to be addressed as to how we are constructing not only a water infrastructure but also physical land infrastructure. That has to be seen in this context.

Anupam: you said that you worked extensively on Brahmaputra and there is also quite a bit that has been written on like said about erosion control and various kinds of like placing geotextile and all those things. How effective could these be as solutions you know?

Mirza: I think the traditional wisdom of communities along the river is that erosion is a part and parcel of life. They see how Brahmaputra is a majestic painter for the sculptor which is actually making landscape what it is. So when erosion happens local communities understand that this is been put into the same basin somewhere else. You know one sand bar goes away, another sand bar forms and they move. But how is our concept of erosion, when we actually come to a land patta kind of an understanding of that you know that these are towns which cannot be disturbed, centres of economy cannot be disturbed, earlier people used to move as the river moved and now we are trying to move the river as per our understanding and that's the problem lies. Erosion may not be such a big problem if we not make a big deal out of it. It is part of a natural process. Look at how communities look at it and how government look at it. You will find a fundamental change. And i think the civil society, the so called civil society which comprises of academics including myself, and how they frame such issues is completely different and is departing from how communities think about it. So we have more engagement with the traditional knowledge of communities, we have to learn a lot from them, instead of saying we know everything, we understand, no, there has to be some understanding, in Arunachal Pradesh the communities know a lot of rivers, we just cannot say they don't know anything. There has to be a learning process both ways, and then only we can be able to see how generations have live along this river for centuries. Few disasters and good times they have lived. Earlier people lived here and people have written about it. i am not saying these things for the first time, these are known and discussed in the right frame.

Anupam: Although this flood may have receded for now, locals say they no longer can predict when the next wave will come. This is mainly because in recent times, floods have become increasingly de-linked from the rainfall. For instance, more than five million people were inundated even though according to the official figures Assam received less than normal rainfall. With August ahead, locals remain unsure what the future holds for them.