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**Searching for an Alternative Decentralized Flood Policy in India:
Hydrological Flood Policy and Local People**

Author(s)

Dr. Pankaj Kumar Jha

*SSN College, Department of Political Science,
University of Delhi, Delhi-100007, India
Pankaj.j.du@gmail.com*

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SEARCHING FOR AN ALTERNATIVE DECENTRALIZED FLOOD POLICY IN INDIA :

HYDROLOGICAL FLOOD POLICY AND LOCAL PEOPLE

Introduction

India is the most flood-affected nation in the world after Bangladesh. It accounts for one-fifth of the global death by floods and on an average 30 million people are evacuated every year. In 1980, *Rashtriya Barh Aayog* (National Commission on Floods) assessed the total area liable to flooding in the country as 40 million hectares (ha) constitutes one eighth of the country's total geographical area (RBA 1980) In India, the most vulnerable states are Uttar Pradesh, Bihar, Assam, West Bengal, Gujarat, Orissa, Andhra Pradesh, Madhya Pradesh, Maharashtra, Punjab and Jammu & Kashmir. Of these, Bihar is the most flood-prone, with 73.06% of the area being affected by floods. Floods continuously affected Bihar in the years of 1964, 1972, 1984, 1987, 1989, 2002, 2004, and most recently in 2008, when Kosi caused havoc in the region. (Mishra 2008).

My work identifies two main perspectives on flood control, the traditional and the modern. My objective here is to look at the dichotomy between them, from the point of view of the politics of knowledge. I also intended to explore the possibility of a dialogue between the two, one that could lead to an alternative flood management policy. The traditional perspective views floods as a part of their life-cycle and responds accordingly. The hydrological approach, on the other hand, is mostly concerned about taming a river, viewing floods as a disaster that ought to be controlled and possibly eliminated. This perspective dominates the policy of the post-colonial state in India.

Hence this paper is divided into four parts. First part focuses on state hydrological measurements and flood policies. Second discusses living with flood perspective. Third brings the field narratives from the selected villages of river side and country side and fourth searches an alternative decentralized flood policy.

Key words- Flood control, Large Dam, Embankment, River side, country side.

II

This is the flood related hydrological perspective which maintain that flood can only be controlled by state. Here, the state tries to control the flood with the hydrological measurements (High dam, embankment, ring dam, sluice gate) and recently developed disaster management Mechanism (NDMC 2005). It had maintained that dams has been Presented as the 'temple of the modern India' based on Nehruvian ideaology (singh 1997). Some scholars pointed out that how state relates Bhakhra Nagal Project, Damodar Valley project (DMC) with the idea of nationalism. (Guha 1988; baviskar 1995; Visvanathan 1988). This part is divided into two parts: First, flood control related constructive parameters like big dams and embankments have been discussed and second independent India's flood policy has been analyzed.

High Dam- Big dams has been seen as a Panacea for flood control, irrigation and electricity, Fishery entertainment etc. Meanwhile these dams are called multi-purpose dams (SANDRAP 2007). According to The International Commission of Large Dams (ICOLD), a large dam is defined as 'any dam above 15 meters in height (measured from the lowest point of foundation to top of dam) or any dam between 10 and 15 meters in height which meets at least one of the

following conditions: a) the crest length is not less than 500 meters; b) the capacity of the reservoir formed by dam is not less than one million cubic meters; c) the maximum flood discharge dealt with by the dam is not less than 2000 cubic per second (Rangchari 2000) Many dams are there like Bhakhra nangal, Hirakud dam, Mettur, Mayurirakshi, Tilaya, panchet, Maithan, Tungbhadra etc.

Embankment- Embankment is a structural measurement, a wall or bank of earth or stone to prevent a river flooding area. These works have been given to those engineers who are trained for this. It maintain that free flowing river can be cut through embankments. Then it will flow from less area and its speed will rise. More speed will cut the banks and will go deep. So when a river will go deep, the chances of flood will be less.¹

State and their Flood Policy- From Patna Flood conference to National Water Policy

In this section we can see transformation of the state led Flood policy from Patna Flood Conference to National water Policy (2012).

Patna Flood conference (1937) is one of the important three day conference was organized in patna to take stock of the flood situations in Bihar. This conference was attended by prominent people and Flood experts. Both supporters and non-supporters of dams and embankments were present in this conference. Governor of Bihar, Mr. Hallet opinioned that similar problem was faced by China and America. Their experiment with measures to tame the river was not successful. But Nirapad Mukherjee, leaders of the small pro-embankment lobby was of the

¹ During my phd (2010-14) I met flood expert, Dinesh Mishra and got all the relevant information. He was by profession a civil engineer. But he is strongly support the 'living with floods'.

opinion that anti- bund argument was the manifestation of a defeatist mentality. Majority of person were doubtful of dams and embankments in this conference. (Mishra, 2006).

The National Flood Policy Control Programme was launched in 1954 for the first time in the country. The programme of Implementation was outlined as follows- A. Immediate Phase (within two years)- a) Embankment at related sites. b) Revetments and Spurs as a measure of Protection of towns against river erosion. c) intensive collection of data etc. B. Short-term Phase (from 3rd to 7th year)- a) Embankments b) Channel improvements. C. Long term Phase (8th to 12th Year)- a) Construction of selected storage reservoirs b) Additional embankments wherever necessary. D. Beyond Long Term Phase (After 12 years)- a) Other Long Term Measures. (INCID, 1994). Important is that based on Nehruvian ideas, independent India was desperate for a dam and embankment related flood control policy.

Koshi treaty of 1954-

After the Koshi treaty of 1954, focus was on the multi purpose river valley projects, flood related garbage dumping, stoppage on flow change, irrigation, production of electricity etc. But technically and policy wise it has some limitations: a.) no special provision of flood control maintenance. B.) no responsibility on Nepal, Nepal can make embankments. C.) if any crack, no contingency plan is ready d.) local people, civil society etc. are not part of this. (Mishra 2008)

Flood Commission (Rastriye Barh Aayog), 1980- 1954 national flood control commission has been made to present a detailed analysis of the flood policy and flood related measurements. In 1980, this commission evolved a balanced, uniform and scientific solution. Following are the details: a.) analysis of the parameters b.) highlighting the area where railway, highway roads

have been made which increase the chance of flood c.) analysis of the destruction happened due to flood in recent years. D.) cost analysis of flood related measurements e.) special focus on forecasting of flood, flood fighting etc. (Mishra 2008).

Nation water policy, 1987

Many forms of water has been analyzed in this. Clearly it has been mentioned that flood control and flood management has to be the priority. Land-conservation, catchment treatment plan, forest conservation check dam should be focus. Flood control ideas have been highlighted but special focus has been made on constructive ideas as well to control the flood and which will lead to less destruction like flood forecasting, flood zoning (Iyer 2004)

National water policy, 2002

Here, in detail water resource related participatory models have been discussed. Drainage system, water harvesting, watershed development, drinking water community management programme, irrigation ad agriculture and migration and rehabilitation issues have been focused. It is expansion of 1982 water policy. But it has been criticized coz it is silent on environment, ecology, equality, social justice, women's rights, participation etc and it lacks strong step towards flood control (Iyer 2004)

Rangchari committee's report-

Committee have focused few points. A.) flood can not be depends on scientific forecasting. Reforms are needed. B.) flood, fields, and river bed no strong measurements have been taken in this field. c.) water resource management and development is inclusive in international flood control discourse.

Important is that R. Rangchari Committee have shown dissatisfaction in not implementing the 1980 National flood commission policies. This clearly shows the confusion related to flood control.

World Bank report on Bihar (2005)

2005 report of WB talks about the good governance promises in report titled 'Bihar towards a development strategy'. (WB 2005) This report clearly indicated the destruction due to flood and said that electricity used to be cut during this. Tubewell are destroyed completely. Due to river system, human habitation is affected. The people who are rehabilitated they face seasonal migration, health and social problems. Hence it is necessary to invest in long term in Bihar's foundational structures and center and state should intervene to reach a conclusion. (ibid, pp.28)

Disaster Management Act, 2005

This act is important to face the natural and man made disaster. This act focuses on mitigation, preparedness, response and recovery. Along with that, it focuses on agency like national disaster management authority, state disaster management authority, district disaster management authority and local authority, National Disaster Responsive force. Only problem this agency have that no regular meetings are held. No serious discussion happens. NO mention of flood affected areas. And, most importantly, local people, women Schedule Caste and Tribes People have no participation. (NRDMC 2005)

Bihar disaster management Regulation Act, 2007

From the center's disaster management authority, Bihar government too formed the disaster management authority at the state level in 2007. Importantly, facilities of motor boats flood areas, state disaster management response force formation, emergency operation centers. Life jackets and tents, communication facilities and instruments, and flood related forecasting have been focused. Many challenges are there in implementing all these which have been discussed in next section.

II

Traditional Perspective on Flood Control: Living with Flood

Living with floods is another very important perspective on Flood control and management, completely different from the flood control related state hydrological perspective. Living with floods fully focuses on people's wisdom or local knowledge for the flood control.² This perspective have been analyzed and discussed by experts like Dinesh Mishra, Anupam Mishra, Amita Bavishkar etc. They maintained that man and society has a very traditional and cultural relation with rivers, ponds and floods³, with the rivers, people have a cultural relation. And, for such society flood has never been a disaster rather than they share a close relation of affinity and companionship (Mishra 2000;2001;2002 Mishra,2008; Baviskar 1995)

² Traditional knowledge is the knowledge of society and people which has been presented differently by many scientists. Mearthy had related it to the traditions (Mearthy,1996) whereas many other had called it as indigenous knowledge, Traditional indigenous knowledge(TIK), Tacit Knowledge, Peoples' Knowledge(Chandra, 2010).

³ Interesting is that Ashish Nandy's attachment with tradition seems to be close with the idea of living with floods. He had categorized culture in three categories. culture as resource where we can take ponds, babri, baans (bamboo), banana, fish, water, makhan etc. Second is culture as lifestyle: where we can take flood with adjustments, the traditional methods of agriculture, the platform irrigation in Bangladesh, schooling etc. And, third is culture as resistance where we can see the resistance of local people for flood and embankments. See in detail, (Nandy 2003).

Significantly, Dinesh Mishra, in his article '*Living with floods'- People's Perspective*, has related the flood with traditions and society and had explained in great length the adjustments of people with flood in flood affected areas. He stated that 'On the bank of Balan River in Jhanjharpur block of the Madhubani district, in Bihar. There used to be a village called Partapur. The Village had one major and three small tanks in it. The big tank was attached with the balan river by a drain. The entry point of the drain near the river was blocked by mud. As the water of Balan used to rise during the rains, the villagers would open the drain and river water would gush towards the main tank. After the main tank was filled, the river water was led to other smaller tanks through link drains. Once the tanks were filled, the inlet drains was closed again only to opened the following year' (Mishra, 2001). All tank were spread in the area of 14 hectares that is 35 acres. This water has been used for rabi crops, pulses etc. This water has also been used for daily purposes. The crops were so strong that they survived 4-6 feet water and flood water never used to rise up than this level. The ponds were full so the wells were never dried up and village was prosperous. This was the reason that villagers and farmers used to wait for flood in balan river. (ibid, 2001) |

Willcocks (1930) had described in detail the story of how the farmers of Burdwan in west Bengal have themselves made arrangements to face the problems of floods and irrigation in Damodar valley (willcocks 1930) | According to him, The farmers used to construct low heights *bundhs*, one meter in height, along with river. When rain happens, the water used to accumulate in land. Then paddy seeds has been roped. By the time, the paddy crop are ready, rain comes in full form and river water starts crossing the bank levels. Here, the paddy crops are

growing and in other side, the *Bundhs* were cut at the same time. The river water reaches the land, the embankments were lesser height and the crops are cut in same length by the farmers. So, the river water reaches only the top layer of the crops which nourishes the crops and gives nutrient element to the land. (Mishra 2001)

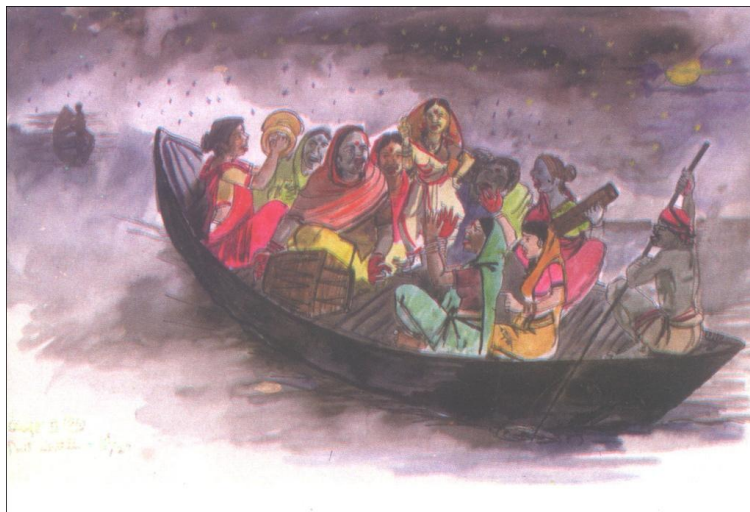
This perspective maintain that flood and embankments are the root cause of the problem. According to him, when there was no dam and embankments, then flood used to come and go after a set time. That time flood used to bring prosperity and happiness. The sand which flood used to bring was full of nutrients. Agriculture was prosperous in mithila region,(Mishra:2005). Society was prosperous and women used to sing songs of *Ael Balan ta banhaloun dalaan; gel balan ta tutale dalaan*" [Let the Balan (river) spill this year, we will build a new extension to our house; if it doesn't, then we lose whatever we have in the house.].⁴

Tradition of *Janer*

Important point is that due to this dam ad embankments built by state, the culture of playing *janer* and *jhinjhir* has been completely vanished. In north Bihar, at Mahananda basin, people in festivals used to play *janer* in the river (Jha 2014) When river was full of water, it used to bring sand which was good for crops. People were very happy for it. And, they used to express their happiness by playing *janer*. In local language they call it *jhinjhar, jhajher, kastikhor, kastibaji etc.* River is part of culture and playing music, dancing near the bank of river was tradition. Social capital was so high that people used to boat together and celebrate. They used to boat in full

⁴ This song implies that when water level is high in balan river, so to keep the crops people make special roofs/courtyards where they keep the paddy And, as water level decreases, farmer break those roofs. I took this song from Dinesh Mishra's literatures. And, during my Doctoral field visit I talked to people and they also told about the prosperity of that time.

moonlight in months of sawan-bhado. People used to play music, dance in the boat. Women used to tease the boatman and used to sing songs. The meaning of those songs were that boatman, take us to market, we buy new cloths, oil, vermilion etc. New wed women also used to boat. They used to sing songs like '*dheere dheere chalo nadiya.....tu dhire chalo re, jana hai mujhko piya ji ke paas*'. (please flow slow my river, I have to go to my loving husband) People used to wait to play *janer*. Interesting fact is that regional Hindi novel writer Phanishwar Nath Renu, had mentioned about *janer* in reportaze *rinjal dhanjal*. Renu wrote – 'the villagers who does not have the boat, they usually used to make bhela of banana leaves and then used to boat and play *janer*. The zamindar used to have boats, with harmonium, table and all they used to do boating and play *jhinjhir*' (Renu 1977). At Mahananda basin, resident of Bharri village of Katihar, Narendra Nath Thakur said that due to dams, we have lost our everything. Earlier days people used to play *janer*. They used take stove, utensils etc and used to cook on boat. Those people who doesn't play *janer*, used to come to see the *janer* festival. Today due to dams, the natural flow of river has been blocked. Rain is also not happening. And, the prosperity which flood used to bring is not coming. Gradually, the festival of *janer* is vanishing (Jha 2015).



Source : Dinesh Mishra (2000)

The water and fish of flood

Living with floods maintained that when water level was high, then fish used to come. Francis Buchanan in his gazetteer of Purnea mentioned that when he came to this part of Purnea, he saw 134 kinds of fishes and hugely found in the water of Ganga, kosi, Mahananda rivers. (Buchanan, 1928) Buchanan also mentioned that in 'this district 14,000 fishermen were there and they were experts in catching fish. The fishes used to be export till kolkatta and were in huge demand' (ibid). Using this reference, Ashish Nandy through the works of Engineer Kapil Bhattacharya⁵ of damodar project said that according to experts like William and willcocks, monsoon's flood used to bring lakhs of fishes full of eggs. And, wherever this water used to flow, there fishes also used to go. The fishes used to eat the mosquito and thereby malaria used to finish in those areas. The local people said that we go three times in water to catch the fish. We only catch *paigh maach* (fish). We leave *choto maach* (small fish) because river has the right over this fish. Earlier in one go, 5 kg fish we used to caught. Now everything is vanishing.⁶ Two reasons were given for this: First, with flood water, fertile soil used to come. Land is low so water used to accumulate for year which was called as *chaap*. The eggs of the fish used to grow in this *chaap* but now there is no enough water. Second, in last 10-15 years, the farming of *makhaan* have been started and chemicals are being used for this. These chemicals are killing those fishes. Fishes are getting diseases and fishermen are incurring huge losses.⁷

⁵ Meanwhile Engineer like Kapil Bhattacharya had dissent against Dam, Hence Social scientist like Ashish Nandy had Called him India's First Modern Environmentalist. For Details see, Ashish Nandi (2003), *The Romance of The State and The fate of Dissent in the Tropics*, New Delhi: Oxford Publication.

⁶ Pankaj Kumar Jha (2015), *State and Politics of Flood Control- A Study of Katihar District of Bihar*, Doctoral Thesis, (Unpublished), Department of Political Science, University Of Delhi.

⁷ Based on Filed visit conversation.

The fishes used to have eggs, and with the flood, these eggs used to travel. Small fishes used grow out of those eggs and these small fishes used to eat the eggs of mosquitoes which were growing on the embankments.

Flood is not a disaster

Interesting fact is that flood control related state hydrological perspective maintain that flood is a disaster and presently, it advocates a strong disaster management policy. Whereas, the flood related to knowledge maintain that like earthquake or sunami are disasters, But flood is not. Because there is fixed time when flood will come. Flood never comes automatically. That's why local people have tried to make an adjustment with the flood and sustain. (Mishra 2009) Mishra who doesn't maintained that all the forms of flood are disaster said that whole Bihar including mithila have witnessed many forms of river and flood. River water used to come till farms and its stay is called flood. For agriculture, this is necessary. When, this water used to reach the residential areas, then it is called as *boh*. In 20-30 years, one time it may happen that water will reach till the windows of the home and cattle get drowned then its called as *humma*. When people were not able to do anything and leave the cattle's then it is called *saah*. Such situation when gets more disastrous then disaster used to happen. The local society had adapted itself to all these forms of floods. Till the time flood is not taking the most violent and disastrous form, they try to sustain with it. (Mishra 2010; Jha, 2016)|

III

The third part of this essay is based on my empirical research. Primarily qualitative methods have been used for the research. In primary source the district gazettes, monograph, memoir,

census reports, newspapers, magazines, government documents and personal files, letters related to flood and dams since the colonial time has been used (Roychouhary 1963; Beames 1961) As the primary source the insights of ethnographic studies have been taken into account. Within this, efforts have been made to live in the flood affected areas to understand their daily life, to understand their local knowledge and do the analysis. For this, I have used the method of 'participant observation'⁸ specially. In secondary sources, literatures related to hydrological discourse, dams and floods have been extensively studied. For the analysis of my hypothesis, all these sources have been used. Research related all archival and ethnographic sources have been assembled together and have been analyzed along with the secondary sources. For this, interdisciplinary sources have also been examined. Local folk songs, poems, idioms in Hindi, English and Maithali languages which are related to rivers, floods and dams have also been used.

To examine the central questions, Mahananda basin situated Katihar district of Bihar has been selected for the purpose. Three villages have been selected in Katihar. Important point should be noted that for the selection of flood affected villages, villages from the river side⁹ and

⁸ Through participant observation method, researcher tries to do the minute analysis of the interplay between the inner and outer activities of the research area. Here, in one side, special and significant beliefs, actions, rituals have been studied to understand the field where in other hand, this knowledge has been examined in the outer contexts. As Cliford have highlighted participant observation seems to be disagreeable and debatable both but when all this experiences and analysis, their communications and dialogs when examined then its seriousness and significance increases.(Cliford,1983:127)I

⁹ River side term is very popular in the flood affected areas. In the flood affected areas the inner areas within the dams is called the river side and the people near the river side used to break the dams when there is heavy flow of water.

country side¹⁰ has been selected. For this, two villages namely Bharri and Saguniya have been chosen and they are situated at river side and country side respectively.

Villages selected for Research

Village	Panchayat	Block	River Side	Country Side
Bharri	Bharri	Kadwa	Situated	
Saguniya	Mohammadpur	Kadwa		Situated

Source- based on own analysis.

Village- Bharri: River Side's story.....

Kadwa Block village *Bharri*¹¹ is 30km away from the Katihar District. In this village, there are total eight *tolas*. They are: Bharri Gandhi tola, Bharri-Balwa tola, BharriBalwaTola (Chotki), Mukhiyaji ka puranatola, two Kushwaha tolas, Two Santhal tola, one Mahadalit tola, one Muslamantola (bagunrekha, baraawaad) and one paschimi (west) Bharritola.¹²Historically, this village is very old. It has been maintained that river *Mahananda* used to flow from the middle of this village only. There is a *Durga temple* which is almost 200 years old. Every year grand mela (fair) is organized here. Folktale says that initially this village has been dominated by the Rajput kings but about 200 years ago Brahmin community got it through auction.It should be noted that this village since ages was affected by the floods. Along with the Mahananda flood, *Kosi* flood used to come through *Kosi Parwan* river. On the basis of social-cultural environment,

¹⁰ In the flood affected areas, the population living outside the dams is called the country side. When river side people used to break the dams the country side people used to wake up while night to protect the dams. Many a times tension and violence to erupt in these two groups.

¹¹ As per the population of 2011, the total population of Bharri village is 3922 in which the population of Schedule caste and Schedule tribes are 431 and 261 respectively.

¹² Prepared on the basis of talking to the local people.

the *Dhanuk* community people are in majority in this village. After that *Mahadalit* and *Kushwaha* community people are in large number. Muslims are also in a large number. Interesting fact is that in *Santhal* tola 100 houses are there in which almost 00 people used to live whereas in Mahadalit's tola 250 people used to live.

Saguniya Village¹³ - The story of the country side.....

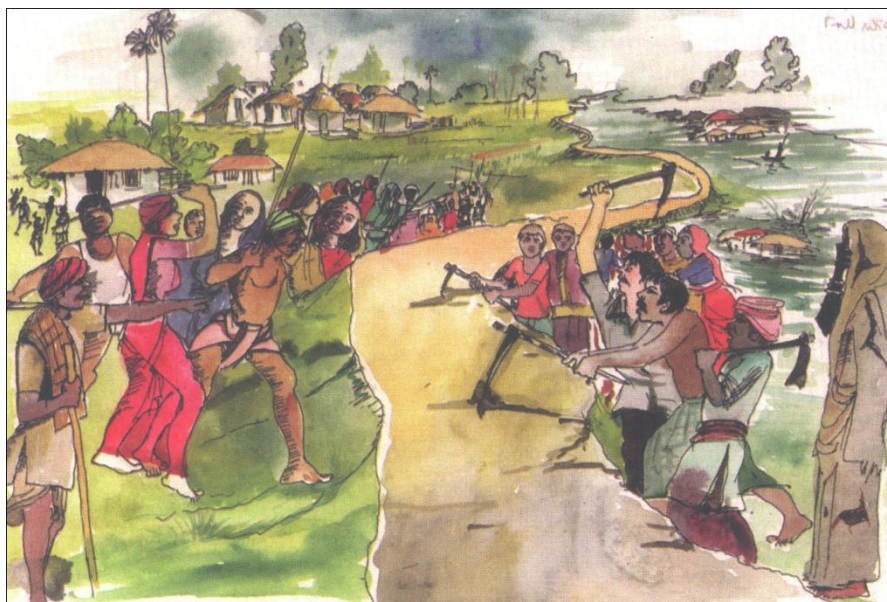
The another village which is studied for the research is the *Saguniya* which comes under the Mohammad pur Panchayat, Kadwa Block, District Katihar. *Sanguniya* village is also badly affected by the floods and it is in the *country side* means outside the dam. Historically, *Saguniya village* is too old. It was clear that for last 200 years this village has the matrimonial alliances and livelihood engagements with the river side village *Bharri*. But during floods, river side people cut the dams and violence had erupted. Socially if we see then *Saguniya village* is Muslim dominated village. And, *Tatma community* people in Hindu religion live here. *Saguniya village* is divided into two *tolas* – *poorvi tola (east)* and *paschim tola (west)*. the *poorvi* and *paschim tola* is known as sheikh and dhuniya tola respectively. If we see the social relation, both the villages *Saguniya* and *Bharri* share the brotherly relations. But due to water and flood issues, violent clashes have happened between this two villages. The Muslim community too along with the other festivals have a relation with the river here.

Local politics between river side and country side

The terms such as river side and country side are very famous among the people of flood affected areas. River side refers to the people who reside inside the dam and country side

¹³ According to the Census 2011, the total population of saguniya village is 1,399. Out of which 720 are male and 597 are female).

refers to area outside the dam. The selected villages such as *Bharri* and *saguniya* are situated outside dam. There is a constant tension between these two sides for the flood water. Due to increase in the flood water, for saving the life and property people from river side beaks the dam to release the water towards country side which in turn make country side people fearful of their live and properties. Due to such fear people from country side use to guard the dam whole night during the days of flood.



Source : Dinesh Mishra (2000)

A Push and Break dam (ek dakka aur do bandh ko tor do)

In the *Bharri village* it has been witnessed that the people try to break the dams¹⁴ constructed by the Indian government. *Bharri* is situated at the side of the dam. People try to cut the sides of the dam when the current is strong. In this context a causality caused by flood in 1987 is quite catastrophic when the people of *Bharri* village tried to break the Kachora dam. The image

¹⁴ In the local newspaper in Delhi, Manish the reporter and inhabitant of the river side visited his home on 14th July, 2013. The wedding bells were ringing. The police but refrained the people of Kachoda village from playing the band as they feared that under the loud music of the band the people might take advantage and break the dam.

of the inhabitants of *Bharri* is that of deconstructing the dams. The people during causalities generally break the dams. In *Bharri* as well as the *Kadwa* panchayats, raise slogans like *ek Dakka aur do Bandh ko Toor do, Bandh Hatao Kadwa Bachoo* (one push and break the dam, remove the dam and save *Kadwa*).¹⁵ Owing to the dam the livelihood of the people living in river side is almost over. So it is very evident that the local Maithli speaking population demonstrated their dissent State led Dam. They gave the slogan *Barh se jiyab- Bandh se Marab* (living with Flood, dying with dam) The flood water of the river gets collected in the dam due to which the people are unable to cultivate crops of their own choice. According to *Chand Khan*, a local resident from *Bharri* village 'if the dam is constructed in that area then the people would have to swim like a fish. It is proposed by the State that a dam shall be constructed on the western side of the *Mahananda* River. This way they shall be reducing the length of the dam from 15-16 kms to 3kms only. In this situation it shall be difficult to assess the destruction from the floods. The water shall flow on the top of the houses of the people'. It is important to note that the eastern side of the river is blocked and the talks going around want to limit the western side.

Nexus between the Political Leaders, Engineers, Contractors and bureaucrat:

The Nexus between the political leaders, engineers, contractors and the bureaucrats are observed closely on the matter of construction of dams and its breakage in the flood prone areas. A political leader only demands a construction of dam in those areas where he finds scope for his advantage. The contractor constructs the dam in those areas where the dam

¹⁵ The slogans against the dam construction has been taken by *Arvind's Sinha* 75 minutes documentary, "*duyi patan ke beech*," which depicts the destruction caused by the flood by breaking of *Kachora* dam in *Bihar* in 1987. Those who had destroyed the dam believed that the construction of dam was profitable to the contractors, engineers and related officers of the *Mahananda* project. The common man had no benefits. The crops of the common man have been destroyed since 25 years.

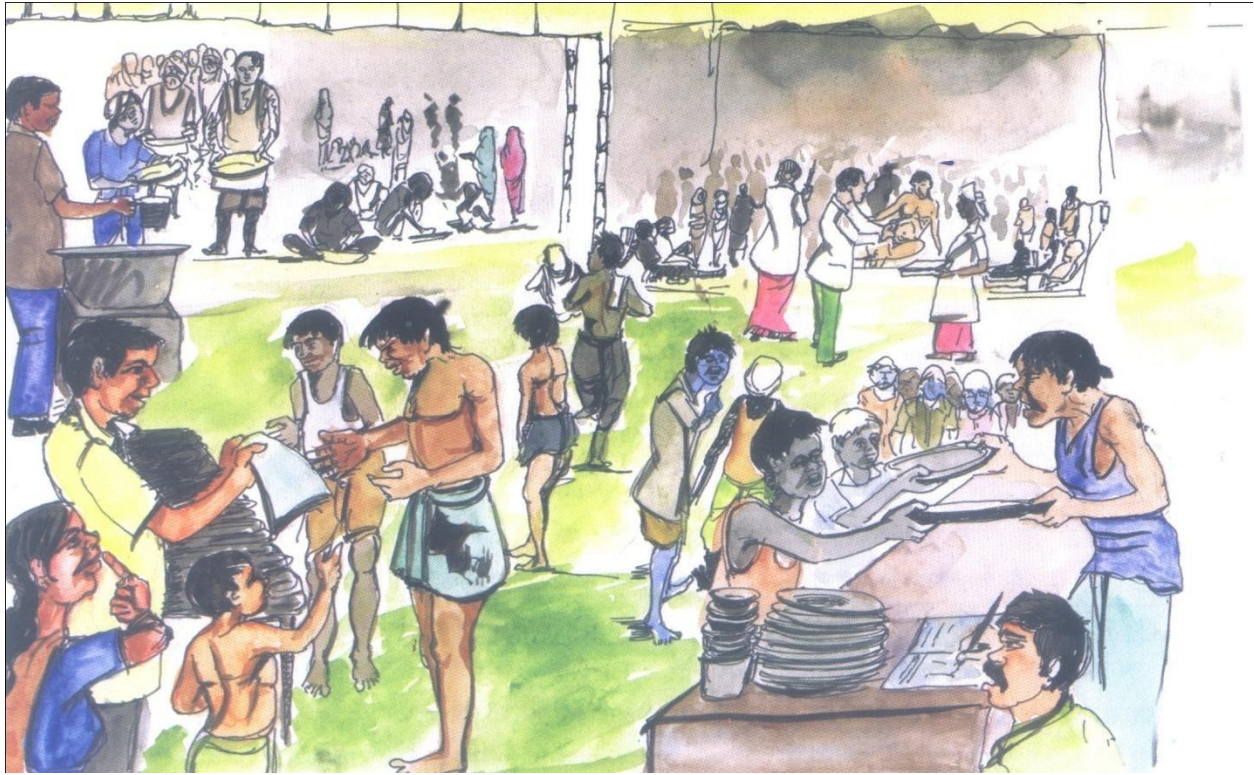
generally breaks in a year or two. The civil engineer decides how the dam shall be constructed, number of days involved, its length and breadth. He even decides the size, place and number of sluice gate and ring dams. Since he is well equipped with the technical knowledge, he is more active in haggling over the project. The bureaucrat on the other hand takes the responsibility and active investigation when the dam collapses. That is why all hold importance in the entire process. Dinesh Mishra, flood expert opines that, “it involves corruption to such an extent that when the dam breaks the government says it collapses due to the mouse holes. I say that when you can’t seal the mouse holes then you are incapable of doing anything else” (Mishra 2010). While highlighting one of the quotes of the contractor, “if we construct the dam strongly then from where shall we get the money and work?” While doing the PhD research one of the localite from the riverside village tried to explain the corrupt relationship between the contractor, bureaucrat, civil engineer and said, “the ethics of all is the money. For personal financial gains those involved break the dams and then themselves suggest for its construction. They earn money while constructing the dams. He then smiled and said, ‘Money is than sweeter than many honey’ (Jha 2015).

Ineffective Disaster Management Policy

What is available in the name of government intervention in floods, is the Disaster management Act, 2005 of the Central government and the Bihar Disaster Management Act in 2007. I believe that two aspects of the perspective of disaster management being used for floods need to be critically looked at—one in terms of policy of preparedness for floods and another for managing the situation afterward. It should be noted that both the Central and the State government declared flood a disaster and emphasized the formation of central, state and

district based authorities to oversee the issues. But both Acts have overlooked some significant aspects which include the clear definition and streamlining of the responsibilities and involvement of the local communities. The results were evident in what I observed during extensive field work. I saw Yet on the ground, the local people knew very little about these plans. I argue that until such time as the whole flood affected population is not attached to the system of disaster management, no special benefits will accrue to them. This shows up in the inherent flaw of the so-called disaster management agency that comes into action only after the floods come and cause devastation. Floods have a clear calendar and come gradually, yet no special attention is given to preparedness and planning prior to them. This aspect of Disaster Management needs to be radically changed.

The other serious flaw shows up in the management of the aftermath, for the rescue operations, in the going on Disaster Responsive Force . Not only are local people not encouraged to participate, but also the officials involved with the management of the rescue and rehabilitation work of aftermath the flood, show no sympathy toward the flood victims. People have little knowledge about the relief work and the bureaucrats use caste factors, local powerful networks, nepotism to distribute the relief goods.



Source : Dinesh Mishra (2000)

IV

Searching for an alternative Decentralized flood policy

In this section, I intend to explore the possibility of a dialogue between the two perspectives that could lead to an alternative decentralized flood management policy. However, both the sides have their own limits when it comes to the politics of flood control. In all these one can see the complete insensitivity in these perspectives and to the policies and the knowledge related to policies. In this section of the research paper, I have tried to give the glimpses of the alternative Decentralized flood management Policy by highlighting both the perspectives. The state perspective with hydrological interest sees the construction of dams as the miracle medicine of the flood control. But if someone analyze it at micro level, he will see that this is only a small part of the dam-flood politics. In Nepal, the scope of high dam seems to be utopian

where the three significant problems are there. First, the place in Nepal, where Bihar government is proposing to built the dam, comes under the high seismic zone. In all these, the dam will bring the unwanted disaster in future. Secondly, if India somehow built the dam, will Nepal will agree to it? Thirdly, in this economic conditions, the dam construction cost will be too much and it will definitely take time to complete it. So, has the state any alternative policies?

In the same way, with the hydrological perspective the local became important too. This local knowledge maintains that village has their own way of managing and fighting with the floods, to enjoy with the floods with songs and plays. But we have to keep this in mind that at the micro level, even this perspective of flood control side is not complete and it has its own politics. The society inspired with the modern science criticizes the traditional flood related knowledge by saying that this perspective glorifies the disaster of flood. How is this possible that the flood which is causing so much of destruction and ruining lives and here women welcoming the flood with songs? Second, the participation with flood seems to be a utopian concept. They maintain that when the people living with the floods know to assimilate their lives with flood then why they look at the state for help, relief and rehabilitation? Can we think about tackling with flood by going beyond the state limits? Third Criticism is of traditional flood control management is that it is anti-reality and anti-change policy. Whereas with the changing time and with changing dynamics of the flood management, new ideas and ways of the control and management should be welcomed and accepted. Keeping in mind all these criticisms we can very well say that even the traditional flood control perspective should introspect itself.

Alternative Decentralized Flood Policy

Keeping in mind the above mentioned both the perspectives, we can realize that there is a strong need of an alternative flood related knowledge and its management. Meanwhile, Instead of Centralized state led Flood policy, Decentralized Decentralized Flood Policy is essential. That could be based on the understanding of local knowledge and participation (chambers 1997; scott 1998; sen 2000) The alternative flood policy always highlights the need of a constant dialogs between the hydrological understanding of the flood-dam issues and the local knowledge of the people living in the flood affected areas. Such policies should always keep attention to the alternative scientific projects, civil engineering's profits input ratios (BC ratio), inventions and hydrological training. But, along with that it should also encourage and give space to the local knowledge (poor men's wisdom) and constant communication, dialogs between the two. It should be noted that the local community has the maximum and important understanding of dealing with the available resources in specific circumstances (chamber 1997). We cannot undermine this fact.

So, this alternative policy can be divided into four parts. First, in place of flood control, the flood management has been given more preference and focus. American Flood expert Philip, b. William had discussed the Flood situation of Missouri river. He stated the goal of 'flood management is to reduce the hazard to lives and property by most cost-effective measures, recognizing that not all flood risk can be eliminated. The underlying assumption is to commit to long-term management of all factors that affect flood risk' (Williams 1999) Under this, along with flood, the transport process, school process and communication process has been given focus for long run so that whole flood management can be made more significant. Secondly, in

the alternative flood policy, the appropriate techniques have been given more priority in which people maintain that dynamic and developed perspective filled techniques will be more effective (Schumacher 1973) Third, in this, the focus has been given to the fact that we can make the flood control related non-structural idea like watershed and its safety and sustenance, catchment area improvement, warning system prior to flood and flood forecasting provision more powerful and workable.¹⁶ Under the alternative flood policy, the neo-traditional theoretical aspect, revival of the dying wisdom¹⁷ has been assimilated and through that old sources like pond¹⁸-canals¹⁹ are again getting revived. Fourth, Disaster Management policy should be decentralized and accountable for locals. In the whole processes of mitigation, preparedness, response and recovery with governmental staffs the active participation of local people would leads to decentralized Flood policy Meanwhile the people know their problems and pathways to the solutions (chambers 1994, 1997) | State and District Administration should be focus on Participation and Capability building to the Locals. enabling environment- system, procedures and rules, 2) Organizational level- system, produces, and rules. 3) Individual level- experience, knowledge, and technical skills (UNDP 2007).

¹⁶ Earnest Frederick Schumacher (1973)

¹⁷ Above mentioned all ideas have been included in the Disaster Management Act, 2005, Central Government and Bihar Disaster Management Act, 2007. Bihar State government respectively.

¹⁸ The pond has a special place in Mithila region. That's why in whole Mithila region '*Pag-Pag Pohar Pan Makhan*' is very famous.

¹⁹ In the flood affected areas, the construction of pond seemed to have worked really well. Here the pond has been called the as the 'cushion' (it has the high capacity to absorb water so the flood can be controlled) and the land as the 'kidney'. In the flood affected areas, the ponds work as the check-dam.

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