

Water issues around Bharatpur and Panchna and its Implication for Different Stakeholders

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ABSTRACT

Keoladeo came into the limelight in 2004 after the refusal of the farmers benefiting from irrigation from Panchna Dam to send water to the Sanctuary area. At that time the conflict centered around the bird sanctuary, farmers benefiting from irrigation from Panchna and the issue of drinking water to Bharatpur. However in a short period of 4-5 years the conflict has burgeoned to embrace over 10 different types of stakeholders including Karauli town, Kailadevi sanctuary and the Alligator sanctuary in the Chambal. Each proposed solution to the problem has added to the number of stakeholders, intensifying the nature of conflict between the different stakeholders. The major dimensions include sanctuaries and National parks of different types, agriculture, animal husbandry and drinking water issues for the neighboring townships. Ecological issues related to quality of water including the type of water that can breed fish for the birds of the sanctuary, breakdown of a traditional method of harvesting water on the Banganga which has not only damaged agriculture, but also led to a breakdown of the traditional breeding ground for birds in the wet lands surrounding Bharatpur. The tourism dimension related to the bird sanctuary and the vanishing Siberian crane all form part of the tapestry.

The region is of critical importance for Rajasthan due to it being the outlet of all East flowing rivers in to the Ganga via Chambal. Being low lying area, the region was initially water logged, but due to the efforts of Raja Suraj Mal a series of small dams were constructed, which trained the rivers and created wet lands in the rainy season on one hand and facilitated agriculture in Rabi season. The change in the ecology resulted in the region becoming a suitable nesting ground for the migrating Siberian birds. After Independence, agriculture in the region has been transformed, with the large scale production of mustard from the region. Milk production in Bharatpur went down due to the scarcity of fodder created as a result. Urbanization and water use intensification has caused a change in the issues around Bharatpur. Where once Ajan Dam etc. was constructed to save Bharatpur from flooding, now Bharatpur starves for even drinking water. On the other hand, Karauli which once hosted vast herds of migratory cattle now faces the unenviable situation as to what to do with its own cattle. Vast hordes migrate to UP along with a good section of the resident population. With inadequate livelihood facilities, dacoity, drug peddling and other problems have reared their ugly heads.

Government has gone for quick technology fix solutions, promising water to be lifted from Chambal and also to bring water via pipe line from Yamuna. This has caused the people from those regions to go up in arms on the one hand while on the other failing to address the ecological questions related to adequate water availability. While it is well understood one cannot go back to the past, what would need to be seen is, what are the parameters on which one can move forward? The paper throws light on the complex nature of issues involved in working out a long term solution. This would on the one hand be the basis for creation of a stakeholder forum in the region and on the other outline the contours along which dialogue with local communities and the State can take place.

BACKGROUND

Bharatpur & Karauli are situated in the eastern part of the state falling between 26°22' to 27°50'N and 76°53' to 78°17'E & 226°3' to 26°49'N and 76°35' to 77°26'E respectively. The districts of Bharatpur & Karauli encompass an area of 32816 & 5530 km² respectively. Bharatpur forms boundaries with Gurgaon in the north; with Gurgaon, Mathura & Agra districts in the east, Morena of MP in the south and Sawai Madhopur and Alwar in the west. The river Chambal forms the southern boundary with MP. Karauli is bordered by Dholpur District to the east; by Bharatpur District to the north-east; by Dausa District to the north; and by Sawai Madhopur District to the west. The Chambal River forms the south-eastern boundary of the district, across which lies the state of Madhya Pradesh. Almost the entire Karauli district is covered by hills and ravines, there are no lofty peaks, the highest having an elevation of less than 1400 feet above sea-level. Good grade stone and some iron ore comprise the mineral resources of the area. Land in Bharatpur district is on the other hand generally fertile and usually flat.

The population of Bharatpur is 21, 01,142 whereas it is 1,205,631 in Karauli (2001 census), indicating a population density of 428 persons per km² in Bharatpur which is highest in the state . In Karauli it is 218 persons per km².

The typical feature of this area is higher population density. More than 80% of the population live in the rural areas and are largely dependent on agriculture and animal husbandry. The availability of water for different purposes is central to many issues in the region.

Bharatpur is located on a very flat surface where a number of rivers converge, flooding the region from year to year. These physiographic features determined how the whole natural resource system developed. The flood prone areas used to have water up to September – October. This meant that the people were dependant mostly on the Rabi crop. This area is one of the largest producers of Groundnut. Ground water in this area though close to the surface is saline.

King Surajmal(1707-63), is credited with creating structures that prevent the flooding of Bharatpur. Ajan and Saver dams were constructed 5 and 8 Kms to the south

respectively while Moti Jheel was constructed 3 km to the northwest of Bharatpur. He also introduced a system of canals from the dams. All the rivers (Ruparel, Banganga, Gambhiri & Kukund) which were earlier causing floods in the region were stopped by making series of dams and water was channelised through this canal system. These canals have small channels by which the water is distributed in the whole area. The dams work as water storage dams and are able to serve the city and surrounding areas with drinking water. It also helped to increase the water table and put a column of sweet water over the saline water.

Problems with water usage are not new to Bharatpur during the period of feudal rule. Riparian rights to Yamuna for instance were disputed with the Mughal rulers. Sharing arrangements on the Ruparel river were however arrived at with the King of Alwar.

After the introduction of the green revolution, over a period of time, due to over use of fertilizers, and increasing pest attack on groundnut, this crop has become less profitable. In Bharatpur, the ground water is quite high but it is saline. With the arrival of tube well irrigation farmers increasingly resorted to ground water for irrigation of the rabi crop in the region.

Mustard requires less water than any other Rabi crop. Considering the conditions in Rajasthan as a whole and around Bharatpur in particular, farmers have adopted mustard on a large scale. Considering the vast area under mustard, Sewar, Bharatpur was identified as the most suitable site for establishment of the NRCRM, Bharatpur. It represents the confluence of principle mustard growing areas of 4 sites, namely, Rajasthan on the West, Uttar Pradesh on the North and North-East and Madhya Pradesh (Bhind-Morena belt) on the South-East, which together accounting for more than 62 per cent of the total production of Rapeseed-Mustard in the country. Accordingly, the ICAR established the National Research Centre on Rapeseed-Mustard at Bharatpur (Rajasthan) in October, 1993.¹

Table 1 : Rainfall data of the study area.

Year	Rainfall (mm)	Year	Rainfall (mm)	Year	Rainfall (mm)	Year	Rainfall (mm)	Year	Rainfall (mm)
1960	684.5	1971	729.6	1981	409.7	1991	444.8	2001	596.2
1961	584.5	1972	566.6	1982	824.9	1992	574.4	2002	397.8
1962	436.1	1973	592.5	1983	897.2	1993	507	2003	803
1963	608.3	1974	639	1984	472.4	1994	549.4	2004	420.8
1964	595.7	1975	657.8	1985	194.9	1995	922.6	2005	817.4
1965	665.9	1976	720.2	1986	310	1996	906.5	2006	297.2
1966	578.6	1977	752.9	1987	349.8	1997	535.4	2007	452.8
1967	750.2	1978	599.6	1988	545	1998	916.2		
1968	637.4	1979	236.4	1989	515.4	1999	797.2		
1969	441.8	1980	625.7	1990	613.4	2000	397.2		
1970	620.8								

Mustard however now faces a lot of problems related to disease. Due to less rains, more irrigation based cropping has resulted in the soils being affected by salinity. In the Mathura & Agra regions, farmers have shifted to Potato. In Bharatpur the soil is Heavy therefore people are not shifting.

The comparative advantage in growing mustard as compared to wheat is clear from the graphs. This is because it uses less water and has a price differential which however needs to be studied more carefully. Problems related to the marketing of mustard led to a decline in its production in 2006.

PANCHNA DAM

Construction of Panchana dam was started in 1978–79 and completed in 2004–05 on the confluence of River Bhadrawati, River Berkhedra, River Ataki, River Bhesawat and River Manchi. Gambhiri River Starts from Panchna dam and flows down to almost 120 Km to Ajan Dam. Total storage capacity is 2100 mcft, out of which 240 mcft is dead storage and rest 1860 mcft is available for irrigation. The total catchment of the dam is 621.60 km. The full reservoir level (FRL) is 258.62M. The Culturable Command Area (CCA) is 12 Km away from the dam and covers 9985 ha of 35 villages of Karauli and Sawai Madhopur(18 villages of Hindaun, Nadoti & Toda Bheem tehsils of Karauli and 17 villages of Gangapur tehsil of Sawai Madhopur). The gross Command Area is 11172ha. Panchana scheme is expected to provide water for 13416 ha. The provision for Rabi is 8494.32 ha and 4921.68 ha will be covered in Kharif. The available water will be available for the developed and established agricultural area only. Irrigation of another 2436 ha by lift irrigation is expected to be managed by changing the current cropping pattern.

Table 2 : Existing Cropping System

Kharif Season				Rabi Season			
S. No	Crop	Area (ha)	%age	S.No	Crop	Area (ha)	%age
1	Bajra	370	7.52	1	Wheat	2384	28.07
2	Jowar	650	13.21	2	Barley	579	6.82
3	Maize	29	0.59	3	Gram	2635	31.02
4	Til	450	9.14	4	Mustard	2246	26.44
5	Groundnut	1800	36.57	5	Others	650	7.65
6	Others	1623	32.97				0.00
	Total	4922	100.00		Total	8494	100.00

The existing cropping pattern shows that in Kharif Season the major area is accounted for by groundnut which accounts for 36.57% area, the table also shows that after groundnut, other crops cover almost 33% however it is not clear under which crop it is covered. In Rabi wheat accounts for 28.07%, after gram 31.02% which requires less

irrigation. The feasibility report for Panchna shows the proposed cropping pattern for Rabi season as below¹:

Table 3 : Proposed Cropping System

Existing Rabi Season				Proposed Rabi Season				Change in Area
S.No	Crop	Area (ha)	%age to Total	S. No	Crop	Proposed Area (ha)	%age to Total	
1	Wheat	2384	28.07	1	Wheat	800	9.42	-18.65
2	Barley	579	6.82	2	Barley	500	5.89	-0.93
3	Gram	2635	31.02	3	Gram	3000	35.32	4.3
4	Mustard	2246	26.44	4	Mustard	3794.32	44.67	18.23
5	Others	650	7.65	5	Others	400	4.71	-2.94
	Total	8494	100		Total	8494.32	100	

It has been proposed that through different ways, they will encourage people to grow those crops which require less water. E.g. they are reducing the wheat area and increasing Mustard by 18%.

But in practice it has not happened on the ground. The figures for area under crops at Tehsil level¹ for year 2003 – 04 shows huge deviation from that proposed in Panchna Feasibility report. The table below clearly shows that instead of Mustard, wheat has gone up by 20% involving an increase of 38% from what was proposed in the scheme, where as the area under the remaining crops including Mustard have been reduced. Instead of reducing the demand for water, water intensification has increased by 38%.

Table 4 : Percentage Change from previous cropping Pattern

Kharif Season (2003 - 04)				% Change from Previous CP	Rabi Season (2003 - 04)				% Change from Previous CP	Deviation from The proposed Scheme
Sl. No	Crop	Area (ha)	% age		Sl. No	Crop	Area (ha)	%age		
1	Bajra	27296	91.90	84.38	1	Wheat	9840	47.56	19.49	38.14
2	Jowar	17	0.06	-13.15	2	Barley	108	0.52	-6.29	-5.36
3	Maize	6	0.02	-0.57	3	Gram	5123	24.76	-6.26	-10.56
4	Til	588	1.98	-7.16	4	Mustard	5391	26.05	-0.39	-18.61
5	Groundnut	117	0.39	-36.18	5	Others	229	1.11	-6.55	-3.60
6	Others	1677	5.65	-27.32						
	Total	29701	100			Total	20691	100		

Over a period of five years (1999 to 2003), rainfall data shows that deviation from the average rainfall is almost 50%.

Table 5 : Deviation of Rainfall

Rainfall	Average (mm)	Actual (mm)	Deviation (mm)
1999	66.97	99.29	32.32
2000	66.97	26.88	-40.09
2001	66.97	16.3	-50.67
2002	66.97	15.88	-51.09
2003	Figure incorrect	78.08	16.59

Karauli farmers found themselves in a situation where they were not in a position to allow the Panchana dam water to be released for other usages. That included provision of water to Keoladeo bird sanctuary.

The Proposed Chambal Panchna Dam lift Irrigation Project

It is planned in the first stage to lift 1000 mcft water from Chambal near Rajghat – Mandrial. Water shall be pumped through two pipe lines (each of 1200 mm dia.) for 18 km upto Langra village, then water will flow in Bhadrawati River for 15 km. to the proposed Chulli-Deh reservoir storage having a capacity of 5000 mcft. Remaining 500 mcft water shall be allowed to flow by gravity for 12 km to Panchna dam. From Panchana dam 500mcft of water shall be pumped through pipeline (1200 mm dia.) for 8.74 kms to submergence of Jaggar dam. It is also proposed to provide irrigation facilities to the command of 13 villages in Rabi Season.

In the second stage it is planned to provide irrigation facilities for an additional command of 21 villages (3135 ha) by lift. It is proposed that a pumping station will be constructed on the right flank of Panchana dam for lifting water with a static head of 33 m to feed 500 mcft of water to Jaggar dam in rainy season and to provide irrigation facilities to the command area of 13 villages comprising of 1973 ha during Rabi season, similarly from this pumping station it is also proposed to provide irrigation facilities to the proposed command area of 8 villages which are at a higher level . Pipe (450 mm dia) will cover 13.16 kms. Out of these 8 villages, 4 villages are situated on right side having CCA 624 ha and 4 villages on the left side having CCA 541 ha.

CONFLICT

The conflict came into the limelight in 2004 when Keoladeo Bird sanctuary did not get water after the refusal of farmers benefiting from irrigation from Panchna Dam to send water to the Sanctuary area. At that time the conflict centered around the bird sanctuary, farmers benefiting from irrigation from Panchna and the issue of drinking water to Bharatpur. However in a short period of 4-5 years the conflict has burgeoned to embrace over 10 different types of stakeholders including Karauli, Kailadevi sanctuary and the Alligator sanctuary in Chambal. Each proposed solution to the problem adding to the number of stakeholders and intensifying the nature of conflict between the different stakeholders.

The conflict in this region has started with the water demand from Keoladeo Bird Sanctuary. The parks basic ecological requirement is 9.5 Mm³ (350 mcft). In normal rainfall years the sanctuary gets 8.15Mm³ water from Panchna dam. Additional requirement is met from precipitation on the opne hand and through an increase in the catchment runoff in Gambhiri River. After three consecutive low rainfall years, conflicts built up in August 2004. The agitation was started when the committee headed by the Chief Minister gave the decision to release 8.15Mm³ water from Panchna. The dam that time had a storage of 35.7Mm³. The farmers from the command area protested against this decision. The dam was constructed specially for irrigation purpose with the help from World Bank and named as “Panchna Band Sinchai Yojna”. The government reversed the previous decision. This was not the end of the problem rather it ignited a bigger problem in the region.

Many pro park people including Tourism and Wildlife Society of India (TWSI) started protesting against the decision and demanding the release of water. The legislators also formed a Green lobby group for conservation of environment and wildlife in the state. Bharatpur hotel business people, Ricksaw pullers, local guides, tour operators and the staff of the sanctuary also supported the protest. TWSI also filled a petition on this issue. The matter is pending with the Central Empowered Committee of Supreme Court. The first meeting of this committee was held on 31st January 2005 where state government officials showed their inability to release the water due to prior commitments of irrigation to Karauli district. They suggested that Chambal water may be supplied through pipeline to Bharatpur for drinking purpose. This presentation was done by the state Irrigation a PHED on behalf of state government. But it was not ratified by the Chief Minister.

The moment Chambal plan was discussed people from all parts of the districts started agitating and came out with their own demands.

Table 6 : The Stake Holders and their water demands

S.No	The Stakeholders	District	Representing No. of Villages	Demand
1	Gudla Panchna Sangarsh Samiti	Karauli	39	Water for Irrigation
2	Agarri Bandh Sangarsh Samiti	Karauli	18	Water for Irrigation
3	Jaggar Bandh Sangarsh Samiti	Karauli	26	Water for Irrigation
4		Karauli	Hindaun City	Drinking water & Sewerage System
5	Gambheer nadi Sangarsh Samiti	Karauli Bharatpur	360	Drinking water, Dry river channel
6	Bhadrawati nadi Sangarsh Samiti	Karauli	Karauli City	Drinking Water & G W Recharging
7	Command Area Sangarsh Samiti	Karauli	37	Water for Irrigation
8	Ghana Keoladev Sangarsh Samiti	Bharatpur	Ghana NP	Water for Wildlife
9	Chambal Nadi bachao Sangarsh Samiti	Karauli Bharatpur	60	Drinking Water
10	Panchana Catchment Sangharsh Samiti	Karauli	40	Irrigation

Gudla Panchna Sangarsh Samiti

The people from 39 villages want irrigation water. These farmers have lost their lands in the submergence zone. Some elevated lands are still left with them. However to enhance agricultural production irrigation facilities are needed.

Agarri Bandh Sangarsh Samiti

Farmers from 18 villages around Agarri dam want Chambal water to be provided to them also. They are also much closer to Panchna dam but they have not been considered in the plan and they are deprived of irrigation.

Jaggar Bandh Sangarsh Samiti

Farmers of 26 villages are demanding irrigation water. People from Hindaun city are also demanding drinking water and water for sewerage. The water will be put in the Jaggar dam and will be supplied to the command area of Panchna dam for irrigation purposes.

Bhadrawati Nadi Sangarsh Samiti

The people from Karauli city are demanding drinking water. At present there is a shortfall in demand of 32 mcft. The city people are also demanding at least drinking water on the basis of the fact that it is crossing their territory. The water losses in distribution are so vigorous that people are growing vegetables from this water. The near by areas are also facing problems as most of the wells have become dried up and land brokers have become very active. Their demand is that water should be stored in Chulli Deh dam and should be released smoothly in Bhadrawati, so that ground water will be recharged.

Gambheer Nadi Sangarsh Samiti

The people living down stream of Panchana dam are struggling to get water from the Gambheer River. There are almost 360 villages along the river upto Bharatpur. The conflict between Karauli and Bharatpur is affecting these villages. If the water is released from Panchna then wells in this area will be recharged and these villages will get their drinking water and will also be able to grow crops. If the water is released once in a year they will get water recharge for at least two years.

Command Area Sangarsh Samiti

In the "Panchna dam irrigation project" 37 villages were planned to be irrigated in the command area (Sri Mahavir Ji Nadoti Area). But so far only seven villages are getting water for irrigation. The remaining 30 villages are still waiting for the water.

Ghana Keoladev Sangarsh Samiti

Ghana bird sanctuary is dependent on the water comes from Gambheer River.

People from Bharatpur have come out to protect the bird sanctuary. Tourism and Wild Life Society of India, Hoteliers, Rickshaw unions, Guide unions etc. have protested to get water from Panchna dam. People living near Ajan dam have also joined this Samiti because they are also not getting water to grow Rabi crops.

Government has gone for quick technology fix solutions, promising water to be lifted from Chambal and also to bring water via pipe line from Yamuna. This has caused the people from those regions to go up in arms on the one hand while on the other failing to address the ecological questions related to adequate water availability. While it is well understood one cannot go back to the past, what would need to be seen is, what are the parameters on which one can move forward? Than providing water will not solve the whole problem because the water quality of Ajan dam brings more swampy ness and also brings feed for the birds which is the attraction part for the birds. This water quality and feed will not be managed from the Yamuna water?

Chambal Nadi bachao Sangarsh Samiti

This is based on the anticipation that water will be lifted from Chambal and irrigation needs of people from Bharatpur and Karauli areas will be met. People from almost 60 villages residing on the Chambal banks and surrounding area are demanding drinking water. In Karanpur region people are also demanding road connectivity to other area. The forest department on the other hand is proposing another solution. They wants the people to be removed from here along with the 40 villages falling in Keladevi national park as this is to a corridor for the National park. This despite the fact that is was only with the participation from the local community that the degraded areas regenerated.¹

Panchana Catchment Sangharsh Samiti

Panchna dam as the name suggests is constructed on the confluence of five rivers. People from the catchment of all five rivers (almost 40 villages) are demanding irrigation facilities. The reason being that water in Panchana is coming from their area and they are deprived of irrigation.

THE ISSUES

These stake holders raise different issues. These issues are linked not only with water but other socio-cultural-economic and ecological issues are also linked with them.

The Caste Factor

The Tribals are dominating in the Agarri Dam area and they have also demanded for irrigation water when Jat Community in Jagggar dam area have benefited under the Chambal Water scheme.

The Forest Department Issue

At national level under the chairmanship of Prime Minister a committee was formed to look at the issue of Tiger protection and habitation. One of the Committee's recommendation was that there should be a contiguous patch for Tiger conservation. The Forests Department has identified this area to be from Sariska to Ranthambore up to Keladevi Sanctuary. Keladevi sanctuary will be linked with Ranthambore in Sawai Madhopur, through one corridor with Band Baretha sanctuary in Bharatpur, and on other side corridor to Van Vihar in Dholpur. It will also be linked with Kunoh National park of Madhya Pradesh. The whole area falls into Tropical Dry Deciduous forest (Dhak forest). The FD logic is that if you are protecting the top of the pyramid the whole small species will be protected on its own.

The forest department has started working on this aspect. They have suggested removing people from the forest area. There are 42 villages within Keladevi Sanctuary and 4 in Ranthambore. The department is ready to remove these villages but does not have the plan to resettle them though the compensation amount has been fixed i.e. Rs. 10,00,000/-. People had started agitating against this action. The Supreme Court has ordered the FD that first R & R (resettlement & Rehabilitation) plan should be prepared and people should be benefited by the plan than only the removal will start.

In Karauli the existing forest has been protected by the villagers only. Now the FD is advocating removing the people from the forest area because forest will not be maintained with the human presence. People argue that since they have protected the forest it means presence of people is essential for its maintenance as well.

The same proposal has been given for the Karanpur area where 23 villages are settled. The Forest Department is proposing that if these 23 villages would be removed from here then they will have a contiguous area of forest. Karanpur area is one of the backward areas in Rajasthan where people are still waiting for the basic connectivity and electricity. They are also demanding drinking water facilities. The government has passed "Dohri Laghu Sinchai Pariyojna" for the Karanpur area. Forest department has objections on this scheme as they are proposing to remove them, while on the contrary government is providing them facilities that mean they will never be removed from this area.

Some questions which need to be examined

1. It is poachers who are killing the animals, villagers do not have power to take action against them. Then, how the problem of poachers will be solved by removing people from the area?
2. If villagers have been removed from there then who will prevent poachers ?
3. Who and how this decision has been made that in a forest ecosystem where Tigers are living man cannot live?

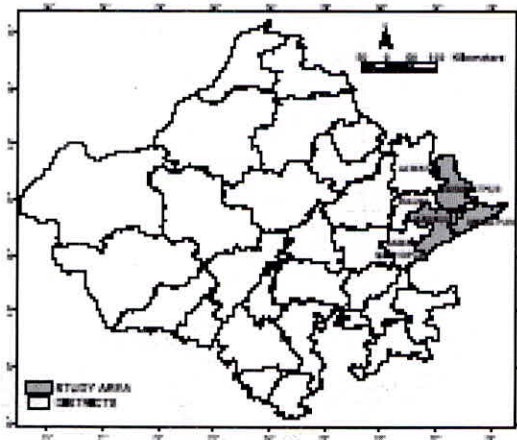
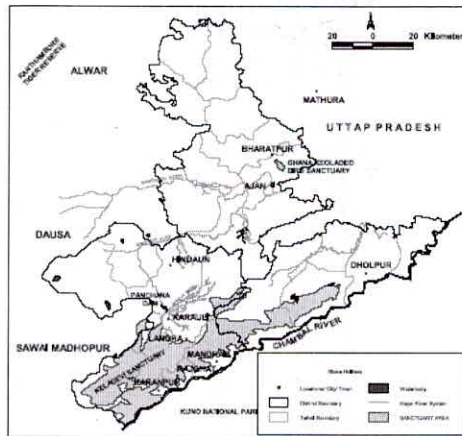
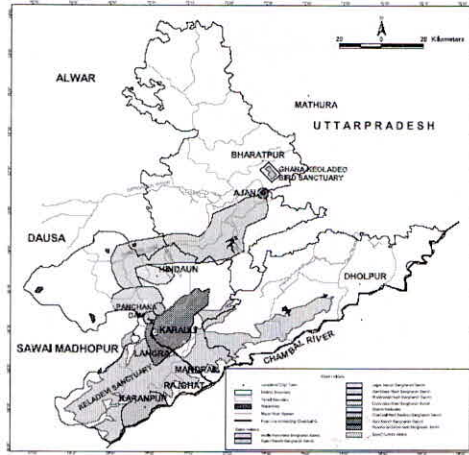


Fig. 1 (a,b,c) : Study Area

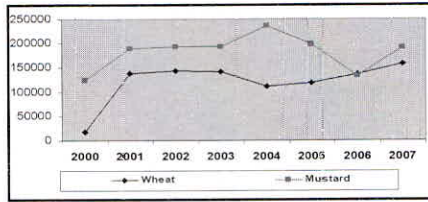


Fig. 2 : Area under Wheat & Mustard (in hat) 2000-07

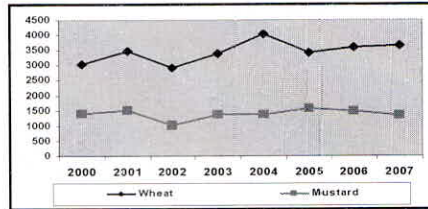


Fig. 2 b : Yield under Wheat & Mustard (kg/in hat) 2000-07

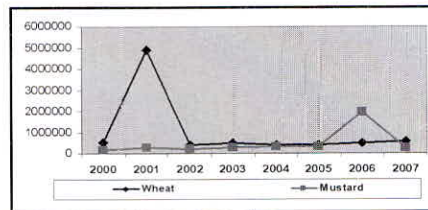


Fig. 2 c : Production of Wheat & Mustard (in MT) 2000-07

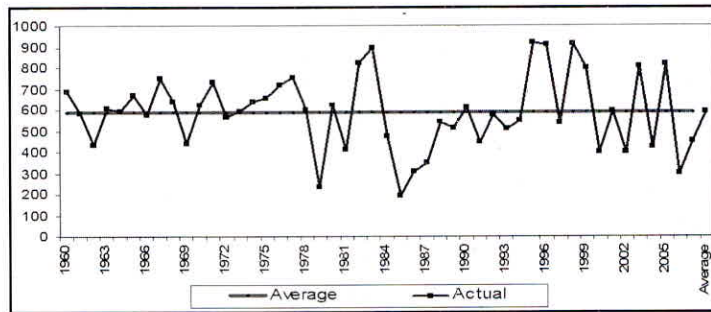


Fig. 2d : Rainfall status, Bharatpur (1960-2007)

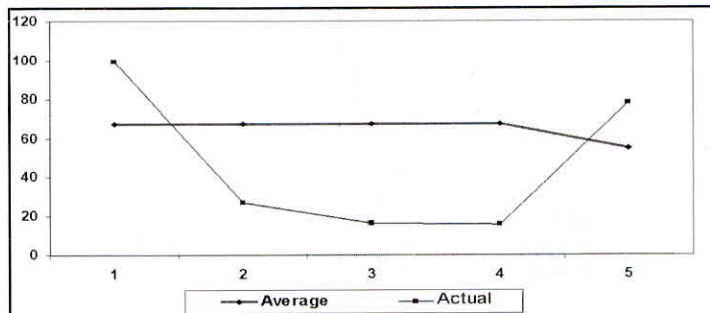


Fig. 2e : Rainfall status, Karauli (1999-2003)

The Alligator Sanctuary

In the Chambal lift scheme, water will be lifted from Mandrail where Alligator sanctuary is. All such lifting process will require lot of construction work in the river bed as well as on the bank. This whole activity will certainly be affecting the alligators breeding process. Alligators only breed in the fresh water and if the water is being lifted from the river then availability of water for the alligators will be a problem seeing the rainfall trends.

The Dang Area

In the light of the above question, the dang area problem is not so different. The Dang region is spread over 4 – 5 districts. This area is comparatively a flat area having ravines. It is the tail area of Vindhyachal. The people are residing in this area are having an age old system of grazing their animals in this area during monsoon period to winters. This is known as Khirkari System. The people from all the neighboring area and from Western Rajasthan come to graze their animals. After march to the onset of monsoon, people from Dang region goes to the neighboring areas. It was a give & take kind of relation. But now this system is under threats. FD has stopped the pastoralists from Rajasthan and due to shortfall of rains, people are facing fodder problems. The people who were hosting others to graze in the region are now migrating out towards foot hills of Himalayas.

The forest department is raising objections to this local movement of people in Dang, advocating that due to overgrazing the hiding points of Tigers have been disturbed. Additionally they argue that due to the livestock is eating the grass the supply of other herbivorous animals is affected and major effects have also been observed. This is resulting in their population decreasing and consequent to this the Tigers which lives off these herbivores has reduced and vanished altogether in Sariska.

On the other side people argue that when all other animals can live in the ecosystem than why cannot Human and Buffalo / Cow not coexist with this. The nature of ecosystem will also be changed by putting Human beings and domestic livestock out?

CONCLUSION

A wrong interpretation of the Panchna conflict has resulted in a supply side technology fix solution, ignoring how the earlier plan for Panchna failed. In the case of the displacement issue in the Sanctuary region, the major issue is how for instance will the communities proposed uprooted be provided with sustainable livelihood.

Clearly a deeper analysis of the complex nature of the problem is needed which will have to look into the structural issues involved.

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