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AGRARIAN SOCIAL STRUCTURE AND WATER: CHANGE AND DEVELOPMENT

Abstract

The present paper makes an attempt to articulate the changing dimensions of agrarian social structure in the wake of water development programmes. Based upon the empirical study of two villages namely, Nasratpur and Bhelai Khurd of Tiloi block of Amethi district of Uttar Pradesh. The paper articulates that the need, availability and accessibility of water have introduced changes in agrarian social structure and relations. Moreover, it takes a critical account of the role of the state and bureaucratic agencies in addressing people's needs and local physiography in operation and maintenance of the canal. Further, It unravels the changing pattern of the class relations, loosening primordial loyalties, especially caste bonds and emerging caste identities due to the introduction of modern water means,. The upper caste hegemony in terms of their land ownership and access to modern water extraction devices and agricultural implements has been reduced and consequently, the backward castes have significantly improved their positions in terms of their land ownership due to the access to water and flourishing cash crop economy and the backward caste groups have emerged as the rural elite.

Keywords: *Agrarian Structure, Land Ownership, Water Extraction Devices, Water User Associations, Water Markets, Rural Elites.*

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Change and development taking place in rural community depends upon the resource pattern, mode of land utilization, ownership and proper behaviour of one social class to another. Further, these factors are responsible for community's progress or failure. No characterisation of human culture is possible without an understanding of its ecological or natural resource and utilization patterns and the economics and politics of ownership and distribution of the land (Mukerjee 1942). In an agrarian society, water seems to be second

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elementary requisite after land for change and progress. It is vital for agrarian economy and its availability and patters of accessibility has determined the agrarian social structure and relations.

In the post-independence phase, Indian agriculture has experienced rapid transformation through large scale water sector developments, mechanisation, land reforms, expansion of credit network and other associated modernising measures. Central Uttar Pradesh is a part of wet ecology and exhibits lots of surface and ground water availability. It has resulted into a huge canal irrigation development project i.e. Sarda Sahayak Pariyojna (SSP) along with augmented tube well irrigation in the area. However, both the means of irrigation have generated their own social realities of water use.

The present paper is based on the fieldwork conducted in two villages region viz. Nasratpur and Bhelai Khurd in Tiloi Block of Amethi (Chhatrapati Sahuji Maharaj Nagar) district in the year 2012-13 by covering all the households from the villages including the both landowners and landless categories. Focused group discussion was also carried out for crosschecking the primary and secondary data on agrarian social structure in general and dynamics of water use in particular. The study further articulates that the need, availability and accessibility of water have introduced changes in agrarian social structure and relations. Moreover, it takes a critical account of the role of the state and bureaucratic agencies in addressing people's needs and local physiography in operation and maintenance of the canal. Ignorance in operation and maintenance of SSP had led to the decay of the structure and resulted into seepage and water logging in adjacent fields. Later on, realizing the need of irrigation development for agriculture, the state of Uttar Pradesh launched Uttar Pradesh Water Sector Restructuring Project (UPWSRP) to cater the need of its reconstruction and rehabilitation. Simultaneously, assessment about the failure of various irrigation development projects across country drew attention of policy makers and development planners towards ignorance of participation of local community in managing these projects. Therefore, a new concept of Participatory Irrigation Management was adopted by the state of Uttar Pradesh. It led to the formation of Water User Associations following the principle of democratic decentralisation.

Thus, with an objective to explore the influence of water resources on agrarian social structure, the present paper articulates on various changes occurring in class relations, traditional patron-client relationship, leadership and power structure in agrarian community of selected villages of Central Uttar Pradesh viz, Nasratpur and Bhelai Khurd due to irrigation development interventions. The paper also traces out emergence of new institutions such as water markets and Water User Associations and their impact on agrarian relations.

The studies on agrarian social structure invariably began with inquiring into the status of land economy in a broader framework of understanding

change in the sphere of class relations, production relations, distribution, and marketing of agricultural surplus, rural elite and power structure. These studies have also included persistence and change in institutions and emergence of new institutions and its impact on agrarian relations. Not only class formation but its resistance against oppressive agrarian structure have also been a focus in agrarian studies. Some of the remarkable studies on agrarian social structure have been conducted by Breman (1974, 1997);Xaxa (1997); Beteille (1965, 1974); Jodhka (1995);Singh (1974); and Abbasi (2005).

In this context, the present study has probed into changing dimensions of production relations, land ownership, class relations,rural elite and power structure introduced by the availability of modern means of water for agriculture facilitated by state owned canal networks, and privately owned tube wells. The study has also made an attempt to trace out impact of declining traditional methods of water extraction on patron-client relations.

Land Ownership, Water and Class Relations

Land ownership of the village Nasratpur indicates that about one third of the total land is owned by brahmin households (29.8 percent) who exist at highest position in the caste ladder. Intermediate castes such as Bhurjis own another big chunk of agricultural land (20.1 percent) followed by murais and lohars. Chamars, despite being numerically preponderant (53.5 percent of total households) own only one fourth of the total land (25.8 percent). Other lower castes such as pasis and dhobis own very small patches of lands even sometimes lesser than a bigha per household.

Land ownership pattern of village Bhelai Khurd reflects that Kayasthas are main owners of the land despite being in minority. They own more than two third (34.7 percent) of the total land followed by murais (19.3 percent) and lodh (13.9 percent). Brahmins (8.1 percent) and thakurs (5.9 percent) in the village own land lesser than them but the proportion of land per household is still larger (4.12 bigha and 1.7 bigha per household respectively) than murais (0.76 bigha per household) and lodhs (0.92 bigha per household).

However, it is noticeable that almost all the land owned by the lower castes, i.e. pasis and chamars and dharkars has been redistributed to them by state. Thus, caste wise land ownership structure reveals the overlapping of twin hierarchies i.e. caste and class. Abolition of Zamindari system and introduction of land reforms have been significant factors underlying changing landlords-tenant relationships. The lower castes including chamar, pasi and dhobi have gained their land rights through land distribution under *patta* scheme. Although, the intermediate castes are also significant beneficiaries of land reforms, lower castes are taken into consideration in the selected villages (particularly in Nasratpur) for three reasons: first, they are numerically preponderant; second, their water rights are crucial in view of their subsistence;

and third, their due to their lower status in caste hierarchy, they are more prone to be dominated by upper and intermediate castes and their insurgence would provoke conflicts.

Table 1-Caste- wise land holding distribution

Village Nasratpur					Village Bhelai Khurd			
S. No.	Caste	Total No. of HHs	No. of Land owning HHs	Land Owner ship (*Bigha*)	Caste	Total No. of HHs	No. of Land owning HHs	Land Owner ship (*Bigha*)
1	Brahmins	9	8 (9.9)	47 (29.8)	Brahmin	4	4 (2.9)	16.5 (8.1)
2	Thakur	1	1 (1.2)	1.5 (0.94)	Kayastha	8	8 (5.9)	70 (34.7)
3	Bhurji	6	5 (6.2)	32 (20.1)	Thakurs	3	3 (4.4)	12 (5.9)
4	Murai	6	5 (6.2)	10 (6.3)	Murai	29	23 (30.9)	39 (19.3)
5	Pasi	12	8 (9.9)	12.5 (7.9)	Pasi	28	13 (19.1)	20.5 (10.2)
6	Dhobi	4	2 (2.3)	1 (0.6)	Dhobi	2	0 (0.0)	0 (0.0)
7	Lohar	4	4 (4.9)	6 (3.8)	Baniya	4	4 (4.4)	3.8 (1.9)
8	Nai	5	4 (4.9)	1 (0.6)	Lodh	21	15 (20.6)	28 (13.9)
9	Teli	2	1 (1.2)	7 (4.4)	Teli	4	1 (1.5)	1.5 (0.74)
10	Chamar	68	43 (56.6)	41 (25.8)	Chamar	3	3 (4.4)	4 (1.9)
11	Mangta	11	0 (0.0)	0 (0.0)	Dharkar	5	4 (5.9)	6.5 (3.2)
12	-	-	-	-	Badhai	1	0 (0.0)	0 (0.0)
13	-	-	-	-	Gujar	11	0 (0.0)	0 (0.0)
Total		128	81 (100)	159 (100)	Total	123	68 (100)	201.8

Distribution of land to the lower castes including chamars and pasis provided them land rights thus making them conscious about their water rights too. Although it was mentioned by them that they have been allotted usar i.e. sodic land, still they consider it important as with improved access to water they can grow at least paddy and wheat for their own consumptions. This situation has aggravated their claim of share in canal water. Being poor, most of them perceive availability of cheap water from canal as the key factor for their agricultural pursuit.

Further, class relations have also undergone changes due to introduction of modern water means. Earlier the relations were based on strong mutual interdependence now these bonds loosen their holds. Earlier the relations were based on cooperation emerged out of inter-caste solidarity and poor caste consciousness among lower castes. Now the relations are based more on competition as every caste claims its share in state development interventions. Diminishing patron-client relationship has also affected the agrarian relation.

Now the lower castes are no longer ready to be exploited by higher or middle castes and middle castes are more powerful in the study villages. Now the relations are more contractual and formal rather than being informal and personal. Patron-client relations for water and agriculture no more exist. Labourers are more driven towards good wages rather than emotional bonding and conventional loyalties. Young generation is migrating and suffices their

daily needs with remittance. Migration has opened up employment opportunities for rural poor therefore detaching them from their age old relationships. Those who reside in village manage watering their fields either with the help of family members or need few labourers, while those who do not stay in village have given their lands for sharecropping to other farmers and this relation between sharecroppers is formal and contractual. Eventually high caste supremacy in terms ownership of land and modern water extraction devices and agricultural implements reduced and backward castes came up with such ownerships (see table).

Furthermore, the emergence of cash crop economy among the murais and other backward castes has promoted sharecropping. The emergence of horticulture and its practice as entrepreneurial activity have facilitated class consciousness. Class mobility has been promoted due to migration in middle and lower castes. However, seasonal migration among middle castes is not much practiced due to their entrepreneurship. Better economic opportunities have improve the status of middle castes and they are actively involved in political activities of the village. Due to various government schemes (land distribution and subsidy on seeds and fertilizers and significantly availability of groundwater[1]) and enhanced exposure on account of migration to Delhi has elevated their aspiration level. It has promoted class mobility and their acceptability among higher castes has increased.

However, in case of lower caste, there is class mobility due to migration, distribution of land and availability and affordability of water but lower caste could not match the status of middle and higher caste. It shows that caste is still an important factor in gaining power and prestige in rural society. On the contrary, denial of opportunity of cheap water has deteriorated the socio-economic condition of poor (particularly pasis in the village Bhelai Khurd)[2] who were subjugated from the ages and the development made for each section of society is in question on account of ignorance and poor functioning of state and local water institutions i.e. WUAs.

Production Relations

Changing dimensions of production relations can be understood in terms of increased sharecropping and agricultural labour activities in the villages. In the sample villages, it can be argued that now with improved access to water there is emerging tendency to engage in cultivation and strive for higher yields. In case of landless and very poor landholders who eventually belong to lower rung of caste hierarchy, the motivation behind agriculture is subsistence because of availability of cheap canal water while accessibility to canal water combined with ground water has initiated cash cropping among intermediate castes particularly murais who are regarded as skilled agriculturists in north Indian agrarian society. The trend of cash cropping through floriculture and horticulture is very prevalent which has exacerbated the phenomenon of

sharecropping among the cultivators. Murais are the most engaging caste in the sharecropping for two reasons; First, they form of a group of hard working cultivators and they are agriculturists by their caste occupations therefore, they are more inclined towards agriculture. The murais are the very early migrants of the village who used to be seasonal migrants but soon they became long time migrants as they got engaged into growing roses in the farms in Delhi. Moreover, they are progressive and brought back the technique of floriculture to their roots. Share cropping patterns among them indicates that most of the murai sharecroppers fall in the category of 2-5 bigha of sharecropping.Second; Deprivation from cheap canal water and consequent switch to tubewell water has encouraging impacts on a particular group of farmers. Despite being expensive, tube well water ensures timely and sufficient water which has promoted diversified and more cash oriented cropping. It was found that, 62.3 percent of the farmers are using tube wells for irrigating their fields. The tube well water ensures good productivity of crops and farmers belonging to every caste and class are engaged in diversified cropping. However, in Nasratpur, the condition is different as there is a predominance of chamars (lower castes) in sharecropping which is largely due to availability of cheap canal water although they pursue subsistence agriculture.

The Kayasthas, Brahmins and Thakurs provide their lands for sharecropping and murais are heavily oriented towards accumulating sharecropping land from them. Kayastha community is progressive and most educated in the village. They are in government jobs; and the upcoming generation is also oriented towards service sector instead of agriculture.

Table-2: Status of Land acquired for Sharecropping

	Nasratpur							Bhelai Khurd						
	Landholding Size (in *Bighas*)						Caste/	Landholding Size (in *Bighas*)						
Caste/ HHs	<1	1<2	2<5	5<10	>10	Total	HHs	<1	1<2	2<5	5<10	>10	Total	
Brahmins	-	-	-	-	-	-	Brahmin	-	-	-	-	-	-	
Thakur	-	-	-	-	-	-	Thakur	-	-	-	-	-	-	
Bhurji	-	-	-	-	-	-	Kayastha	-	-	-	-	-	-	
Murai	-	2	3	-	-	5	Murai	2	3	4	-	1	10	
Pasi	-	1	-	-	-	1	Lodh	3	4	-	-	-	7	
Teli	-	-	-	-	-	-	Jaisawal	-	1	-	-	-	1	
Lohar	-	1	-	-	-	1	Teli	-	-	-	-	-	-	
Nai	-	-	-	-	-	-	Pasi	2	4	-	-	-	6	
Dhobi	-	-	-	-	-	-	Chamar	-	-	-	-	-	-	
Chamar	3	9	-	-	-	12	Dharkar	-	-	-	-	-	-	
Total	3	13	3	-	-	19	Total	7	12	4	-	1	24	

Thus, access to water has made cash cropping and sharecropping a prevalent phenomenon. It has led to overall socio-economic development of murais in the village and they have gained social prestige and power next to brahmins, thakurs and kayasthas. Subsequently, they have come up with active participation in the village politics, promptly making their presence felt in panchayat elections. However, if sharecropping is examined in relation to

landholding size, data depicts, it is largely a marginal farmer syndrome in the studied villages.

Like earlier empirical evidences (Shah 1993; Pant 2004), these villages also indicate powerful changes in the labour market such as substantial increase in labour demand, and wage rates. Landless, small and marginal farmers are left with more opportunities. Floriculture has provided great employment opportunities for primarily female labourers from both the villages that generally belong to scheduled castes and sometimes to backward castes. It is also worth mentioning that women from backward castes generally work for their own caste families in lieu of their labour in their own families while scheduled caste who are either landless or own very small patches of land work for wages.

Further, agricultural and non- agricultural labour either in and around the village are other sources of income. Urban migration is another source of income generation. In case of marginal farmers, seasonal migration is prevalent in order to suffice the productivity requirements of the crops. Thus, non-farm income has constituted significant part of the agriculture economy of Uttar Pradesh.

Thus, water has facilitated substantial increase in agricultural production, increase in income and employment, greater division of labour and occupational specialization, increase in consumption and improved living conditions and social and geographical mobility, stimulating a process of socio-economic change. Spatial mobility has promoted subsistence agriculture among lower caste and capitalist market oriented farming among entrepreneurial caste murais. Remittances have accelerated the process of agriculture by providing inputs. Moreover, labour demand has increased due to cash cropping and sharecropping leading to scarcity of labour in the village. It has stopped seasonal migration to some extent while long term migrations are still prevalent.

Rural Elite and Power Structure

In due course, backward castes gained numerical strength in political institutions. Their hold got further consolidated with the implementation of Mandal Commission recommendations when they began entering bureaucratic corridors of power (Pant 2005). It is clear that politics has played a major role to evolve the caste consciousness. These days, people belonging to each caste categories are aware of their rights and are more vocal towards their rights. Changing face of rural elite is subsequent major change in the context of present study.

Earlier studies suggested a coincidence of class and caste with reference to ownership of water extraction devices and size of landholdings (Pant and Rai 1985). Besides, Land inequalities and caste are directly related and it also forms the basis for staking claims in ground water resource ownership and

access (Naz 2015). However, it has been found that this trend is not witnessed anymore. The present study seems to demolish the high caste supremacy in terms of modern agriculture equipment. Backward castes seem to go neck and neck with high caste in owning such implements. The backward castes like Murais and Jaisawals, Bhurjis represent a group of hard working cultivators, who are biggest beneficiaries of the Zamindari abolition. Therefore, it can be argued that water along with other governmental benefits such as reservations, rotational panchayati raj system and land reforms has played crucial role in changing faces of rural elite. But scheduled castes are still deprived from such benefits and struggling for their existence.

Forces of modernization have caused to become some areas of village life caste free, while other was still governed by caste. Caste, class and power are intertwined, as in villages; power and wealth seem to be concentrated in the hands of upper caste people. However, on account of availability of water, spatial mobility, awareness about government schemes for upliftment of weaker sections erstwhile dominance of higher castes is challenged by those occupying middle status in hierarchy. Middle castes like murais and bhurjis have accumulated more agricultural land and modern agricultural equipments. They have achieved higher economic status and are new elite faces of the village alongwith brahmins, thakurs and kayasthas.

Table 3: Caste-wise Distribution of Water Extracting Devices

Caste	Pumpsets	Engine	Boring	Caste	Pumpsets	Engine	Boring
Brahmin	0	2	4	Brahmin	1	1	1
				Thakur	1	1	0
				Kayastha	1	2	0
Total	0	2	4	Total	3	4	1
Bhurji	1	1	1	Murai	4	6	5
Lohar	1	1	1	Lodh	0	4	1
Murai	1	1	0	Jaisawal	1	1	0
Nai	0	0	0	Gujar	0	0	0
Teli	0	0	0	Teli	0	0	0
Total	3	3	2	Total	5	11	6
Chamar	0	1	5	Pasi	0	1	0
Dhobi	0	0	0	Chamar	0	0	0
Pasi	0	0	1	Dharkar	0	0	0
				Dhobi	0	0	0
Total	0	1	6	Total	0	1	0

Emerging Institutions: Water Markets

Changing water use practices have added some new institutions in the constellation of village institutions such as water markets and water users associations and these newer institutions have their own impact on rural society and lifestyle. Many studies have attempted to gauge the emergence of these institutions and their impact on agrarian social structure. For example, in his study of two villages Ratanpura and Paldi of Gujarat, Dubash (2000) offers

three criteria which play crucial role in development of water markets i.e. hydro-ecological conditions, spatial distribution and size of landholdings to be irrigated and historically embedded social informal norms of exchange which determine the institutional rules under which water is sold. Shah (1993) visualized water markets into powerful instruments of small farmer's developments. Groundwater markets have played a significant role in the agrarian economy of Uttar Pradesh. Several empirical studies reveal that groundwater markets have solved the problem of scattered holdings (Pant1992; Ballabh and Choudhary 2003).

Evidences from Field

An overwhelming proportion of households depend on groundwater markets. In both villages the more than two third of total cultivating households are dependent on ground water market; Nasartpur (76.9 percent) and Bhelai Khurd (66.7 percent). Thus, it clearly points to an inevitability of water markets in the present times in the study area.

Table 4: Households owning Water extracting Devices (WEDs) for Consumption, Sale and Purchase of Water

Activity	Nasratpur	Bhelai Khurd
Sale with self -consumption	4 (15.4)	14 (22.2)
Purchase	20 (76.9)	42 (66.7)
Consumption	2 (7.7)	7 (1.1)
Total	26 (100.0)	63 (100.0)

Judging groundwater markets from the angle of their accessibility to poor and marginal farmers, it is found that the farmers with landholdings up to 1.5 bigha in Bhelai Khurd are the biggest beneficiaries, as majority of them irrigate their crops using water purchased from the owners of private WEDs. Emergence of ground water markets has caused significant changes in rural social structure. Generally two types of transactions are observed cash and kind based. Although, both the villages under study are involved in cash sale and purchase of water but comparatively, it is more prevalent in Bhelai Khurd as the canal water is scanty. The cause for this situation can be attributed to the state's ignorance of operation and maintenance of the canal, its minors and outlets. It was informed by the farmers during the field work that

> The village gets canal water from Nasratpur minor and falls in the middle reach. The location of the village in the middle reach of the minor causes sluggish flow of water due to bunds and diversions in head reach of the minor. Thus, required amount of water could not reach to farmers in this village. Furthermore, when the whole canal system was reconstructed by government (under UPWSRP) the outlets were not properly placed in synchronization with height of fields, and additionally the outlets are smaller in size.

The whole situation has accelerated the sale and purchase of water through hiring of WEDs in the village. Another, noteworthy factor is that farmers of murai and other backward castes in the village are encouraged to practice horticulture and floriculture due to development of water markets hence leading to emergence of sharecropping as an important phenomenon. Caste preferences are also evident in purchase of water particularly.

> Hiring WEDs is more comfortable from our own caste families because it gives us relaxation in charges in paying the rent of the devices hired. If it gets late to pay for the charges, it is not a matter to worry.

One more reason is also stated by intra caste water transactions among those who are the owner of the devices.

> We can mutually borrow some devices for some time and later on they need it, we can help them.

Thus, the ground water markets have been very useful in solving the issue of access to ground water for poor and remedying the problem arising due to lack of consolidations of holdings.

Emerging Institutions: Water Users Associations

Emergence of various institutional arrangements for water management has attracted much academic and policy discussion (Ostrom 1990; Ostrom et al 1994; Wade 1987). These institutions have evolved over a long period with state controlled institutional arrangements superimposed over traditional small- scale community ownership and management of water. This has led to the erosion of community initiatives and involvement in water development and weakened the efficiency, productivity, equity, and sustainability of these systems. The concept of decentralised participatory management evolved out of a recognition of such inefficiencies as well as of the potential benefits of peoples' participation. However, mobilising participation would depend very much on the local farmers' willingness to cooperate [Vaidyanathan 1999]. Physical characteristics like location of the area in relation to the source, demand and availability of water, socio-economic heterogeneities of resource users, etc, do have impact on the collective action of the farmers in organizing irrigation. However, the present study finds them complete failure and not functioning in the villages.

Water User Associations could be very influential while solving the conflicts arising out of distribution of water. It is also evident that unequal social relations are at the core of resource conflicts. Although the conflict appears to be between the individuals and groups but they are intensively intertwined with the complex social relations sprawling across villages (Folke, 1998). Being asked about who solves the conflict,a group of poor farmers from both the villages responded that

> The conflict is resolved by mutual discussion and consent only in some of the cases, while often the weaker group or the farmer let the dominant one to irrigate his fields first and waits for his turn. In such condition, sometimes their fields remain unirrigated and canal is closed. Sometimes some influential and respected person of the Brahmin community in Nasratpur and kayastha in Bhelai Khurd village intervene in the matter and convince big farmers to allow us to irrigate our fields in between as we own lesser land and we cannot afford tube well water.

It seems that the traditional caste based loyalties play an important role in solving the conflict. Water User Associations (WUAs) are formed to take care of repairing and maintenance of the minors and outlets. It was informed,

> Repairing and maintenance task is not taken care of by any authority or the group. Generally, a farmer who is in dire need of water and cannot afford it from other sources, do the required possible repairing.

Shramdan is a significant phenomenon to such activities, which is not visible in this case. It was really ironical to know that where on the one hand a large majority of the population was unknown about the existence of even the concept of WUAs. The WUAs Elections became the arena of local politics and handful of economically and politically strong farmers dominated in the process of formation of WUAs. Similar observations have been recorded by several studies that elite capture and political influence dominate the functioning of WUAs. Large farmers dominate the WUAs and are the biggest beneficiaries and participation of women is not paid attention (Koppan et al 2001; Sandbergen 2008). Consequently, forgetting its purpose of ensuring maintenance of canal, timely and regular supply of water, fair distribution of water among all sections of farmers and conflict resolution, it has aggravated the problem.

It is argued that state has to play developmental role in India. Various interventions for development can be recorded including water resource development. The study articulates that development of canal irrigation system is crucial to development of rural poor who eventually happen to belong to lower caste, availability of cheap canal water has oriented them towards subsistence agriculture and sharecropping.But emerging social conflicts and tensions cannot be avoided which has been aggravated by the absence of *warabandi*[1].

Conclusion

Although social structure determines utilization patterns of natural resources, however, it has also undergone changes due to various development programs, (particularly related to water in this case), encounters of urban,

market oriented capitalist culture and increasing network of information and communication systems. They have facilitated changes in behavioural patterns, social relationships and social structure. It is noteworthy that changing landownership pattern has affected control over and access to water in rural social setting. Distribution of lands as *patta* to landless and poor lower caste and backward castes has entitled them with land ownership. Although land provided to them is not very fertile, still it is crucial in terms of their subsistence and is responsible for growing competition among farmers and inter-caste and intra-caste conflicts in the village.

The study argues that although Nasartpur reflects strong hierarchical (caste and class) interplay in access to water leading to domination and conflicts, it has motivated the poor farmers belonging to lower rung of hierarchy i.e. chamars and pasis to subsistence agriculture. Therefore, it could be argued that although in the village community the access to resource is still aligned along the lines of caste. However, in view of historical processes of land reforms and changing tenurial rights, intermediate castes such as murais have made better growth in agriculture in particular and social sphere in general. They are new elites in the village. Emergence of institutions such as water markets and water user associations are significant to trace the changes in social structure.

Eventually, water markets have emerged as instruments of development of farmers. In the context of Uttar Pradesh, ground water markets have been very useful in solving the issue of access to ground water for poor and remedying the problem arising due to lack of consolidations of holdings. However, evidences from both the villages, argue that each caste feels more comfortable in water transactions with in their own castes or similar caste categories. Shah views such benefits as irrigation surplus in the purview of political economy of irrigation and states "much of the politics of irrigation concerns the generation, manipulation and distribution of this surplus" (Shah, 1993).

Similarly, the state has adopted the strategy of participatory water management to ensure equality and regularity of water distribution among farmers belonging to any caste or class. But the formation of WUAs is dominated by local politics and whole purpose of WUAs is missing. It is reflected from the study that there is no awareness about existence of such group among common masses in the villages. Like, Panchayat elections, elections of WUAs are reflections of local politics and are guided by power theory which is based on socio-economic and political dominance. The process of nominations reflects the social networking and seats reserved for scheduled caste and women farmers is not rationally filled up by individual initiative and it is based on again primordial loyalties.State efforts could not involve locals in this process and main reason behind such condition is lack of awareness about purpose and benefits of WUAs. Thus, forgetting its purpose of ensuring maintenance of

canal, ensuring timely and regular supply of water, fair distribution of water among all sections of farmers and conflict resolution, it has aggravated the problem.Therefore, the study articulates that only provision of alternative institutions is not the only solution, spread of awareness and information about the purpose of the institution and active involvement of locals is crucial to success of such institutions. The study also articulates the need of improving those women's position in farmer's organization, who belong to disadvantaged groups, are landless and female heads of the households having no political support and particularly who have no relatives in the village. Their access to decision making in the WUAs, to benefits from the WUAs and to land is more meaningful than the participation of women who are quite satisfied with the situation, who have access to means of production, and to the benefits through the membership of their husbands.

Thus, it is evident that, change and development in agrarian society is critically linked with land distribution and availability of agrarian facilities particularly water. There is a need to work on bi-dimensional approach of agrarian development i.e. equalising land holdings and availability of cheap and timely supply of water to remove income inequalities and bridge the gap between rich and poor in agrarian social structure. Simultaneously, the state and community both have to join hands to ensure the success of Participatory User Management policy leading towards more egalitarian society free from dominance and conflicts.

Notes

1. Groundwater is very expensive than canal water. However, murais in Bhelai Khurd village are practicing horticulture in capitalist mode of production and earningprofit as it is not controlled by state and its availability is assured.

2. There is a group of lower castes that cannot afford ground water and in absence of much needed canal water they had to mortgage their land. Therefore, water has become crucial in terms of their subsistence and development.

3. Warabandi is a system for regulating water use. It refers to turn wise distribution of water to ensure equal distribution and avoid conflict.

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