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SOCIAL IMPLICATION OF WATER DISTRIBUTION THROUGH CANAL IRRIGATION SYSTEM: CASE STUDY OF A SARAIKI VILLAGE IN SOUTHERN PUNJAB

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ABSTRACT

This paper deals with the water distribution methods of canal irrigation andtheir social implications. The research was conducted in Village Banbhan Tehsil Taunsa Sharif District D. G. Khan in South Punjab. This article emphasis on how the changing pattern of irrigation in village is proving as a change agent in the social patterns of the natives. Through the different methods of water distribution like Warabandi, Rotation of water and water trade methods have brought the social changes in the lives of native. These methods of water distribution are being caused of introducing the social class system in the village. The methods of water distribution and their social implications are discussed in detail. The data presented in this paper has been collected by using qualitative anthropological research techniques.

KEYWORDS: Warabandi, Khalpunchait, Moga, Distributary, Kanal, Canal Authorities, Pattadars, Patwari

INTRODUCTION

District D.G.Khan is unique in its feature that it has linked boundaries with other three provinces than that of Punjab like linked Balochistan at Rukni, KP at Ramak D.I.Khan and Sindh at Kasmoor. The village Banbhan also has very important geographical setting in the area because it linked dozen of village at the right bank of River Indus with Indus highway Peshwar to Karachi. The village Banbhan is situated 21km away from the Tehsil Taunsa at Indus Highway. The soil of village is very fruitful for the agriculture because Indus River flow only 3km away from the village, but after the construction of the Indus Highway it divided the village into two portion one from the right side of the Indus highway and other is left side of the Indus highway.

The economy of the village depends upon the agriculture. The lands of the village irrigated through the *ChotaDarya*(Small River) branch of Indus River. The irrigation water from the Small River IS extracted through the NalaMasowah and it irrigatesKharif crops only. In 1992 NalaMasowah blocked due to low water level in the Small River. The period from the 1992 to 2002 was very difficult for the agriculture as well as for the villagers.

The construction of the CRB Canal created a hope for the betterment of the agriculture as well as for the natives of the village Banbhan. CRB Canal phase three was completed in 2002 that brought drastic changes not only in the agriculture but also brings economic revolution as well as massive changes in the social patterns of the village.The water distribution in Canal Zone was very essential and important aspect of the canal irrigation. This paper focuses on the water distribution methods in village and what social changes have brought by these methods at village.

METHODOLOGY

Qualitative anthropological methodology which includes methods like socio-economic survey, participant observation, key informant interviews and in-depth interviews were used to collect empirical data. Different sampling techniques were used during the research like purposive sampling, random sampling and snow ball sampling. By using these sampling techniques 100 households out of 300 households have selected as sample of study. Beside this structured

and unstructured questionnaire and in-depth interviews have been used during the study. Modern methodology like photography and recording have also used during research. The research conducted in four month from February 2012 to June 2012.

RESULTS AND DISCUSSIONS

Canal irrigation in the village was very valuable for agriculture, it also prevent from famines when it is effectively working. So water distribution at Canal Zone was very essential because when farmers were unable to get proper water share their crops were affected deeply and as a result, their surplus production reduced that ultimately infer their economic activities as well as create a problem of food shortage in a particular geographical boundaries and also at national level.

The delivery of canal water was important for farmers because they sow their crops according to the availability of water share they get, while the importance was also for the trade system people were practicing in the village. There were many dimensions of water delivery from the canal and its meaningful circulation in the Canal Zone. The major water distribution systems that were working in the village were:

Warabandi

The method of water distribution arranged by the farmers under the supervision of Government authorities and sometimes under the control of local farmers' body was called *warabandi* method, according to it the distribution of canal water was divided between farmers according to their agriculture land in Canal Zone. Five to eight minutes were secure for each *kanal*(local unit for measurement of land) of agricultural land in Canal Zone. Specific time and particular date was fixed for each landowner in one day of week with the consultation of local farmer body and canal authorities. If water was not available at fixed day and fixed time, farmer were meant to wait for a week to get water that was fixed by the farmer's body and canal authorities.

Each water distributary and *Moga* (particular hole from the water distributary) had a committee called *KhaalPunchait* (a group of local farmers) who fixed the *Warabandi*. Every *KhaalPunchait*had a chairman and four members. It is mandatory for the chairman and the members to hold agricultural land at the particular *Moga*. Normally the water course is divided into three parts i.e. beginning, middle and the end. The first member controls the first part, second and third members regulate the middle part of and fourth member control the tail of water course.

Members of a *KhaalPunchait*are normally elected in a group meeting of farmers especially conducted for the purpose. Each candidate has to show his strength on that particular day.The farmers raise their hands for their candidates.The one who shows maximum strength is elected for the post. After this election one member is nominated as Chairman who necessarily has not to be adefaulter of water charges.The Chairman and the members of the *KhaalPunchait* must be males because the female members were considered unable to control the management and it was also against the agrarian cultural norms. The*KhaalPunchait* fixes *warabandi* at each *Moga.*According to our respondent Mosa Khan:

> *"Warabandi is not fixed in fair way because the KhaalPunchait is consist of gigantic landowners or landlords, who deceived the small landowners through providing them little share of canal water because KhaalPunchait is not observed by canal authorities and a result small landowners who has their agricultural land at the tail of water course do not get their proper water share"*

It was observed in the field that the *KhaalPunchait* was fixing the *warabandi* according to agricultural land in the Canal Zone.Thepattern of water distribution was fixed for eight minutes for each *Kanal*for the big landowners, while five minutes for each *Kanal* of small landowners.That'sthe way they save water share for their lands and quantity of water in

the tail area was made condensed. Due to the less availability of canal water share, most of the farmers were adopting rotation of water mode method to fulfill their irrigational needs.

Rotation of Water

Rotation of water is a method used for the distribution of the Canal water among the natives. When a famer completesirrigation of his fields he immediately diverts the water to the next needy neighboring farmer. Another form of rotation is used when a farmer could not get his share of water due to the scarcityof water in the main Canal.He requests his neighboring farmer to divert surplus water to his fieldswhich he returns during the next week at the same day.This rotation of water has improved the level of social interaction among the farmers at their own level. The method was used only by the owners of the neighboring fields usually by using the kinship and reciprocal relations.According to our key informant Abdul Ghafoor:

> *"Generally we share water with our neighbor farmer, but Rishtedary (kinship ties) role is very important here. If water share is needed to my brother and my neighbor I will give preference to my brother. Another aspect regarding to water distribution is reciprocal relation of people. We share water with those people who also share water with us in the time of need."*

Social solidarity has increased in the Canal Zone by managing the rotation of water at their own and solved the water distribution problem among them has brought better relationship among them.

Case Study 1

Abdul Ghafoor was 45 year old owner of eighty acres of agricultural land in Canal Zone told the researchers that he needed the help of neighbors to irrigate his fields, because his land was at the tail of watercourse so it was not possible for him to supervise the watering of his fields all the times. The matter was solved with the help of his neighboring famer's cooperation which did not exist before the construction of Canal. According to him such kind of cooperation was the need of the time to increase the productivity for the overall benefit of the nation.So I hadto develop good relation with my neighbor. Before construction of the Canal there was a conflict between us. Now we resolved the conflict as it has become the need of time to develop good relation with each other to cope with our agrarian activities. The farmers were managing water distribution themselves according to the need that was outcome of the Canal irrigation as there was no harmony and cooperation among them before the execution of the Canal.

Outcomes of Case Study

- Canal irrigation familiarized new forms of water distribution;
- Rotation of water method has generated social integration;
- Rotation of water technique has helped to solve disputes among the people;
- Rotation of water scheme has enriched the reciprocal relation in the Canal Zone.

Water Trade

Water trade was the new phenomenon in the village emerged after the functioning of the Canal and due to less availability of Canal water. To fulfill the irrigational needs people have started water trade at local level to resolve the water problem. Farmers having surplus water have started sellingtheir share to other needy farmer. Rates of water trade vary according to distance from the *Moga* and also vary among different watercourses; however, the water trade was not so

popular. *Warabandi* and rotation of water were mostly practiced in the village and were increasing day by day, though it was illegal according to Canal authorities.

Alliances through Canal Water

As describe earlier that social interaction among people in Canal Zone has increased and social behavior improved due to Canal irrigation and distribution of Canal water has played a vital role to enhance the alliances among the people of a community. In the early years of the Canal formation, there was random irrigation system practiced by the village farmers that was also very important to bring the people close to each other because it developed a connection among them from head of *Moga* to the tail of watercourse. Farmers interact with each other on the issues of Canal water; sometime they also helped each other to save Canal water from wastage. Thus with such type of activities, their social interaction has augmented and social solidarity increased among the farmers.According to a respondent NazarHussaain:

> *"Social solidarity arose among the people after the introduction of Canal System in the village because before the Canal construction there was tube well irrigation system.The tube wells were the individuals' property and could be operated any time. They were not in need to interact with each other. Tube well irrigation was controlled by the individuals. While Canal irrigation is not controlled irrigation if an individual missed his turn he had to wait for next week at same day to get his share again. This concept of uncontrolled irrigation system led the base of social solidarity in Canal Zone.Now people help each other when they irrigate their fields. Rotation of water and water trade system compelled the natives to solve their disputes and cooperate with each other. Thus with the alleviation of conflicts among the people social solidarity has augmented among the people at locale."*

According to another respondent Shamla Khan:

> *"After the construction of CRB Canal it is not only the social solidarity and social interaction which increased among the people, it also enhances the alliance with other neighboring communities which includes Leghari, Merani, Lashri and Jarwar.So interaction with these communities has improved because without social interaction with them we cannot protect our crops and water share. With each passing year after the Canal social interaction with these communities is growing. Some people have made marriage alliances with these communities also."*

CRB Canal has wrecked the geographical boundaries and ethnic bonds among different communities of the village *Banbhan* as well as other localities linked with the Canal Zone. Some people considered Canal as a blessing of Allah Almighty that has upgraded them socially, economically and shaped social harmony among them.

Water Sharing and Social Classes

As stated earlier that Canal irrigation on one hand has created social harmony among the people at the local level and on the other hand it has created a negative impact in the village and that is the introduction of class system. These social classes emerged because of the large landholdings and hegemony of land owners in the Canal Zone as they were looking after the water distribution. Originally, there were three classes in the village:

Landlord Class

Landlord was a class exploiting other classes with reference to water distribution methods like Warabandi,rotation of water and water trade system because the patterns of water distribution were controlled by the same class. The chairman of local farmer body and water users association belonged to that class that fixed the water shares according to their wishes for getting maximum share of Canal water for their fields, while under the rotation of water method, they used water until

the fulfillment of their irrigational needs. After the emergence of the water trade system, they get maximum share of Canal water through different ways and then sold it to other farmers. The mostly illegal withdrawal has done by that class through different methods.

Small Landowners

The small landowners were another class emerged due to water distribution of Canal.They also had un-limited rights of water share. This class also had a prominent position in local farmer's body and water users association so they get sufficient water share.According to Haji Ramzan a respondent belonged to small scale landowner class.

> *"We elect the members of farmer body. We are responsible to provide them equal water share according to their agricultural land in Canal Zone. We fixed Warabandi under the supervision of Canal authorities and farmers. Five to eight minutes are fixed for one kanal according to the distance from Moga."*

The inequality in the water distribution was a slogan raised at the national and international level by the landless class and *Pattadars* as they were not happy with the Canal water distribution.

Landless Class

The landless class also came into being due to the water distribution in Canal Zone.They do not have agriculture land in the Canal Zone. They cultivate lands of other landowners. This class mostlyconsists of people who came from hilly area and thetenants(*kami*)of the village. They were of the view that the landlord class had key position in the local farmer's body thus they always use unfair means to get maximum water share.According to a respondent Musa khan:

> *"When the share of water is fixed by landlords they save one or two minute from each kanal of agricultural land and in the end they save five to ten hours of water share. Another method through which they save Canal water is that they consider maximum GCA (Grass command area) and less CCA (Cultural command area) with the help of local Patwari, thus through this method they also save water time for themselves."*

The landless was an oppressed class because of having no land.The conflicts of water distribution directly or indirectly distress them. Sometime they were sent to jail in water theft cases. Unfair water distribution and illegal water withdrawal has generated many social problems at the local level. According to the police sources 1000 cases of illegal water withdrawal were registered at the local police station, while 321 cases of disputes were handled during the last ten years.These figures indicate that the social crimes and disputes have increased after the creation of the Canal. It very important to mention here is that mostly victims of these disputes and conflicts belong to landless class and *Pattadars*(who get land on rent). According to a *Pattadar* Allah Nawaz:

> *"I got land on Patta at the rate of 25000/acre/year, irrespective of crop production. I had to pay the amount on a fixed date. So when unfair water distribution was fixed by Landlords I could not get appropriate share of water and as a result my crops were affected. To get proper share of water, I registered my complaint with the local farmer's body but that could not provide justice, then I knocked the doors of justice at Chakhri Tehsil Court."*

According to the researchers' observation, the class stratification has emerged after the Canal that was leading the society to social and economic decline.

CONCLUSIONS

Water distribution methods not only contain the distribution of canal water in the particular zone but also have many socio-cultural elements in it. Water distribution of canal on one hand is creating social integration through the

increase of social relations among the kinship ties as well as with other communities, but on the other hand canal water distribution methods are generating social disintegration through the emergence of different social classes with respect to have canal water share.Water distribution methods are also indicating the coordination among the canal authorities and farmers. This is very useful because it is generating the social cooperation among the Government and farmers which normally considered themselves enemies. At the same time farmers who have no positions in local farmer's body and water user's associations of the view that the both canal authorities and landlords are not allocating their proper share of the water.People at the locale considered canal as a blessing of God but some people has considered it as a divine curse because it has vanished our socio-cultural norms and created disintegration and physical as well as psychological unrest in the society.