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Abstract
The Fordwah Eastern Sadiqia South (FESS) Irrigation and Drainage Project (Drainage Component) was initiated with the assistance of World Bank, aimed at increasing the productivity of waterlogged lands through water conservation and anti-seepage measures, specifically controlling water logging and salinity through cost effective methods and improving the equity of water distribution. The project area comprised of parts of Bhawalnagar, Haroonabad and Chistian tehsils covering 258,701 acres of cultural command area. As the project includes construction of about 308 Km of surface drains, so it requires acquisition of private land for completion of 223.52 miles long network of surface drains. Acquisition of land for drains is unpleasant task for the concerned agencies as it reduces the land area, damages the houses, business places and public infrastructure, etc., falling in the Right of Ways (ROWs) of the drainage channels. The project affected persons (PAPs), particularly small and medium farmers do not feel comfortable due to adverse effects. According to its policy regarding Involuntary Resettlement (IR) which calls for at least maintaining the standard of living of the PAPs, World Bank gave serious consideration to these issues. Thus, the World Bank proposed a Resettlement Action Plan (RAP) for settlement and rehabilitation of PAPs to minimize the impact of involuntary resettlement, provide investment resources to PAPs and opportunities to share project benefits. This study undertakes external monitoring of the implementation of RAP. The major findings of the study pertained to need for evolving an objective land valuation criteria; extent of delay in payment of compensation amount and non-consideration of resettlement issues increased awareness of affectees and reduction in incidence of illegal gratification.

Key words: Monitoring, Drainage, Punjab

Introduction
Water logging and salinity is one of the main problems causing low crop yields in Pakistan. Major area of Pakistan constitutes arid regions. These regions do not receive sufficient rainfall to leach the salts from the soils out of root zone. Soils in low lying areas and retarded and imperfect drainage often result in an elevation of the water table and ultimately water logging. The unlined canals and water channels also lead to water logging and salanization of adjacent land by seepage. Pakistan can not afford any loss of agricultural land in either way as Agriculture sector accounts for 20.9% of the GDP and employs 43.4% of the total work force (Govt. of Pakistan, 2007). The Fordwah Eastern Sadiqia South (FESS) Irrigation and Drainage Project (Drainage Component) was initiated to overcome these problems with the assistance of World Bank. The project aimed at increasing the productivity of waterlogged lands through water conservation and anti-seepage measures, specifically controlling water logging and salinity through cost effective methods and improving the equity of water distribution. The project area comprised of parts of Bhawalnagar, Haroonabad and Chistian tehsils of Bhawalnagar district covering 258,701 acres of cultural command area (Govt. of Punjab, 2005). The project area has arid climate with an average rainfall of 9 inches. Quality of ground water is mostly saline except the areas closer to irrigation channels, where the quality has been improved due to constant water seepage. About 50% of the project area is water logged with permanent water table depth of 12 feet and about 12 % of the area is affected by soil salinity. The area did not have any surface drain except a few tube wells, a small quantity of water was pumped which resulted in a limited remedy from water logging and salinity. Thus Fordwah Eastern Sadiqia South (FESS) Irrigation and Drainage Project (Drainage Component) envisaged construction of 308 Km of surface drains, which involved
acquisition of 3549 acres of land. In all 4462 landowners were affected. Thus, a Resettlement Action Plan (RAP) was launched to ensure that at least pre-project standard of living of the Project Affected Persons (PAPs) was maintained (WAPDA, 2006).

The following measures were proposed in RAP:

- The project will provide entitlements to rehabilitate persons who lose their land, properties and whose livelihood is affected through land acquisition.
- Entitlement package will be provided to improve the standard of living of the PAPs, by allowing for sufficient compensation, while providing adequate credit and training for the poorer groups among the PAPs.
- These entitlements will be supplemented by entitlements for land less PAPs with packages including training, work opportunities and credit.
- Entitlement package will be classified in terms of category of loss rather than category of person affected as each category of person may suffer more than loss.
- Work opportunities will involve priority project employment with the contractors and WAPDA.

Objectives of the Study
The specific objectives of the study were as under:

- Verification and review of the adequacy of compensation rates, relocation arrangements and rehabilitation measures.
- To explore perception and level of satisfaction of PAPs.
- Examining the efficacy of the grievances redress procedures.
- Identification of key issues and problems in RAP implementation and suggest recommendations to improve implementation.

Materials and Methods
The FESS Irrigation and Drainage Project (Drainage Component) covers about 2.59 lacs acres culturable command area in the Bhawalnagar, Haroonabad and Chistian tehsils. The Project Affected Persons (PAPs) were 4462. All those PAPs under various surface drains were population for the study. The sample size was determined by using the following statistically formula:

\[
n = \frac{NZ^2S^2}{Nd^2+ Z^2S^2}
\]

where:
- \( n \) = Sample size
- \( N \) = Sample population
- \( Z \) = Normal variate at 95% confidence level (1.96)
- \( S \) = Guessed variability of sampling units for the area acquired of each sample unit (50%)
- \( D \) = Acceptable error (3.0 %)

Consequently the sample size of the study was 861 respondents.

Results and Discussion
As mentioned earlier that about 50% of the project area is water logged and about 12 % of the area is affected by soil salinity. The historical background/area under water logging and salinity in Punjab and Pakistan with respect to various water table depths under two months of the respective year is shown below in Table 1.
Table: 1 Extent of Water Logging and Salinity (Area in 000 Hectares)

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>‘0’ to ‘5’ Feet or 150 cm Water Table Depth</th>
<th>‘0’ to ‘10’ Feet or 300 cm Water Table Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Punjab</td>
<td>Pakistan</td>
</tr>
<tr>
<td>1998</td>
<td>June</td>
<td>594</td>
<td>2456</td>
</tr>
<tr>
<td></td>
<td>Oct.</td>
<td>912</td>
<td>4945</td>
</tr>
<tr>
<td>1999</td>
<td>June</td>
<td>619</td>
<td>2935</td>
</tr>
<tr>
<td></td>
<td>Oct.</td>
<td>402</td>
<td>4430</td>
</tr>
<tr>
<td>2000</td>
<td>June</td>
<td>228</td>
<td>544</td>
</tr>
<tr>
<td></td>
<td>Oct.</td>
<td>280</td>
<td>3215</td>
</tr>
<tr>
<td>2001</td>
<td>June</td>
<td>184</td>
<td>530</td>
</tr>
<tr>
<td></td>
<td>Oct.</td>
<td>262</td>
<td>2732</td>
</tr>
<tr>
<td>2002</td>
<td>June</td>
<td>136</td>
<td>2939</td>
</tr>
<tr>
<td></td>
<td>Oct.</td>
<td>209</td>
<td>2229</td>
</tr>
<tr>
<td>2003</td>
<td>June</td>
<td>365</td>
<td>898</td>
</tr>
<tr>
<td></td>
<td>Oct.</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Govt. of Pakistan (2006)

The proportion of water logged and saline areas in the project area i.e., Bahawalnagar and its adjoining districts like, Bahawalpur and Rahim Yar Khan of Punjab province is given below at Table 2.

Table: 2 Water Logged and Saline Area in Bahwalpur, Bahwalnagar, and R.Y Khan Districts (Area in Hectares)

<table>
<thead>
<tr>
<th>District/Province</th>
<th>Area Surveyed</th>
<th>Saline Area</th>
<th>Water Logged Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area</td>
<td>Percentage</td>
<td>Area</td>
</tr>
<tr>
<td>Bahawalpur</td>
<td>468528</td>
<td>24325</td>
<td>5.2</td>
</tr>
<tr>
<td>Bahawalnagar</td>
<td>623717</td>
<td>132414</td>
<td>21.2</td>
</tr>
<tr>
<td>R.Y Khan</td>
<td>720760</td>
<td>124749</td>
<td>17.3</td>
</tr>
<tr>
<td>Punjab</td>
<td>9396359</td>
<td>1170118</td>
<td>12.4</td>
</tr>
</tbody>
</table>

Source: Govt. of Punjab (2005)

As the Project envisaged construction of 308 Km of surface drains, which involved acquisition of 3549 acres of land, which affected about 4462 landowners. A Resettlement Action Plan (RAP) was launched to ensure that at least pre-project standard of living of the Project Affected Persons (PAPs) was maintained. The major findings of the study regarding the implementation of the RAP are elaborated as follows:

Knowledge Regarding Package of Incentives under RAP

Only 9.3% of PAPs had knowledge regarding package of incentives mentioned in RAP. Grievances Redress Committee (GRC) had been constituted under the project. None of the sample PAPs had knowledge about GRC. Inadequate knowledge of PAPs regarding VRCS and GRC indicates that the project was not being implemented as originally envisaged.

This situation reveals that the performance of Social Unit of Project Resettlement Office (PRO) was not up to the mark, since this unit was responsible to conduct orientation, communication and awareness programme to disseminate information on assets valuation methods, mode of compensation payment and resettlement or incentive package.

Status of Acquired Land, Land Valuation Method and Compensation

The average acquired land was 9.2% of the average farm land of the respondents. The average compensation received by PAPs was Rs.75,678 per acre, while the average market value of land similar to acquired land determined was Rs.102,741 per acre. Consequently the value of acquired land was 26.3% less than the market value of similar land. About 89.1% of the payment of approved cases was made to the PAPs, while 10.9% of the PAPs were not paid because of disputed titles and unresolved inheritance problems.

Only 9.8% of the PAPs expressed satisfaction with the prevalent land valuation method. Significant difference in land compensation and market value assessed and low level of satisfaction with the method used for assessing land value suggested the need for evolving an objective valuation criterion.
The compensation received for land acquisition was utilized in different ways. Only 6.5% of PAPs purchased land.

**Compensation for House Damages, Crops and Fruit Trees**

About 7% of PAPs reported about their house damages, while payment to 100% of PAPs had been made. Only 32.2% of PAPs were paid compensation for crops. The reason reported was non-availability of the record of the crop losses. About 17.9% of PAPs were paid fruit trees compensation.

**Illegal Gratification**

It is unpleasant task to take land and other assets from the people and to make a number of visits to concerned offices to get compensation and further more to pay illegal gratification. The expenses incurred to receive compensation amount included traveling, lodging, food and illegal gratification and other expenses. The sample PAPs had to make more than 11.5 visits to get the compensation. Total expenses incurred to obtain compensation were Rs. 3806, while the share of illegal gratification in such expenses was 80.5%. The PAPs who paid illegal gratification were 67%.

**Recommendations/ Suggestions**

On the basis of study findings the following recommendations are made:

- The massive awareness about RAP should be given to the PAPs.
- Ensuring adequate compensation for land acquired by evolving an objective land valuation criterian
- The Project Resettlement Office (PRO) may consider compensating for land in cases where a farm holding is split into two by the drain in a way that the pieces of land on other side of the drain is also effectively lost.
- The outstanding cases of crop and damaged assets may be paid expeditiously.
- Scrutiny of outstanding land compensation cases to determine the cases which are pending in the courts and to expedite the remaining cases by fixing a deadline for settling them. This would require improved communication between PAPs, PRO and Revenue staff. This issue should be taken in the spirit of public service and Revenue staff should go out, and meet the affectees and village notables to resolve the issue of outstanding compensation due to unresolved inheritance and related problems
- The Social Unit should submit a report regarding extent of deprivation of non viable PAPs, what specially is contemplated to restore their pre-project standard of living and expected income from the contemplated income supplemented measures.

**References**


Govt. of Punjab PC-1 Document, FESS Irrigation and Drainage Project (Drainage Component), Lahore. 2005