



# Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY  
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Coversheet Template:

## Rehabilitation and resettlement in TEHRI HYDRO Power project- India

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## **Abstract**

This paper explains the land acquisition procedures, norms and the current status of implementation for the rehabilitation and resettlement for different household categories and communities in TEHRI Hydro Project in India. The paper examined whether the rehabilitation and resettlement package for different families and communities provided for basic social and economic needs of the project affected people? What are the practical problems faced by both administration and also project affected people in implementing the rehabilitation package? What is the status of the project effected people after habilitation compared to before dam construction? The study used intensive field survey for the year 2006-08 in the project effected areas by collecting data on various socio-economic parameters.

Government of India is unable to pass The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (Amendment) Bill, 2015 due to the concerns of various political parties, non-government organizations and civil society regarding the provisions for rights of farmers and other vulnerable sections of the society like tribal communities etc. The civil society is of the opinion that the development of large public and private projects should not be at the cost of the farmers and other vulnerable sections of the society like land less laborers and tribal community. The new land acquisition bill is in favor of large private companies at the cost of provisioning better livelihoods to the displaced poor. This paper try to give some policy solutions for a proper rehabilitation and resettlement of the large public and private projects by intensively examining the rehabilitation policies and packages and their implementation at grassroots level. The paper specifically focuses on the vulnerable groups like unemployed, landless laborers; old aged persons, small and marginal farmers for effective policy implementation. The paper also deals with development of community and social services in the rehabilitated communities for better life quality.

**Key Words: rehabilitation and resettlement, India, project effected people, multi-purpose projects**



## **REHABILITATION AND RESETTLEMENT IN TEHRI HYDRO POWER PROJECT-INDIA**

### **INTRODUCTION**

Tehri dam site was identified as a potential site for storage dam in 1949. A reconnaissance survey of Bhagirathi river valley was carried out during 1961-62 to select a suitable site for constructing a storage dam, wherein Tehri site was found techno-economically feasible for the construction of a high earth and rock fill dam. The Planning Commission approved the project in 1972. THDC was set up in 1988 as a joint venture of GoI and GoUP for implementation of the Tehri Hydro Power Complex (2,400 MW), with equity participation by GoI and GoUP in the ratio of 3:1 for power component, while the irrigation component (20% of Tehri dam & HPP cost) was to be entirely funded by the GoUP. GoUP transferred project works to THDC in 1989.

Tehri dam is one of the highest earth and rock fill dams in the world. A 260.5 m high earth and rock filled dam was constructed on the Ganga river at the downstream of the confluence of its two main tributaries e.g. Bhagirathi and Bhilangana rivers. At crest the length of the dam is 570 m and the width is 25.5 m flared to 30.5 m at abutments. The THDC and government of Uttaranchal are following best practices in its rehabilitation and resettlement of the oustees. An Expert Committee headed by Prof. Hanumantha Rao on Environmental and Rehabilitation aspects of Tehri dam was constituted by the Government in 1996 and the Committee submitted its report in 1997. Construction of powerhouse and main dam started in 1996 and 1997 respectively.

Tehri Hydro Power Project THPP (1,000 MW) was completed in 2006-07 and the benefits of the project with respect to irrigation, drinking water and electricity already started to flow with the commissioning of the generating units. Presently THDC have seven projects under various stages of investigations in Ganga valley while 2 projects are under active construction. The catchment area of river at Tehri dam site is 7,511 sq. km.



and dam shall impound the monsoon flows of river to create a lake with surface spread of 44 sq. km.

Major benefits of the Tehri project are:

1. Generate clean and renewable energy of 2,400 MW during peak hours with lower cost of operation and maintenance.
2. Provide an additional irrigation facility to 2.7 lac ha. of land and stabilization of existing irrigated land of 6.04 lac ha.
3. Provide 500 cusecs of drinking water to Delhi and UP.
4. Moderate the flood during monsoon by way of storage of excess water.
5. Development of pisciculture.
6. Integrated development of the catchment area including afforestation and soil conservation of 36,200 ha. of severely eroded land.
7. Development of tourism in the Garhwal region, which shall boost up the employment opportunities.

The completion of Tehri dam project was a landmark achievement in the history of river valley projects in the country. This project is unique multi-purpose project, which provides benefits of electricity, irrigation and drinking water to the northern India. The benefits from the project have already started to flow. The Tehri hydropower station is now operational with three units of 250 MW each having been commissioned. The project with its technical complexities is an engineering marvel. The rehabilitation and resettlement works carried out in Tehri project have been on a massive scale.

### **Need for the study**

The Administrative Staff College of India (ASCI) first conducted a Socio Economic Study for the THDC in 1993, which aimed at the families to be rehabilitated and those already rehabilitated. The first socio-economic study carried out a benchmark survey to evaluate the project and its impact, as also to build a socio-economic profile of the households to understand the conditions before and after R&R. The survey also documented the perceptions, views and suggestions of the rehabilitated households.



The present paper is an updated version of the previous study and it compares with the results of the First Survey to understand any changes. The main aims of the paper are (1) to understand social economic conditions of the households rehabilitated and resettled in the year 2008.

**Scope of the paper:**

To understand the current status of project affected population (PAP), a household survey has been conducted in the year 2007. There are different varieties of PAPs (agriculturists, artisans, businessmen, people who have opted for only cash compensation, etc.). The study tried to contact these people and find out their socio-economic conditions after rehabilitation. In general the impact of the R&R package would be analysed with respect to the change in the R&R initiatives over two different time periods, viz., 1993 and 2007. The study covered all the households which were categorized into (1) Agriculture and related activities taken up by those receiving ‘land for land’ compensation, (2) Income generation activities that have sustained over the period, (3) New tertiary/service activities that have gained ground, (4) PAFs who have opted for cash compensation, (5) Partially affected people who have upgraded their skills, (6) People living in the cut-off areas and who now have new modes of connectivity and (7) Other issues of social development measures among the PAFs.

**Basic theoretical framework of the methodology:**

Impoverishment Risks and Reconstruction (IRR) model adopted in the study. Our field survey has been designed based on IRR model which assesses the intrinsic risks that cause impoverishment through displacement, as well as the effectiveness of rehabilitation policy to counteract-eliminate or mitigate-these risks through rehabilitation and resettlement. The model basically explains (a) what happens during massive displacements- and risk assessment and (b) to assess safeguarding measures to mitigate the risks due to displacement during rehabilitation and resettlement. We believe that this impoverishment risks and reconstruction (IRR) model substantively adds to the tools of



explaining, diagnosing, assessing, predicting, and planning of effectiveness of R&R policies implementation.

The components of the model are

- (a) Landlessness;
- (b) Joblessness;
- (c) Homelessness;
- (d) Marginalization;
- (e) Food insecurity;
- (f) Increased morbidity;
- (g) Loss of access to common property resources; and
- (h) Community disarticulation.

The model studies methods employed in rehabilitation and resettlement in preventing or overcoming the pattern of impoverishment, risk reversal or mitigation. The model basically studies reconstruction strategies implemented and its operational performance based on the following parameters.

- (a) From landlessness to land-based resettlement;
- (b) From joblessness to reemployment;
- (c) From homelessness to house reconstruction;
- (d) From marginalization to social inclusion;
- (e) From increased morbidity to improved health care;
- (f) From food insecurity to adequate nutrition;
- (g) From loss of access to restoration of community assets and services; and
- (h) From social disarticulation to networks and community rebuilding.

The model stimulates the generation of hypotheses about relations between key variables in both displacement and relocation. The research utility of the model comes from its ability to guide data collection in the field and coherently aggregate disparate empirical findings along the model's key variables. Hence we choose IRR model as a guiding framework for conducting and organizing our fieldwork. Overall, the adoption of this



model provides the basis for assessing effectiveness of reestablishment of resettlers along several clear indicators.

- (a) How impoverishment risks have been successfully attacked and reversed;
- (b) What are the livelihood reconstruction strategies evolved over a period of time and the specific directions identified.

**Usefulness of IRR model in the current context:**

Evidence indicates that the IRR framework is in some important respects ahead of current mainstream practices. It builds upon the more advanced scholarly analyses of implementation of resettlement package. The model is fully compatible with the most advanced resettlement policies in existence today and offers a methodology capable to vastly increase consistency and effectiveness in the implementation of these policies.

**Sampling:**

There were 125 villages and one Tehri town affected by the construction of the Tehri project. Out of these, 37 villages were fully and 88 villages were partially submerged.

The rehabilitation work was divided into two parts (i) Urban Rehabilitation and (ii) Rural Rehabilitation. Old Tehri Town and 125 villages were affected as a result of implementation of the Tehri Dam Project. New Tehri Town has been established in place of old Tehri City through the project in which the displaced families of old Tehri Town were rehabilitated. The Rural rehabilitation sites are (i) District Dehradun, (ii) District Haridwar and (iii) New Tehri.

Under Urban Rehabilitation, all the 5,291 families of Old Tehri Town, categorized as fully affected, were completely rehabilitated and the Old Tehri Town was vacated in January 2004. Under Rural Rehabilitation, 5,429 were fully affected families have been rehabilitated through allotment of land / cash compensation. In partially affected villages, out of 2,074 fully affected rural families, 1,572 families have been rehabilitated, while R&R of the balance rural families is under way.



The sample of the households was drawn using two stage sampling procedure. In the first stage, the villages were selected based on probability proportion, in consultation with the officials of the THDC engaged in rehabilitation of affected families. At the second stage 350 households were selected based on the random sample. Out of 350 sample households 200 were rural households and 150 were urban households. The urban families were selected from New Tehri Town, since it is the only affected urban settlement in the project area. The rural families were selected from 10 different rehabilitated colonies in probability proportion to PAFs in the rehabilitated site.

The data for the rural rehabilitation were collected from 42 households in Pashulok, 31 in Banjarawala, 25 in Baniawala, 16 in Dherkhas, 10 in Raiwala and 5 in Atakfarm in the Dehradun district, 15 in Patri block-1, 20 in Patri block-2, 28 in Patri block-3 and 8 in Patri row/ Suman nagar in the Haridwar district. The data for the urban rehabilitation were collected from 150 households in New Tehri Town, which includes Mooldhar and Baurari. In addition to the above PAFs, data is collected from a sample of 20 institutions including schools, banks, temples and government offices.

### **Explaining the questionnaire:**

For the purpose of the study, questionnaires for both urban and rural survey were developed in English and then translated into Hindi, on the advise of THDC and Directorate of Rehabilitation, Uttaranchal officials. This has been done since Hindi being local language in the surveyed area. We have discussed the questionnaire thoroughly with the THDC officials before we have conducted the survey and done necessary modifications as advised by them. The household survey was conducted in both the rural and urban rehabilitated colonies using structured questionnaires separately for both rural and urban PAPs.

Detailed data were collected from the affected households on various aspects such as size of the family, age, sex, education, main occupation and number of days of employment in a year of all the family members for both before and after rehabilitation. For this purpose



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2007 has taken as the study period. Wherever possible the data has been collected for both before rehabilitation and after rehabilitation. This can give an overall idea about how the socio-economic structure of the family has changed because of their displacement. The detailed information regarding assets possessed such as house, land, cattle, agricultural implements, household items, vehicles, etc. has culled out for both before and after displacement and estimated how the life style has changed. Detailed information regarding the income from various sources like agriculture and allied activities, cottage industries, non-agricultural income, labour (both skilled and unskilled), government service and the other occupation and expenditure incurred on food, education, cloths, health, fuel for vehicle, entertainment and others was collected. This gives a broad picture about how the PAPs are affected economically because of the displacement. The information about various types of compensation/allowances such as incentive allowances, compensation allowances, building construction assistance allowances, decoration allowances, replacement allowances, food and seed allowances they have received from the THDC and the property they have lost such as land (irrigated or unirrigated), trees, buildings, shops, etc.

Data on the distance and the satisfactory levels on the civic facilities such as hospital, education, water for drinking and irrigation, roads, sanitation, electricity, financial institutions, markets/shops, communication, entertainment, religious places, parks, function halls, fuel, pastured land, village pond, graveyard, etc. were created/provided by the THDC in those rehabilitated colonies were also collected and compared with the amenities they had earlier in their villages. From this we can estimate how these facilities were utilized and benefited by the community as individual or in-group.

The data were also collected on the perspective on the project, the rehabilitation site, transfer of property, etc. and the status of women at home and village, violence on women, freedom at the new place, etc.



### **Household survey:**

The Study team has visited 11 rehabilitated colonies in three districts i.e. Dehradun, Haridwar and Tehri and collected data from 350 PAPs. Detailed data were collected from 150 urban PAPs, 200 rural PAPs and 20 institutions during September 2007. The sample villages were Pashulok, Banjarawala, Baniawala, Dherkhas, Raiwala, Atakfarm, Patri block 1, Patri block 2, Patri block 3, Patri row/ Suman nagar and New Tehri Town. Two separate questionnaires were prepared for both urban and rural respondents in local Hindi language. The data collection team consisting of six local graduates who were recruited and trained extensively by the ASCI Study team to ensure a standardised approach to data collection. The three member ASCI study team has monitored and supervised the field level data collection through out the survey with necessary logistic assistance of THDC/Directorate of Rehabilitation Officials.

Detailed data were collected on the family structure and composition, socio-economic conditions of the PAPs like land structure, cattle information, income, expenditure, cropping pattern, occupational structure, property lost because of the displacement, compensation and other benefits received from the THDC, their concern about the project, construction, usage and satisfactory levels of various community based infrastructure provided/ constructed by the THDC and the status of the women before and after displacement. The final questionnaires administered to collect data for both urban and rural households are presented in Annexure I & II at the end of Chapter 1.

### **3.1 Basic principles and objectives guiding formulation of R&R Policy:**

1. To minimize displacement and to identify non-displacing or least displacing alternatives.
2. To plan for the R&R of Project Affected Families (PAFs) including special needs of women, tribals, SC/ST and other vulnerable sections.
3. To provide better standard of living to PAFs.
4. Rural oustees to be compensated through allotment of agricultural land or cash in lieu thereof. Land for land option is preferred.



5. The rural oustees would be settled in large blocks so that the fabric of their social life remains intact.
6. Ousteas or their representatives are involved to the extent possible in selected rehabilitation centers and other issues to facilitate harmonious relationship between the project proponent and the PAFs.
7. Community facilities are provided at rural rehabilitation centers even if these did not exist at their earlier settlements.
8. To assess requirement of other public facilities, connectivity and infrastructure requirements of affected population who would continue to reside above submergence level.
9. To study employment needs and self-employment generation schemes.

### **3.2 REHABILITATION PROVISIONS**

#### **Background:**

Due to construction of the Tehri Complex, a total area of 5,200 ha. has got submerged. With this, the Old Tehri Town and 37 villages (including 2 of Koteshwar) will come under full submergence, while another 88 villages (including 14 of Koteshwar) will only be partially affected. In addition, 13 more villages will be affected for the construction of infrastructural facilities like workshop, project colony and the New Tehri Township developed for rehabilitating the urban population.

#### **Rehabilitation plan:**

The Rehabilitation Plan has been broadly divided into Rural Rehabilitation and Urban Rehabilitation. Affected families under Rural Rehabilitation were categorized as "Fully affected" or "Partially affected". The families whose 50% or more land was acquired were treated as Fully Affected. Those families whose less than 50% land coming under submergence were categorised as "Partially Affected".

In case of urban population of Tehri Town, all 5,291 families living in the Town as on the cut-off date of 06.06.1985 were treated as fully affected. Under Rural Rehabilitation,



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there were 5,429 fully affected families due to Tehri Dam were to be rehabilitated. Another 3,810 rural families Partially Affected and were not going to be displaced; they would be paid cash compensation for their land under submergence or would be allotted equal land above submergence level. Urban Rehabilitation Programme involves a total of 5,291 families, covered

### **Implementation:**

As per Govt. decision, R&R works were transferred to the U.P. State Govt. in Jan.'99 for implementation, under control and supervision of commissioner, Garhwal, with funds to be provided by THDC. With the formation of Uttaranchal State, R&R is now being implemented by Uttaranchal State Govt. since January, 2001.

### **Broad features of rehabilitation policy:**

The basic principles that guided the formation of the Rehabilitation Policy were:

- Rural oustees to be compensated through allotment of agricultural land or cash in lieu thereof.
- The Rural oustees should be settled in large blocks so that the fabric of their social life remains intact.
- Ousteas or their representatives to be involved to the extent possible in selecting the rehabilitation centers.
- To the extent possible, consideration is given to the preference of the ousteas for settlement at a particular site.
- Community facilities are provided at each of the rural rehabilitation centers at the cost of the project even if these did not exist at their earlier settlements.

### **Rehabilitation package:**

Within the framework of the set principles, which guided the formation of Rehabilitation Policy, an attractive and a liberal rehabilitation package was evolved, which was improved from time to time, including measures approved by the Govt. based on the recommendations of the Hanumantha Rao Committee.



### **3.3 THE REHABILITATION PACKAGE IS AS UNDER:**

#### **Definition of Family:**

For the purposes of entitlement of Rehabilitation benefits to land owners, family is represented by the head of the family, in whose name the land is entered in revenue records as on date of Sec-4 (i) notification, and includes all members dependent on him. In case of death of land owner (head of family) take place prior to issue of Sec-4 (i) notification, all legal heirs become eligible to receive rehabilitation benefits. All major sons and unmarried daughters of entitled fully affected family who has attained the age of 21 years and dependent parent (mother / father) are eligible for ex-gratia payment.

#### **Rural Package:**

##### **Land Owner Family:**

- 2 acres of developed irrigated land, or half acre of developed irrigated land adjacent to Municipal limits of Dehradun, Haridwar or Rishikesh cities, or cash of Rs. 5 lacs in lieu of allotment of land, as per their option.
- Compensation for acquired land as per Land Acquisition Act plus solatium @ 30%. Even if acquired land is less than 2 acres, 2 acres of developed irrigated land is given, cost of which to be adjusted from the amount of compensation payable in respect of acquired land. If the cost of land acquired were more than the cost of allotted land, the oustees would be paid the difference of cost; and if it is less, difference in cost will not be recovered.
- Cost of house property/trees acquired to be evaluated at the PWD/Forest/Horticulture deptt. rates plus solitium. Further, ex-gratia equivalent to amount of depreciation, subject to a maximum of Rs. 50,000 is payable. Minimum compensation in case of house is Rs. 1.00 lac.
- Allotment of residential plot of 200 sq. m. to each family at nominal cost.
- Cash grant for shifting is Rs. 5200/- and for seeds/fertilizers is Rs. 4960/-.
- Additional incentive grant of Rs. 15,000/- payable to those who shift within 6 months from date of award of compensation or date of allotment of land, whichever is less, after handing over their acquired property.



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- All the eligible additional family members for fully affected rural families attaining the age of 21 years as on 19.07.90, and dependent parent (Mother/Father) would receive ex-gratia amount equivalent to 750 days of minimum agricultural wage per member.
- Cash grant ranging from Rs. 80,000/- to Rs. 1,20,000/- to each rural shop holder depending upon the locations.

### **Landless Agricultural Labourers:**

- Land free of cost @ 2 acre / ½ acre / Rs.5.00 Lac cash option, as applicable to rural project affected families, on certification by the concerned District Magistrate.
- Ex-gratia grant to additional family members as applicable for fully affected rural families.

### **Urban Package:**

- Land owners including Nazul land holders are given residential plot of various size (60, 100, 150, 200, 250 and 300 sq.m.) in proportion to their holdings at very nominal cost (ranging from Rs. 5 per sq. m. for plot up to 150 sq.m. to Rs. 150 per sq.m. for plots of size 300 sq.m.) at locations as per choice, in addition to compensation of house property as calculated in case of rural properties (Average rate of developed plot is in the range of Rs.1000/- per sq.m.).
- House construction assistance, as grant to the land owners at following rates less compensation already paid;
  - 60 –100 Sq.m. plot holders - Rs. 2.50 lacs
  - 150-200 Sq.m. plot holders - Rs. 3.50 lacs
  - 250-300 Sq.m. plot holders - Rs. 4.50 lacs
- Ready to built houses/flats to entitled tenant, on subsidized cost at pre- 1989 rates.
- Benap house owners who constructed house before 6.6.1985 are allotted either house/flats or plots (if available).



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- Allotment of shop at subsidized cost (Rs.1600/- per sq.m.) in NTT/ Dehradun/ Rishikesh to those running shops at Old Tehri Town.
- Compensation for “Saj-Sajja”, for shopkeepers.
- One shop to be allotted to shop owner who were not running shop(s) themselves in Old Tehri Town.
- Cash grant of Rs. 3000/- to Rs. 4000/- for transportation of household goods and Rs.1500/- to Rs.2000/- for commercial goods. In addition, entitled families who hand over their acquired properties and shift to new allotted sites within a period of 6 months from the date of allotment of plot/flat, an incentive grant of Rs. 12000/- per family is payable.
- One room flat to Economically Weaker Section (EWS) families free of cost, up to a maximum of 100 families.
- All additional eligible family members of entitled landowner families as per criteria defined under rural package, get ex-gratia amount equivalent to 750 days of minimum agricultural wage per member.
- Cash option allowed in lieu of allotment of plots (Rs. 1.10 lac to Rs. 3.00 lacs), flat (1.00 lac) and shop (Rs. 0.25 lac to Rs. 0.60 lac).
- Govt. of Uttaranchal paid cash grant to shop keepers of Old Tehri Town ranging from Rs.1.00 lac to Rs.3.00 lacs depending upon category of shop.
- Govt. of Uttaranchal paid cash grant of Rs.1.50 lac each to advocates of Old Tehri Town who were practicing before the year,1985.

### **Provision of social amenities:**

The rural resettlement colonies are located in agricultural areas in Dehradun and Haridwar districts and have been provided with all civic facilities like electricity, irrigation, piped drinking water, roads, schools, dispensaries, places of worship and community centers etc. There are around 14 rural resettlement colonies located in agricultural areas (6 in Dehradun district and 8 in Haridwar district) and provided with all basic facilities.



The urban families are resettled at New Tehri Town (NTT) or at Rishikesh and Dehradun as per their option. NTT has all the modern facilities for education, hospital, financial institutions, District administration offices, markets, bus stand and places of worship, etc. It can be seen that land allotted at resettlement site is approximately 4 times the land acquired.

Total cost of Rehabilitation and Resettlement of Tehri dam would be around Rs. 1,260 crores, which is around 15% of the cost of the project.

### **3.4 EVOLUTION OF R & R PACKAGE**

The Govt. of U.P. commenced the rehabilitation work of the affected families when the project was under them. The Rehabilitation Policy including the location of New Tehri Town (NTT) had been evolved and decided by the State Government of U.P. after interaction with the representatives of the local population. After the incorporation of THDC, the rehabilitation work was handed over to the THDC in 1990. The policies as evolved by the State Government was fully adopted by the Corporation and later on the amount of compensation were enhanced wherever necessary.

#### **Improvements by Hanumanta Rao Committee (HRC) - 1998**

On the demands for further improvements raised by the local population, the Government of India in September, 1996 constituted a committee viz. Hanumantha Rao Committee (HRC) to examine the Rehabilitation Policy of the Project and suggest further measures/improvements etc. The HRC submitted its recommendation to the Govt. in November 1997. The Govt. of India after examining the recommendations of HRC, accepted certain additional benefits/measures, which were incorporated in the Rehabilitation Policy of 1998.

The major recommendations of the Hanumatha Rao Committee, approved by the Govt. in regard to rehabilitation of the affected population include definition of family so as to make all major sons and major daughters who attained the age of 21 years, and dependent



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parent (Mother/Father) of the fully affected entitled land owner as on 19.07.1990, eligible for ex-gratia payment of Rs. 33,000/-, i.e., 750 days minimum agricultural wage each, grant of house construction assistance to the urban land owner families, linked with the progress of construction and shifting, allotment of one constructed shop, recognition of the right of people living in the villages upstream of the Tehri reservoir, over the water from Bhagirathi and Bhilangna rivers and tributaries for drinking and irrigation purposes.

### **Improvements after Government decision on HRC-2001:**

Additional measures/ benefits agreed after HRC

#### **Rural:**

- Minimum amount of cash in lieu of land allotment, equivalent to cost of 2 acres of allotted land has increased from Rs. 2 lacs to Rs. 5 lacs.
- House construction assistance to fully affected rural house owners, whose land / house have been acquired, be given @ Rs.1 lacs each.
- Cash grants admissible for shifting and purchase of seeds and fertilizers are increased.
- Eligibility criteria for land allotment: GoUP orders of 1976/78 to stand modified so as to make eligible for land allotment, those land owners in rural area who sold their part land after 1978, but before issue of Section 4(1) notification under Land Acquisition Act.
- Rural shopkeepers to be paid cash compensation @ Rs.60,000/ each to those having shops on National / other Highways and large market areas, and @ Rs. 40,000/ each to shopkeepers on other roads in submergence areas.

#### **Urban:**

- Amount of house construction assistance revised, varying from Rs. 2.5 lacs to Rs. 4.5 lacs depending on plot size.
- Cost of flats and shops allotted to the entitled oustees to be recovered at pre-1989 construction cost; development cost not to be charged.



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- Government of Uttaranchal allowed in July 2001 payment of cash grant to shopkeepers of Old Tehri Town, ranging from Rs.1.00 lacs to Rs. 3.00 lacs, depending on category of shop, subject to handing over possession of their shop.
- Government of Uttaranchal, in Dec 2001 allowed payment of cash grant of Rs. 1.5 lacs each to the advocates of Old Tehri Town who were practicing before the year 1985.

### **Additional measures agreed by GoI for public facilities and infrastructure development – 2005:**

- Enhancement of compensation for rural shopkeepers from existing Rs.40,000 to Rs.80,000 for shopkeepers at other roads and Rs.60,000 to for Rs.1,20,000 for shopkeepers at National/ other Highways
- Reconstruction and reallocation of public properties situated below EI. 835 M in partially submergence villages, at higher level for population residing above submergence level.
- Arrangement of Ferry boat/ cable car services for cut-off area
- Heavy motor vehicle bridge across Bhagirathi river near village Dobra with funding to be provided by Govt. of Uttaranchal and Govt. of India.



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Table 1 Resettlement and Rehabilitation Policies of various Projects

	<b>Tungabhadra</b>	<b>Bhakra</b>	<b>Ukai</b>	<b>Srisaillam</b>	<b>Tehri</b>	<b>Sardar Sarovar</b>	<b>Indira Sagar &amp; Maheswar</b>
Landed family	5-10 acres of agricultural land free of cost.	There was no information available on R&R package.  - PAPs were paid cash compensation.	Land made available 0.1 to 4 acres, depending on the land acquired. The land was sold to oustees at @ Rs. 600-960.	50% of compensation subject to a maximum of Rs. 1000 per acre for the land acquired.  50% compensation subject Rs. 5000 paid where land and house were acquired.	2 acres of irrigated land or cash of Rs. 5 lakhs in lieu of land.	Minimum 2 ha. land for agricultural purpose.	2 ha.-8 ha. 50% compensation and remaining 50% adjusted against cost on allotted land to be recovered in 20 years.
Major sons	-	-	-	-	No provision.	2 ha. for agricultural purpose.	Treated as separate family. Only cash compensation.
Co-sharer	-	-	-	-	-	2 ha. for agricultural purpose.	No provision.
Major unmarried daughter	-				No provision.	No provision.	No provision.
Widows	-	-	-	-	No provision.	No provision.	No provision.



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	Tungabhadra	Bhakra	Ukai	Srisaillam	Tehri	Sardar Sarovar	Indira Sagar & Maheswar
Encroach ers	-	-	-	-	Urban PAFs provision exists.	2 ha. prior to 1 year of notification.	Entitled to compensation.
Landless PAFs	-	-	-	-	2 acres for agricultural land.	2 ha. to agricultural labourers.	No land. -Rs. 29,000 for SC/ST. -Rs. 19,500 to others.
House	<p>a) 700 sq.m. land for house and other purposes.</p> <p>b) 185-200 per cent of ex-gratia at market value of house.</p> <p>c) Housing construction material at subsidized rates.</p>	-	<p>3200 sq. ft. for land owners and 1600 sq. ft. to those who do not own land.</p> <p>Compensation to house was paid.</p>	<p>50% of compensation subject to a maximum of Rs. 1000 where house was acquired.</p>	<p>200 sq. m. land at nominal rate of Rs. 330 minimum compensation of Rs. 1 lakh.</p>	<p>-500 sq. m. free of cost cash compensation for submerged land.</p> <p>-Rs. 10,000 per family to construct pucca hosue.</p>	<p>Plot of 5400 sq. ft. free to oustees and their major son and compensation as per L.A.Act or Rs. 20,000 in lieu of plot.</p>



# Responsible Land Governance: Towards an Evidence Based Approach

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	<b>Tungabhadra</b>	<b>Bhakra</b>	<b>Ukai</b>	<b>Srisaïlam</b>	<b>Tehri</b>	<b>Sardar Sarovar</b>	<b>Indira Sagar &amp; Maheswar</b>
Partially affected families	-	-	-	-	Provision of Rs. 20,000 worth of IGS scheme who are left with less than 1.5 ha. and Rs. 5000 for those who are left with more than 1.5 ha. land.	No provision.	No provision
Employment	-	Gainful employment was provided.	-	-	Preference in employment.	Preference in employment.	Not mentioned.
Rehabilitation grant	Free transport provided to displaced persons.	Rs. 250 per family was provided.	-	Weaker sections were provided houses and house sites and hutment charges of Rs. 1000 on humanitarian grounds. Others were allotted house sites on payment at market value for land.	Shifting grant Rs. 5000. Intensive shifting within prescribed time Rs. 15,000.  Urban: Shifting grant Rs. 3000-Rs. 4000. Intensive shifting grant within prescribed time Rs. 12,000.	a) Rs. 15 per day for 25 days. b) Rs. 754 per family. c) Grant in aid up to Rs. 500.	a) Rehabilitation grant of Rs. 18,700 to landless, small & marginal and SC/ST families. b) Others Rs. 9350.



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House/ building advance/loan	-	Assistance to construct house.	Rs. 4000-5000 at 7% interest. Those who did not opt for government help were offered Rs. 450-670 for cooperating with govt.	-	Upto 1 lakh at subsidized interest	No provision	No provision
Facilities affected due to construction of project colony and project work	-	-	-	-	Entitled for rehabilitation benefits	-	No provision
Subsistence allowance	-	-	-	-	-	Rs. 4500 per family	
Grant for purchase of productive assets	-	-	-	-	-	Rs. 7000 per family.	a) Rs. 49,300 for landless agricultural labour. b) 33,150 for others.
Insurance	-	-	-	-	-	For hut, death, loss of limbs, disablement.	-

Source: 1. Data collected from various projects.

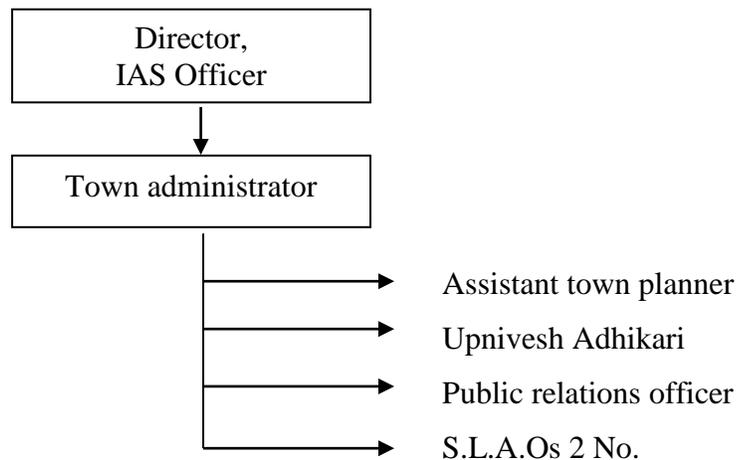
2. Report of the Expert Committee on Rehabilitation and Environmental Aspects of THDC. Vol. II, Annexure, Oct 1997.





### 3.4 ADMINISTRATIVE SET UP UNDER THE STATE GOVERNMENT

Tehri Dam Project was being implemented by the irrigation department of the Government of Uttar Pradesh, till 1989. Commissioner, Garhwal Division was notified as the Administrator of the project looking after rehabilitation and other related activities, under which the rehabilitation wing was constituted. The following is the administrative wing



The above officers were assisted by the supporting staff as per the sanctioned strength. In addition the PWD Division with staff and irrigation division with staff were also working under the Administrator. A high level Control Board was constituted under the Chairmanship of Chief Minister of UP for economic and efficient expedition of implementation. Under this Control Board, a Standing Committee was formed to monitor physical and financial progress. The Control Board also assisted the state government in framing the policies for rehabilitation and other aspects by laying down guidelines.

#### **Monitoring Mechanism for Rehabilitation:**

Government of India has constituted a Project Level Monitoring Committee (PLMC) for conducting field visits to verify the satisfactory completion of various environmental safeguards stipulated at the time of Project clearance and other specific recommendations accepted by the Govt. The Committee comprises of Regional Chief Conservator of Forests, representatives of Ministry of Environment and Forests, Ministry of Power, Jawaharlal



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Nehru University, Indian Agricultural Research Institute; The Committee also includes independent experts and an NGO.

Ministry of Environment & Forests, Govt. of India also constituted a High Level Inter Ministerial Review Committee headed by Secretary, MOEF to periodically review the environment and rehabilitation and resettlement issues associated with the Tehri Hydro Electric Project and also review the recommendations of the Project Level Monitoring Committee. The Committee comprises of the following:

1. Secretary, Ministry of Environment & Forests .... Chairman
2. Secretary, Ministry of Power .... Member
3. Secretary, Ministry of Social Justice .... Member
4. Secretary, Ministry of Water Resources .... Member

Chief Secretaries of Governments of Uttar Pradesh and Uttaranchal are Special Invitees.

### **Grievance Redressal Mechanism:**

A Grievance Redressal Cell under the Director (Rehabilitation), who is also the District Magistrate, Tehri, is functioning in the Rehabilitation Directorate, Uttaranchal Government for expeditious disposal of grievances received from PAFs. Further, Coordination Committee headed by Commissioner (Garhwal), set up by the State Govt., also redresses the specific cases/demands of the people.



### 3.5 OVERALL STATUS OF R&R

#### Urban Rehabilitation:

The Old Tehri Town (OTT) comprised of urban population of 5,291 families, categorized as fully affected, has been completely rehabilitated at the New Tehri Town (NTT) or in Haridwar or Dehradun districts as per the option of the oustees (table 2).

#### 2 Status of Rehabilitation of PAFs of Old Tehri Town

Description	Required	Constructed/ Developed	Allotted	% Age allotted (Progress)
1. Residences:				
(a) Plots	2,438	2,438	2,438	100
(b) Flats	2,853	2,853	2,728	100
Total (a)& (b)	5,291	5,291	5,166	100
2. Commercial:				
Shops	784	787	787	100

- All the eligible persons have been given rehabilitation benefits

The NTT, is at a height of 1,350 to 1,850 M., overlooking the lake, with a panoramic view of the Himalayas. The New Township has all the modern facilities for education (including ITI and a University), 75 bedded hospital, financial institutions, district administration offices, markets, bus stand and places of worship, etc. The Old Tehri Town has been vacated in January 2004.

#### Rural Rehabilitation:

All the 3,355 fully affected rural families in the villages have been rehabilitated through allotment of land/cash compensation. In partially affected villages, out of 2,074 fully affected



rural families, 1,620 families have been rehabilitated. There were 5,429 rural families, which have been categorized as fully affected families, and another 3,810 rural families as partially affected. Rural resettlement colonies are located in Dehradun and Haridwar districts and have been provided with all civic facilities (table 3).

Table 3 Status of Rehabilitation in Rural Areas

S.No.	Description	Land affected (in acre)	No. of villages	Fully affected families	Rehabilitation facilities provided	Balance PAFs
1	Fully submerged/ affected villages	2,993.93	37	3,355	3,355	-
2	Partially submerged/ affected villages	1,936.91	72	2,074	1,620	454
	Total	4,930.84	109	5,429	4,975	454

The partially affected families about 3,810 nos. were not relocated, but given cash compensation. Out of 3,810 partially affected families 2,280 nos. were paid cash and rest are under process. All R&R benefits have been paid up to EI.790 M and affected families resettled. Disbursement of compensation /grants between EI. 790 M to EI. 835 M was completed.

**Transfer of Facilities:**

All public properties/community facilities created under the project have been transferred to concerned departments of the state government. It was also decided that the concerned departments should make their own budgetary provision for operation and maintenance of the properties /community facilities and no further expenditure shall be incurred by the project for the same.



**Connectivity and public facilities in cut off area:**

- In lieu of Tehri-Dharasu Road, Chamba-Dharasu road at higher altitude was constructed at Project cost.
- In lieu of Tehri-Ghansali road, Tehri-Bhagirathi Puram-Tipri-Ghansali road was constructed at project cost
- Two medium motor vehicle suspension bridges have been constructed, one each in Bhagirathi & Bhilangana valley at a cost of Rs. 30 crores. While Pipaldali MMV Bridge on Bhilangana has been opened for the traffic, Siyansu MMV Bridge is expected to be made operational soon after completion of the connecting approach roads. However, the pedestrians have been allowed to cross the bridge. Meanwhile, ferryboat services have been provided at the project cost till such time bridge and its approach roads are completed to facilitate the people living in cut-off areas.
- Additional package of Rs. 25.00 Crs. for road connectivity with bridges, reconstruction and relocation of public facilities below 835 m. at higher elevation for use of population residing above submergence level, arrangement of cable car & Ferry Boat for cut-off area, enhancement of competition for rural shopkeepers of cut-off area has been provided.
- A heavy motor vehicle bridge across Bhagirathi river near village Dobra with a span of 532 M (5.5 M clear road way for single lane) amounting to Rs.90.00 Crs. is also being constructed with funding by GOUK & GoI. As decided in the meeting held by Hon'ble Minister of Power on 19.9.2006, an adhoc advance of Rs.20.00 crores has been released by THDC to GOUK for the construction of the bridge.
- In the meeting held by Hon'ble Minister of Power on 19.9.2006, it was felt that arrangement of a barrage with capability to carry load be explored and implemented urgently. It was noted, that since the water level in the reservoir varies up to 90 m, the operation of barrage in such conditions would entail an appropriate system of Jetties at both ends, e.g. floating jetties.
- As discussed in the meeting held by Hon'ble Minister of Power on 22.11.2006, the ferry arrangements are to be made operational in around 6 months time, order has



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been placed by THDC on WAPCOS on 14.12.2006 for consultancy services for floating jetties/ferry specification. WAPCOS is preparing feasibility report in the first instance.

### Rehabilitation & Resettlement Sites:

The rural resettlement colonies are located in agricultural areas in Dehradun and Haridwar districts and have been provided with all civic facilities, like electricity, irrigation, piped drinking water, roads, schools, dispensaries, places of worships and community centers etc.

### Cost /Expenditure of R&R:

Demands are being raised for additional funds for rehabilitation work at different forums by various leaders. The approved provision for R&R as per revised cost estimates was Rs.983.14 crs (at March 2003 Price Level). With additional measures agreed by government expenditure on rehabilitation is likely to be around Rs.1,260 crs. An expenditure of Rs.1,231.56 crs (provisional) has already been incurred.

Table 4: Status of Rehabilitation of PAFs of Oil Tehri Town

S.No.	Description of affected family	Total No. of PAFs	Shifting status from Old Tehri			
			Shifted	Balance	Progress	
1	Land owner/benap house owner/father land etc (as per 1985 survey)	3,001	3,001	Nil	100%	All PAFs & unauthorized families have evacuated Old Tehri Town
2	Govt./ semi Govt./ institution employee/ tenants etc. (excluding laboures and unauthorized families)	2,290	2,290	Nil	100%	
	Total	5,291	5,291	Nil	100%	



All 5,291 nos. of PAFs (population about 20,000 nos) which includes landowners, tenants, shopkeepers, Kokha, Thelidharak, labours, howkers and unauthorized families etc. have been given property compensation, plots/flats, shops & rehabilitation grants etc (Table 4). A few unsettled /disputed claims i.e., house construction assistance, ex-gratia and left over properties claims etc. are still under process.

**Status of Rural Rehabilitation (up to R.L. 835.0 M)**

There are 109 villages (37 fully submerged and 72 partially submerged) in submergence of Tehri dam. 5,187 entitled families have been resettled/allotted plots in new resettlement sites. All the families residing between R.L. 790.0 m to R.L. 835 m have been allotted land at new resettlement sites(Table 5).

Partially affected rural families (3,810 nos) are not to be relocated, but are paid cash compensation for their part of land coming under submergence. Since land was scarce in Tehri district, rural families have been resettled in Dehradun and Haridwar districts. For rural displaced families (including landless labourers) two acres of developed irrigated land per family (or half acre, if resettlement site is within urban municipal limit) was provided at new resettlement sites. New resettlement colonies for Rural PAFs are Pashulok near Rishikesh, Raiwala, Bhaniyawala, Banjarawala, Parwal, Central Hope Town, West Hope Town, Fulsani in Distt. Dehradun and Pathri Block, Pathri Roh, Roshnabad in Distt. Haridwar.

Table 5 Progress of Rural rehabilitation (up to F.R.L. 835.0 M)

S.No.	Description	Land affected (in acre)	No. of villages	Fully Affected Families	Rehabilitation Facilities Provided	Progress
1	Fully submerged/ affected villages	2,993.93	37	3,355	3,355	100%
2	Partially submerged / affected villages	1,936.91	72	1,832	1,832	100%
	Total	4,930.84	109	5,187	5,187	100%



- The partially affected families 3,810 nos are not relocated, but cash compensation was paid. Out of 3,810 households 2,510 nos have been paid cash and rest is being under process.
- The fully affected families identified, so far have been allocated land in new resettlement sites along with due compensation. Only 454 families are residing between R.L. 790.0 m to R.L. 835 m.
- Survey of India has been deployed for marking of final contour line at RL 835.0 Mtr. along the periphery of reservoir to identify the final left out families and land/properties of PAFs if any.

**Rehabilitation Plan for Balance Rural PAFs**

Balance rural families, if identified after survey of R.L. 835 m. by survey of India is proposed to be rehabilitated was given in Table 6.

Table 6 : Proposed rehabilitation of balance rural families (R.L. 835 m)

S. No.	Name of Rehabilitation Site	No. of Families
1	Virbhadra, Pashulok etc. in Distt. Dehradun	35
2	Patri Block, Distt. Hardwar	15
3	Patri Roh (Suman Nagar), Distt. Hardwar	45
4	Shivalik nagar in Distt. Hardwar	9
5	Roshanabad in Distt. Hardwar	27
	Total	132



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Table 7 Details of Funds Received & Expenditure for Rehabilitation Work

Sl. No.	Fin. Year	Received from THDC	From Oustees	From Govt. of UK	Total	Expenditure	Balance
1	2000-01	522975881	4263453.09		527239334	507303651	
2	2001-02	1152000000	45149652.7	150000000	1347149653	1323852327	
3	2002-03	1753000000	16265465.9		1769265466	1796236687	
4	2003-04	753000000	5726026.5		758726027	756391099	
5	2004-05	620000000	12707678.6	10000000	642707679	613441857	
6	2005-06	1435715000	6791724	100000000	1542506724	1145531783	
7	2006-07	769400000	2237124		771637124	833734261	
		7006090881	93141124.8	260000000	7359232006	6976491664	382740341
					5180000000	5180000000	
					12539232006	12156491664	382740342

Balance Fund with Rehabilitation Directorate = Rs.38.27 Crs.

Balance of funds were utilised as follows:

1. Construction of Dobra\_Chanti HVM bridge =Rs. 20.00 Crs.

2. Construction of Ropeway etc for cutoff area, payment of balance properties in submergence area and development work in resettlement areas =Rs.18.27 Crs.

Cost of construction of Dobra\_Chanti HVM bridge = Rs. 89.20 Crs

Released fund against Dobra\_Chanti HVM Bridge = Rs.31.00 Crs.

(Rs.11.00 Crs. From Govt. of UK + Rs.20.00 Crs. From THDC/GoI)

Balance Funds = Rs.58.20 Crs.

Demand of special package for affected/cut-off areas of

Tehri dam project = Rs.248.00 Crs.



## SUMMARY AND CONCLUSIONS

Construction of large storage dams involves large-scale submergence of land often resulting in displacement of people. Implementation of R & R involves acquisition of land in submergence area as well as in resettlement colonies, besides creation of other civic, public and infrastructure facilities. Acquisition of land for public purpose displaces people, forcing them to give up their homes, assets and means of livelihood. Apart from depriving them of their lands, livelihood and resource-base, displacement has other traumatic, psychological and socio-cultural consequences.

The completion of multipurpose Tehri dam project was a landmark achievement in the history of river valley projects in India. The rehabilitation and resettlement works carried out in Tehri project have been on a massive scale.

### **Analytical Framework**

The first socio-economic study carried out by the ASCI in 1993 was a benchmark survey to evaluate the project and its impact, as also to build a socio-economic profile of the households to understand the conditions before and after R&R. The survey also documented the perceptions, views and suggestions of the rehabilitated households. The present study is an updated version of the previous study and it compares with the results of the First Survey to understand any changes.



The field survey has been designed based on Impoverishment Risks and Reconstruction (IRR) model, which assesses the intrinsic risks that cause impoverishment through displacement, as well as the effectiveness of rehabilitation policy to counteract-eliminate or mitigate-these risks through rehabilitation and resettlement. We believe that this impoverishment risks and reconstruction (IRR) model substantively adds to the tools of explaining, diagnosing, assessing, predicting, and planning of effectiveness of R&R policies implementation.

The sample of the households was drawn using two stage sampling procedure. In the first stage, the villages were selected and at the second stage households were selected. A total of 350 sample households were surveyed where 200 were rural and 150 were urban households along with 20 institutional respondents in New Tehri Town. Detailed data were collected from the affected households on socio-economic aspects both before and after rehabilitation. This can give an overall idea about how the socio-economic conditions of the households has changed because of their displacement. Data on the satisfactory levels on the civic facilities provided by the THDC in those rehabilitated colonies were also collected and compared with the amenities they had earlier in their villages.

### **Social Background**

Social background of the sample indicates that most of them are Hindus, which include all sections of community like upper castes and backward castes and weaker sections. The distance between previous and current location of the urban PAPs is less when compared with rural PAPs.



The age profile of rural and urban households is almost similar for all age groups. Majority of the population are in the prime age group, which indicates that most of them are relatively young and capable of making adjustments with the current location.

The average family size is about 5.4 for both urban and rural sample households. The overall sex ratio is around 862, which indicates unfavourable gender situation among households for women particularly in rural households.

### **Educational Level**

The level of education of persons increased marginally among all PAPs after rehabilitation because most of the resettlement sites are situated in sub-urban/urban areas and also THDC/GoUK taken initiatives in establishing schools within reach for all households. The quality of education in terms of infrastructure like building, playground, other facilities like sanitation, drinking water, ventilation, furniture, etc. has improved a lot in the newly constructed rehabilitated colonies. The accessibility to the school from their houses is also made easy with the roads network developed by the THDC where that was absent in the previous locations.

### **Accessibility to Land**

The number of land owners having land up to 2.0 acres were increased significantly after rehabilitation and the current market price of their land is significantly higher when compared with the old land. The average size of land holding of the sample households has been increased from 1.7 acres before displacement to 1.9 acres after displacement.

Irrigation facilities have been increased significantly after rehabilitation. The THDC has developed/constructed irrigation canals/ channels to the most of the agricultural lands



provided to the PAPs where such type of system was not present in the previous location. As a result now farmers are cultivating three crops in a year. The cropping pattern also changed to more remunerative crops like paddy, sugarcane, wheat and potato. Most the farmers in sub-urban areas who got only 0.5 acre are cultivating vegetable crops and selling it in near by market Even though most of the PAPs are dissatisfied with the underutilization of the allotted 0.5 acre land for any commercial/non-farm activities due to lack of markets/training and awareness.

### **Employment**

Employment and income levels have been increased significantly due to i) opportunities for rural PAPs have been increased because they have allotted agricultural land with irrigation facility, which helps in cultivating short duration, high yielding varieties of crops and started cultivating commercial crops by using modern farming techniques and equipments. ii) the PAPs rehabilitated closed to urban areas are benefited by constructed shops, cultivating vegetables, fruits, flowers, etc. in their allotted land. In addition to that they had a chance to get work in industries, service, transport and other sectors, which are available in cities only. THDC has given jobs like workmen and supervisors, ordered the contractors of the THDC to recruit unskilled workers, clerical staff and supervisors. THDC has awarded small size contracts for some of the PAPs and gave special preference in local developmental works. The state government also initiated various self-employment/ income generating schemes for the PAPs.

Livestock has reduced after rehabilitation, which results in income from dairy, goat rearing has been reduced significantly, however income from other trade and construction related



activities like electricians, plumbers, etc. has been increased. Most the households do not own any farm implements before and after rehabilitation.

### **Housing**

The THDC has given a one room flat to the economically weaker landless oustees at free of cost in the rehabilitated area. Most of the PAPs in the rural and urban areas were constructed their houses in a modern way with sophisticated furnishings. The number of households staying in the cement/pucca houses was increased significantly after rehabilitation. The household appliances like radio, TV and vehicles have increased a lot after rehabilitation.

PAFs got compensated for land, house, shops, trees and assets based on market rates prevailing at the time of rehabilitation. Apart from this the they have received various allowances/incentives for shifting, for construction of house, for decoration of house, for food, for fertilizer and seeds, etc.

### **Other Basic Needs**

Expenditure on food has increased significantly. There is diversified consumption pattern evolved with fruits, vegetables, milk and ready to cook foods having increased their share in food basket both in rural and urban areas.

The THDC gave much importance to the health care by constructing hospitals, primary health care centers and dispensaries wherever necessary. The road network of the rehabilitated colonies is also helped in reaching the patients to the health care centers in time, which leads in decrease the rate of mortality and morbidity. The share of income spends on health increased significantly in overall expenditure across all income groups both in urban and rural PAPs.



The other civic amenities like safe drinking water, sanitation and the other community infrastructure developed by the THDC created healthy atmosphere in the rehabilitated sites leads to improvement in the living conditions of the PAPs when compared with the areas where they have stayed earlier.

### **Expenditure on Superior Goods**

The expenditure incurred on vehicles, transport and entertainment has increased significantly in both the urban and rural PAPs. These expenditure categories are at the higher hierarchy of human needs, which indicates most the PAPs are at higher hierarchy of human needs and socio-economic development.

Majority of the sample households were satisfied with the uninterrupted power supply and the number of hours of power supply has been increased tremendously the after rehabilitation.

### **Social Inclusion**

Most of the PAFs reported that they have no disputes with the local population. Most of the times the host population helped the resettlers in establishing themselves in the new place.

### **Women Development**

Most of the rural and urban respondents expressed that there is no discrimination, no violence, no restrictions against women and they are participating actively in social and economic life at their newly developed rehabilitated locations. The socio-economic profile of the women after displacement in terms of status in the village and at home has been increased significantly. Source of income and employment of women in traditional activities has been decreased marginally, but other employment opportunities and educational facilities for women increased significantly as they moved to sub-urban and urban areas when compared



to their previous locations which are mostly remote and lack any employment opportunities for women.

### **Recommendations**

- The PAPs especially educated youth and women should be provided training on entrepreneurship other development activities in the areas like dairy, poultry, goat rearing, bee keeping, sericulture, aquaculture, mushroom cultivation, food processing, establishment of nurseries, seed storage, fodder plantation, vermiculture, medicinal plants and cottage industries which leads employment generation and sustainable economic development of the region.
- To strengthen rural artisans and rural industries in handloom, handicrafts and khadi & village industries by provided training on technology upgradation and modernisation.
- Provide training and counseling on maximum utilization of the existing available local resources with minimum expenditure.
- To meet the above educational/training needs local engineering college/ university/ Krishi Vigyan Kendras to be nominated as nodal agencies for entrepreneurship/education/agriculture respectively.
- The PAPs should be sensitized on various government schemes for maximum utilization of on-going government schemes by PAPs. Awareness camps to be set up with the active participation of local NGOs on government programs on mother and child health, adult education, sanitation,
- The youth of New Tehri Town can be provided trained as tourist guides because the dam has more potential to grow as tourist place.



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- The New Tehri Town has more potential to grow as tourist place. So the THDC can establish linkages with various tourism development corporations/ agencies to develop tourism in the area. Which can leads to creation of more employment in sectors like business, transport and other services for youth of the NTT.
- The common properties like parks, dormitories, shopping complex, etc. are unutilized/ underutilized because they were developed/ constructed by the THDC but the THDC or PAPs are not maintaining them properly because of low density of population. It would be better if they can form a committee with the rehabilitated PAPs and maintain the common properties and can allow the people residing nearby areas to utilize the properties on commercial/fee basis. The income earned from this can be used for the development and maintenance of these facilities.
- Some of the urban and rural PAPs are facing the problem with the safe drinking water. It would be ideal if the THDC can do alternative arrangements like digging tube wells, construct overhead water tanks with pipelines wherever necessary to overcome the problem.
- The recreation facilities like constructing cinema theaters, amusement parks, etc. at the rehabilitated colonies should be developed.
- Encourage the entrepreneurs to start vocational training institutions like ITIs, polytechnic colleges, agricultural colleges, etc. in the new colonies.
- Existing grievance redressal mechanism is functioning need to be further strengthened by including independent experts for periodical review.
- Cut-off areas need to be given special emphasis on priority basis to link up with mainland.



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