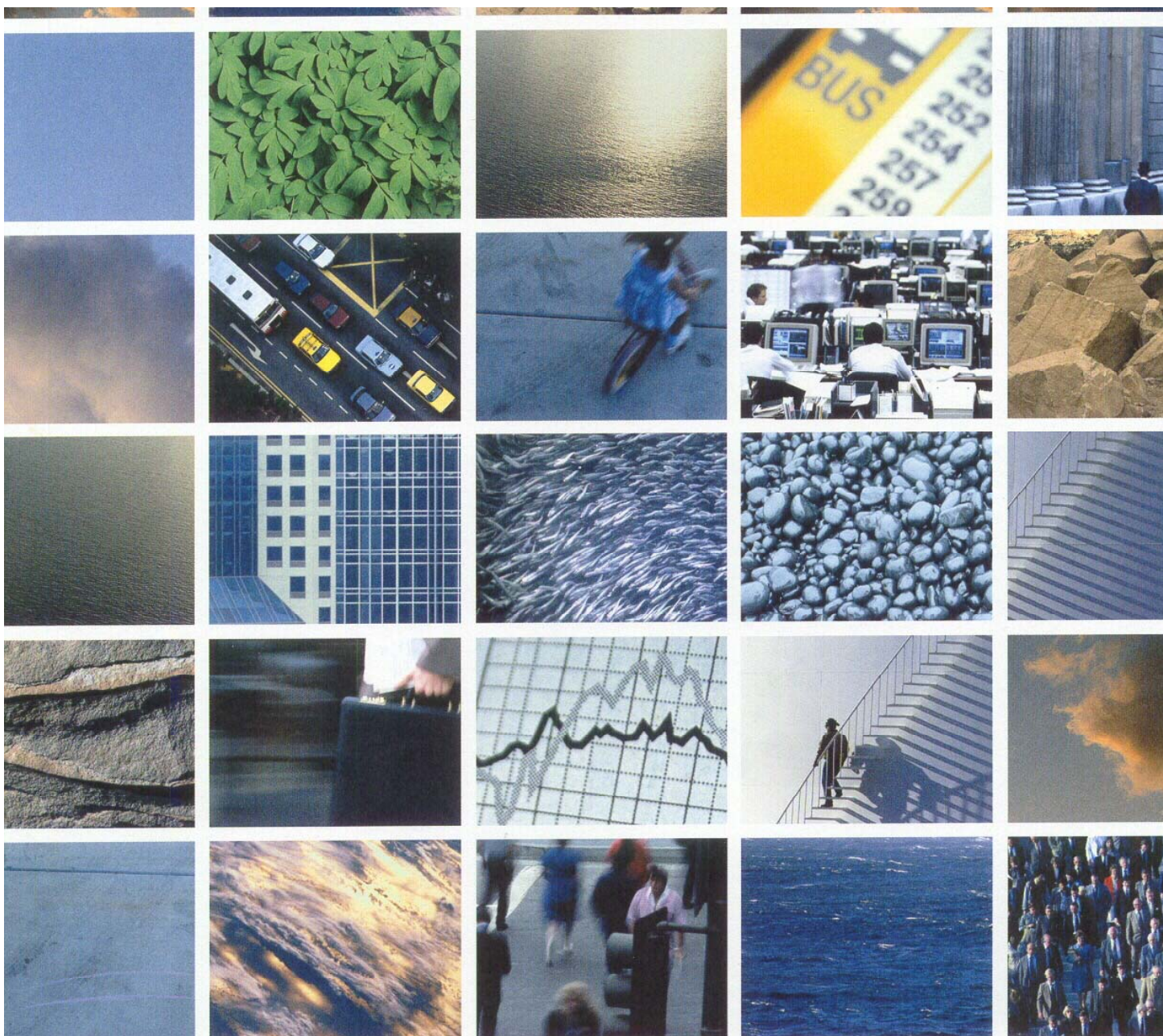




**Rajasthan Spinning &
Weaving Mills Limited**

Allain Duhangan Hydroelectric Project: Tehsil Manali, District Kullu, Himachal Pradesh

**Compendium of Specialised Studies - Draft Final Report,
Volume-III (Revised)**

December 2003

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Rajasthan Spinning & Weaving Mills Limited

**Allain Duhangan Hydroelectric
Project: Tehsil Manali, District
Kullu, Himachal Pradesh**

**COMPENDIUM OF SPECIALISED STUDIES - VOLUME-III
(REVISED)**

December 2003

Reference I5724

For and on behalf of
Environmental Resources Management

Approved by: **Dr. T.K. Moulik**

Signed: _____



Position: **CEO & Vice Chairman**

Date: **15 December 2003**

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This report has been prepared by ERM India as a part of Environmental & Social Impact Assessment of Allain Duhangan Hydropower Project, district Kullu, Himachal Pradesh for the Rajasthan Spinning & Weaving Mills Limited. This report provides details of the Social Impact Assessment (SIA) of the proposed project.

1.1**PROJECT BACKGROUND**

Rajasthan Spinning and Weaving Mills Limited (RSWML), a private limited company incorporated in India, proposes to set up Allain - Duhangan Hydroelectric Project (ADHEP) of 2 x 96 MW (192 MW hydropower generation facility on Allain and Duhangan tributaries of Beas river) in Tehsil Manali, District Kullu, Himachal Pradesh in India. The project is located near village Prini, approximately 3 km SE of Manali town.

In the state of Himachal Pradesh, five perennial rivers Satluj, Beas, Ravi, Chenab and Yamuna flow through and the utility of these rivers though restricted considerably by the rugged and undulating terrain of the State, nevertheless, these rivers possess immense potential for the generation of hydro-electricity.

The proposed hydel project has been contemplated as run-of-the-river scheme to utilise the combined discharge of Allain and Duhangan streams, which are tributaries of river Beas in the Kullu district of Himachal Pradesh. The proposed hydel project is expected to be complete by end of year 2008 AD. The proposed project will consist of an underground power plant that would utilise flows from a combination of glacial snow melt and monsoon rains to supply a small peaking reservoir (19.5 hectare meter) via tunnels from catchment basins of the Allain and Duhangan rivers. The setting for the project is the steep terrain of the Himalayas with the diversion structures on the two rivers and an intermediate storage reservoir with a capacity of 0.195 million m³ (requiring a dam measuring approximately 14.5 m x 261 m). All these facilities will be located above elevation of 2700 m feeding water via a 1.6-km steel lined pressure shaft, an 853m-head 2 unit Pelton turbine Power House to be located in a rock cavern. The project will divert a portion of the flow of the Duhangan to the Allain and combine the flows of the two rivers to feed a single powerhouse with 2 units each of 96 MW capacity. A 220 kV power transmission line (of approximately 185km) will evacuate the power to the northern grid at Nalagarh in the district Solan, Himachal Pradesh.

The project has received various approvals including Environmental and Forest Clearances from the Ministry of Environment and Forests (MoEF), Government of India (GoI) as well from state environmental and forest authorities based on the previously done environmental impact assessment and mitigation plan prepared by the Group's in-house consultants.

RSWM is seeking partial financing from the International Finance Corporation (IFC) for the project. To fulfil the requirements of IFC's Environmental and Social Review of the project, more detailed information is required on

environmental and social impact assessment, along with specialised studies and a reconnaissance survey for the proposed transmission line corridor, prior to IFC's approval on financing the project.

Accordingly, RSWML has retained ERM India Pvt. Ltd, New Delhi to undertake detailed Environmental and Social Impact Assessment Study including specialised studies to fulfil the IFC requirements in accordance to the requirements of OP 4.01 (also see environmental assessment report).

1.2

SCOPE OF WORK: SOCIO-ECONOMIC IMPACT ASSESSMENT

As per the scope of work the socio-economic impact assessment study was to cover the villages of Jagatsukh, Hamta & Pirni. It would be undertaken as per the Guidelines for Social Assessment of IFC Investment Projects provided in the ToR. While general information would be collected for the entire community, the study would focus specifically on those families that are going to be directly affected by the loss of private land. The study includes the following:

- Socio-economic Profile of the communities in the two villages in the project area,
- Impact assessment of existing and proposed project activities (on the community in general and those losing private land in particular).
- Developing mitigation measures for each of social impacts identified.
- Documentation of public consultations and information dissemination undertaken by project proponent.
- Community Development Opportunities

This study would be undertaken on the basis of information from the following sources:

- Secondary sources (project documents, information already collected by RSWM, available maps, published statistics from District Census Handbooks, District level statistical profiles, etc.)
- Primary sources through observation, sample surveys, interviews and discussions with the project proponent, local community and village institutions.

1.3

LAYOUT OF THE REPORT

The SIA report is presented in the following manner.

<i>Section 1</i>	Introduction and project background and scope of work (this section)
<i>Section 2</i>	Approach and methodology
<i>Section 3</i>	Legal and administrative framework
<i>Section 4</i>	Profile of the district and the project area
<i>Section 5</i>	Stakeholders
<i>Section 6</i>	Profile of the project affected families
<i>Section 7</i>	Analysis of the project impacts
<i>Section 8</i>	Resettlement Action Plan
<i>Section 9</i>	Rehabilitation Action Plan

<i>Section 10</i>	Community Development Plan
<i>Section 11</i>	Implementation Mechanism
<i>Section 12</i>	Institutional Arrangement

Although the scope of work envisaged that the SIA would cover Prini, Jagatsukh and Hamta, the actual survey was done in Prini, Jagatsukh and Aleo villages for the reasons cited below.

At the time of survey, the project proponents were not decided on the exact alignment of the road passing through Hamta and therefore there was ambiguity about the number of project-affected persons and the extent of loss. The project proponents provided lists of project-affected families only in case of Prini, Jagatsukh and Aleo. The land was proposed to be acquired from Aleo for construction of road and from Prini & Jagatsukh for construction of road and residential colony for project staff.

During the field survey, however, the social experts visited Hamta and interviewed one family but due to ambiguity about the extent of loss (land/trees) could not complete the assessment. During the same visit it was observed that almost all men and some families had temporarily migrated to other villages in search of work. Seasonal migration in the hills is a common phenomenon as people generally move to the lower altitude regions during the winter season, since their fields are covered with snow. These people generally own house and land in another village. Many of Hamta residents had migrated to Prini, hence some of them could be covered in the Prini household survey and village level consultations.

The SIA was based on a variety of information from primary as well as secondary sources, collected in the months of Feb-Apr 2003.

The primary information was collected through visits to the affected villages for meetings with the Gram Panchayat, household survey, consultations with villagers and focussed group discussions with women and BPL persons. The field survey also included visits to the proposed sites for different project components (colony, road) in separate villages to observe present use of the land to be acquired and nature of losses in the form of agricultural produce and apple trees. At each village a pre-determined set of information was collected.

At the Gram panchayat (GP) level this included:

- Spread of revenue villages, member villages in the GP, geographic distance from main GP, what are the interactions/relationships between the GP and the other revenue villages and member villages in terms of participation in GPs, decision making process, type of work undertaken by the GP in the last 2-3 years and the location of these activities (in main village or also member villages)
- Demographic profile,
- Tribal Groups-migration pattern, economic activity/integration/socio-economic profile
- Average land holding and asset ownership, income levels, occupation,
- Land ownership and registration

- Formal and informal rights on common property/ natural resources
- Accessibility and linkages
- GP resource allocation
- Key developmental issues
- Opinion on the proposed project – possible positive and negative impacts

Village level

The consultations with villagers and focussed groups discussions were designed to seek the following sets of information:

Socio-economic impact

- Loss of Income/ Livelihood through agriculture/ plantation and any other activity like fishing
- Access to fuel wood
- Disturbance in social fabric/ structure/ values
- Job prospects
- Development (infrastructure) of the area
- Social and economic opportunities
- Pressure on local resources through influx of additional people in the area.
- Impact of access to metalled road
- Impact on wider interactions with outside community
- Opportunities for infrastructure development through the project
- Community Development Opportunities
- Opportunities for social and economic development of the area

Public Health

- Common diseases
- Access to health facilities
- Any epidemic/ outbreak

Religious/Archaeological

- Religious sites in the vicinity of the project
- Archaeological sites
- Access/ influence

Gender

- Role of women in the community
- Status of the women in the community
- Division of labour within the household
- Potential impacts of the project on women
- Their views, opinions about the development of the area and their priorities

At the household level following information was sought:

Social classification; family details at the individual level – education, marital status, occupation and income; vulnerability classification; family profession and income details from – agriculture, horticulture, shop, service, labour or any other; project impacts – loss of land, structure, assets, income, etc.; sharecropping or lease arrangement; village record/ identity number (khasra

no.); and loss of common property resources – land, cremation ground, burial ground, school, etc.

Secondary Information

The secondary sources of information included various documents published by the government of Himachal Pradesh such as district census handbook, statistical abstract, economic survey report and relevant laws/acts and policies. The NTPC's scheme for rehabilitation and resettlement of the oustees of Kol Dam project was also referred since it was accepted by the H.P. government as a and hence has become a benchmark for projects undertaken by other agencies. Un-published material included land records at the Patwari's office and land-use records at the District Collector's office. Field visits included visit to office of the SDM and BDO to know about the development initiatives being planned for the area, to Patwari's office to understand procedure of land transfers, land acquisition and procure for calculating the land prices. Visit to state capital Shimla included meetings with horticulture department to understand the procedure for valuation of apple trees, cropping pattern across the Tehsil/ district and maximum/ minimum yield. Meetings with Tribal development department for understanding special provisions for STs in project area.

2.1.2

Sampling Method

A total of 62 families were taken up for sample survey. This amounted to 25% of the total Project Affected Families. The detailed methodology for sampling is outlined below.

Although it was originally planned to carry out census survey of the project affected families, due to mid-course revision (increase) in list of project affected families it was decided to carry out sample survey. A sample of 25% families was taken for adequate representation. The original timeframe for the field survey was estimated on the basis of a list of 16 families provided by project proponents. However initial interactions with the concerned villages revealed that the actual number of project affected families was much more than that. The project proponent, therefore, undertook fresh enumeration and provided a new list of about 65 *Jamabandis*¹ for about 263 families in three villages. 25% sample (i.e. 66 families) was in itself was almost four times larger than the initial list and necessitated a revision in the actual time frame to accommodate extra work.

The sample was picked from the list, provided by the project proponents, using random method while ensuring:

- That the sample was divided proportionately between three villages,
- Impact from different project components (colony, road) is adequately studied and
- All socio-economic categories are represented

(1) ¹ A set of land parcels that may have one or more (separate) Khasra numbers but has common shareholders. The shares may be in different proportions.

During the course of survey it was discovered that there were many discrepancies in the list due to inaccurate and/or old land records. For instance many persons who featured in the list had expired and some others had given up their share to their relatives. For instance while the children inherit equal share in land, the daughters give away their rights to the sons. However, such mutations are not formally recorded in the land records. In most cases the family members informally divide the land among themselves, and hence although their names may appear in different Khasras, they cultivate only some of these parcels of land. Hence, it could be concluded that the actual list was less than 263 families. For instance, in case of Aleo village, the list consisted of 40 families. During the survey 24 families were contacted and found that only 13 were actually getting affected. Of the remaining 11 persons 6 had expired, one had sold out and 4 had given up their share within the family. Thus there was a reduction of about 46% from the official record. In case of Jagatsukh of the 49 families contacted only 25 families were found to be actually getting affected. Thus a reduction of about 49% was recorded. On the basis of similar variation in two villages it could be assumed that the total number of project-affected families would reduce to anything between 130 and 140. However, 62 families (proportionately divided among individual villages) were still surveyed to ensure that at least 25% sample for each village.

Table 2.1 *Sample Survey Details*

Village	No of families surveyed	% of sample	Projected no. of families
Prini	31	50.0	70
Jagatsukh	22	35.5	50
Aleo	9	14.5	20
Total	62	100	140

2.1.3 *Limitations of the Methodology*

Limitation of the methodology pertains to two aspects:

- Exclusion of Hamta village from the survey due to ambiguity in final design (explained above); and
- Absence of a comprehensive and accurate list of total number of project affected persons. As stated earlier this was owing to absence of updated and accurate land records with Patwari and informal division of land parcels incongruent with the actual records. However, considering that the total number of project affected families were less than 263, a sample of 62 families would be well over 25%.