ENVIRONMENTAL AND SOCIO ECONOMIC ASPECTS OF TEHRI DAM

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PROFILE VIEW OF TEHRI DAM

TEHRI HPP (1000 MW)- UNDERGOUND POWER HOUSE

Tehri Power Complex

Tehri Power complex (2400MW) comprises:-

Stage-I: Tehri HPP (1000MW) :

Commissioned on 2006-07

Stage-II: Tehri PSP (1000MW) :

Under construction, 1st Unit expected by Dec.'2022

Stage-III: Koteshwar HEP (400MW) :

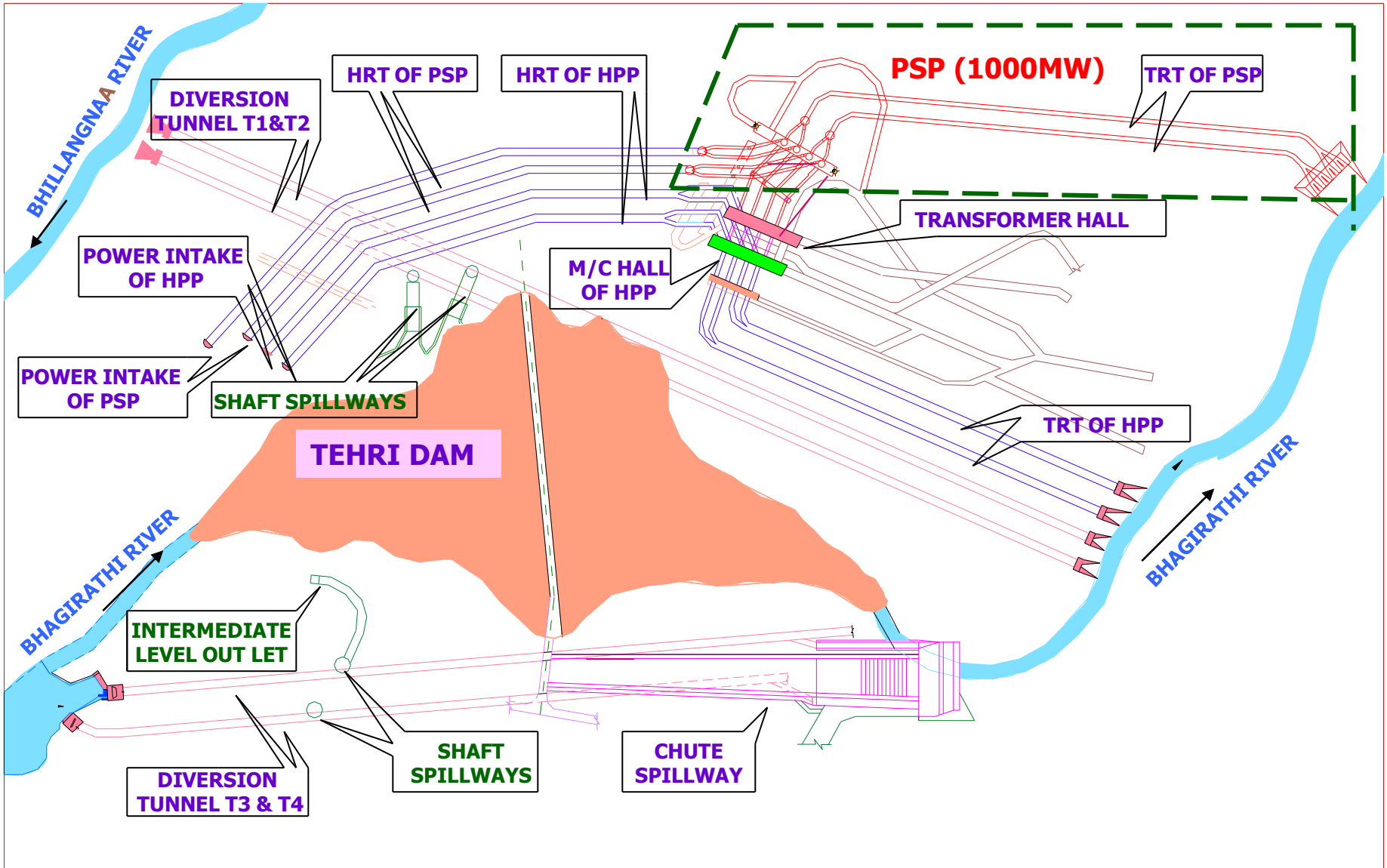
Commissioned on 2011-12

- Power Benefit to Northern Region Grid
  - ✓ Installed Capacity 2,400 MW
  - ✓ Annual Energy 5,300 MU (With PSP's one cycle) and 6650 MU (With PSP's two cycles)

- Irrigation in Command Area : 8.74 Lac Ha.
  - ✓ Increase in agricultural output in UP State estimated as over INR 1,600 Cr. annually

- Drinking Water
  - ✓ For Delhi 300 Cusecs
  - ✓ For UP 200 Cusecs

- Annual Increase in Generation of 200 MU Downstream Projects Of State Govt.


BHILLANGNAA RIVER
DIVERSION TUNNEL T1&T2
HRT OF PSP
HRT OF HPP
PSP (1000MW)
TRT OF PSP
TRANSFORMER HALL
POWER INTAKE OF HPP
M/C HALL OF HPP
POWER INTAKE OF PSP
SHAFT SPILLWAYS
TEHRI DAM
TRT OF HPP
BHAGIRATHI RIVER
BHAGIRATHI RIVER
INTERMEDIATE LEVEL OUT LET
SHAFT SPILLWAYS
CHUTE SPILLWAY
DIVERSION TUNNEL T3 & T4

Salient Features of Tehri Dam

➢ Type	:	Rock and Earth fill
➢ Height of Dam	:	260.5 m(4th highest in the world)
➢ Base	:	1128 m
➢ Width at top	:	25.5 m
➢ Length at the top	:	592 m
➢ U/s Slope	:	2.5H : 1V
➢ D/s Slope	:	2H : 1V

INTRODUCTION

- 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 land, livelihood and resource base, displacement has other traumatic, psychological and socio-cultural consequences.

INTRODUCTION

- 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.
- The facilities provided to PAPs under this Project were much better compared to the other projects in India & abroad.

INTRODUCTION

- The spread of 02 lakes formed due to construction of 260.5m high Tehri Dam and 97.50 mts high Koteshwar Dam is 44 sq km and 2.65 sq km respectively at Full reservoir levels.
- Due to construction of Tehri Project the Old Tehri Town and 125 villages were affected.
- 37 villages were fully affected and 88 villages were partially affected.
- Out of 125 Project affected villages, 76 villages are in Bhagirathi valley, 25 are in Bhilangana valley, 16 are in Koteshwar valley and 08 were utilized for Project colony and New Tehri Town.

DETAILS OF AFFECTED VILLAGES / FAMILIES

- Old Tehri Town : 5291 Urban Families
- Fully Affected : 5299 Rural Families (Relocated)
- Partially Affected : 6413 Families (Not To Be Relocated)
- Cost Of R&r : App. Rs. 1800 Crs.

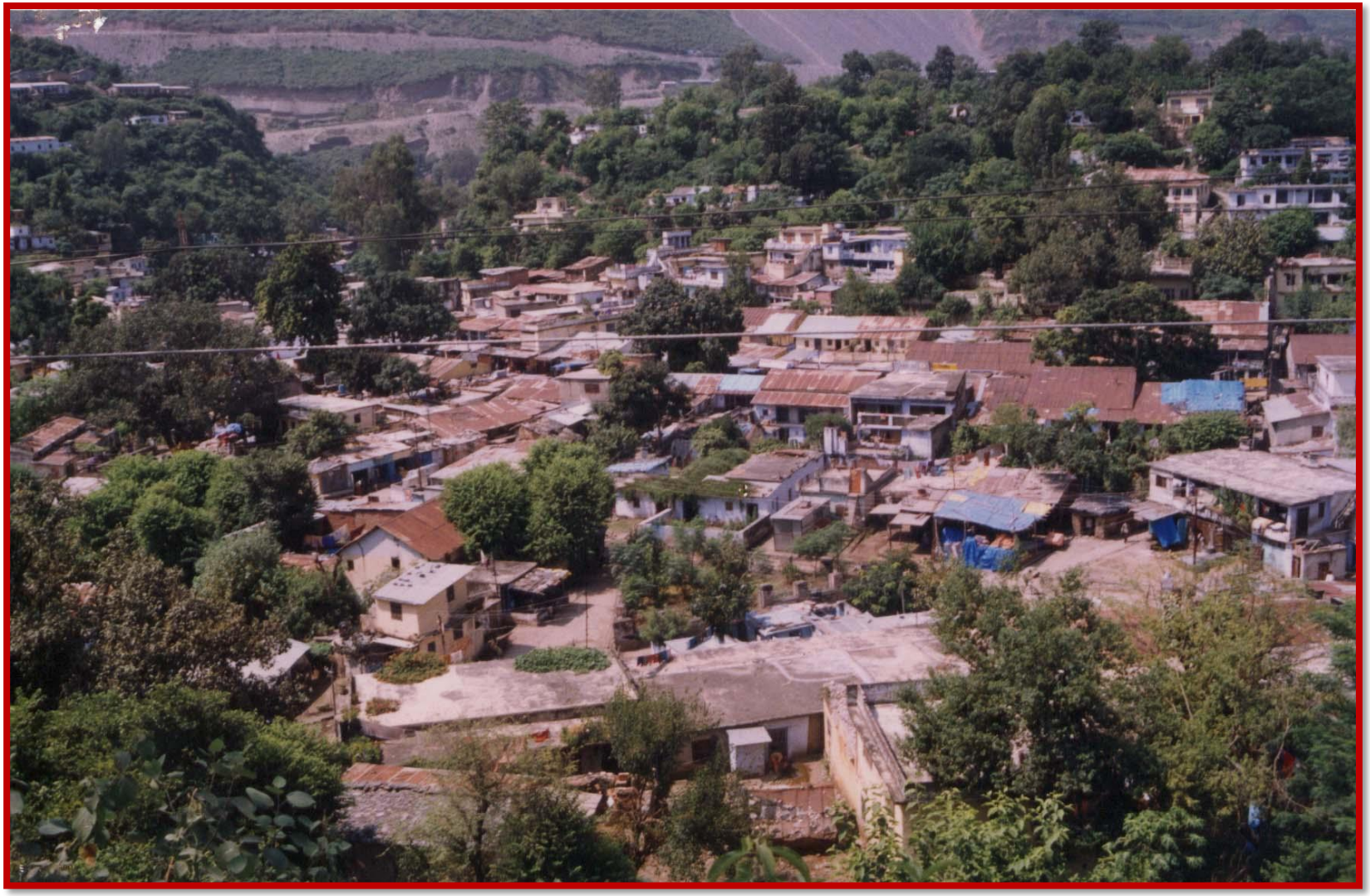
Rehabilitation is being implemented by the Govt. of Uttarakhand for which funds are being provided by THDCIL.

REHABILITATION & RESETTLEMENT

- The affected population from rural areas are rehabilitated in newly developed 18 rehabilitation sites in District Dehradun & District Haridwar under Rural Rehabilitation Policy for Tehri Dam Project, with all civic facilities/ amenities, like electricity, irrigation, drinking water, roads, schools, dispensary, community centre etc.

- Whereas population from submerged Old Tehri Town, were rehabilitated in newly developed town known as New Tehri Town under Urban Rehabilitation Policy.

VIEW OF OLD TEHRI TOWN



OLD TEHRI TOWN BEFORE SUBMERGENCE

OLD TEHRI TOWN AFTER SUBMERGENCE

VIEW OF RURAL REHAB SITE AT DEHRADUN

VIEW OF RURAL REHAB SITE AT DEHRADUN

VIEW OF RURAL REHAB SITE AT HARIDWAR

VIEW OF NEW TEHRI TOWN

BASIC FEATURES OF REHABILITATION POLICY

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 was entered in revenue records as on the date of section-4 (i) notification, and includes all members dependent on him.

Fully Affected and Partially Affected Families

The families whose 50% or more land is being acquired are being treated as ‘fully affected’. Those whose less than 50% land is coming under submergence is being acquired are categorized as partially affected and are not to be settled at new rehabilitation sites.

BASIC FEATURES OF REHABILITATION POLICY

- 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.
- Oustees or their representatives to be consulted to the extent possible in selecting the rehabilitation centers.
- Essential community facilities be provided at each of the rural rehabilitation centers at the cost of the project even if these did not exist at their earlier settlements.

BASIC FEATURES OF REHABILITATION POLICY

- In accordance with the norms prescribed by the State Government, husband and wife, even though owning land separately in their name in revenue records, are to be treated as one unit for purposes of payment of minimum compensation, allotment of land/plot to land owners.

- Minors, if any, under the category of land owners area also given same benefits as fully or partially affected families.

- Within the framework of the above broad principles, the rehabilitation package had been evolved and further improved from time to time for rehabilitation of the affected population.

MAIN FEATURES OF RURAL PACKAGE

2 acres of developed irrigated land in rural area or cash of Rs. 5 lacs in lieu of allotment of land, as per their option.

Allotment of residential plot of 200 sq. m. to each family at nominal cost.

MAIN FEATURES OF RURAL Package

- Compensation for acquired properties as per PWD norms.
- Minimum compensation of house Rs. 1.00 lac.
- House construction assistance of Rs. 60,000/- per family.
- Rs 5000 for Shifting Grant & Rs 4000 for purchase seeds & fertilizers per family.
- Incentive grant Rs. 15000 for early shifting within specified date.
- Rs. 80,000 & Rs. 1,20,000 per shop situated at state highway & national highway respectively as grant to each rural shopkeeper.

LANDLESS AGRICULTURAL LABOURERS

- Allotment of 2 acre of agriculture plot to landless agricultural labourers of fully affected villages on the certification of the concerned District Magistrate.

- Allotment of residential plot of 200 sq. m. to each landless agricultural labourers at nominal cost.

CROPS AT RURAL REHABILITATION SITE

SCHOOL BUILDING AT RURAL REHABILITATION SITE

VIEW OF A RURAL REHABILITATION SITE

TEMPLE AT RURAL REHABILITATION SITE

URBAN PACKAGE

Land owners are given residential plots of various sizes (60, 100, 150, 200, 250 and 300 sq. m.) in proportion to their holdings at Old Tehri Town at very nominal cost in addition to compensation of their properties.

All civic facilities/ amenities, like electricity, drinking water, roads, schools, dispensary, community centre etc have been created/ provided at Urban Rehab sites.

URBAN PACKAGE

- House construction assistance varying from Rs. 2,50,000- Rs. 4,50,000 as per size of allotted plot .
- Ready to move houses/flats to entitled tenants or Benap house owners on subsidized cost.
- Allotment of shops at subsidized cost to shopkeepers running shops at Old Tehri Town prior to cut off date1985.
- Rs. 1.00 Lac to Rs. 3.00 Lac to each shopkeepers, depending upon the nature of business as a grant- “ Saakh Bhatta”.

URBAN PACKAGE

One room flat to EWS families free of cost.

Ex-gratia Grant to Additional Family Members

All additional living family members of entitled urban land owner families, (excluding benap house owners) of Tehri Town, were paid ex-gratia amount equivalent to 750 times the minimum agricultural wage, which was approx Rs.33,000/- per person in the year 1998.

URBAN PACKAGE

In addition, Educational Institutions and a University Campus was also constructed considering the future plans.

As regards to Central Govt. departments & financial institutions, the developed plots were made available to the respective organizations for residential & official premises.

All public utility buildings were constructed at the cost of the Project.

CONSTRUCTION OF NEW TEHRI TOWN UNDER URBAN REHABILITATION

The New Tehri Town has been constructed/ developed as an Urban Rehabilitation town with all modern facilities, envisaged a population of about 36,000 in 2005.

URBAN REHABILITATION SITE-
NEW TEHRI TOWN

PANORAMIC VIEW OF NEW TEHRI TOWN

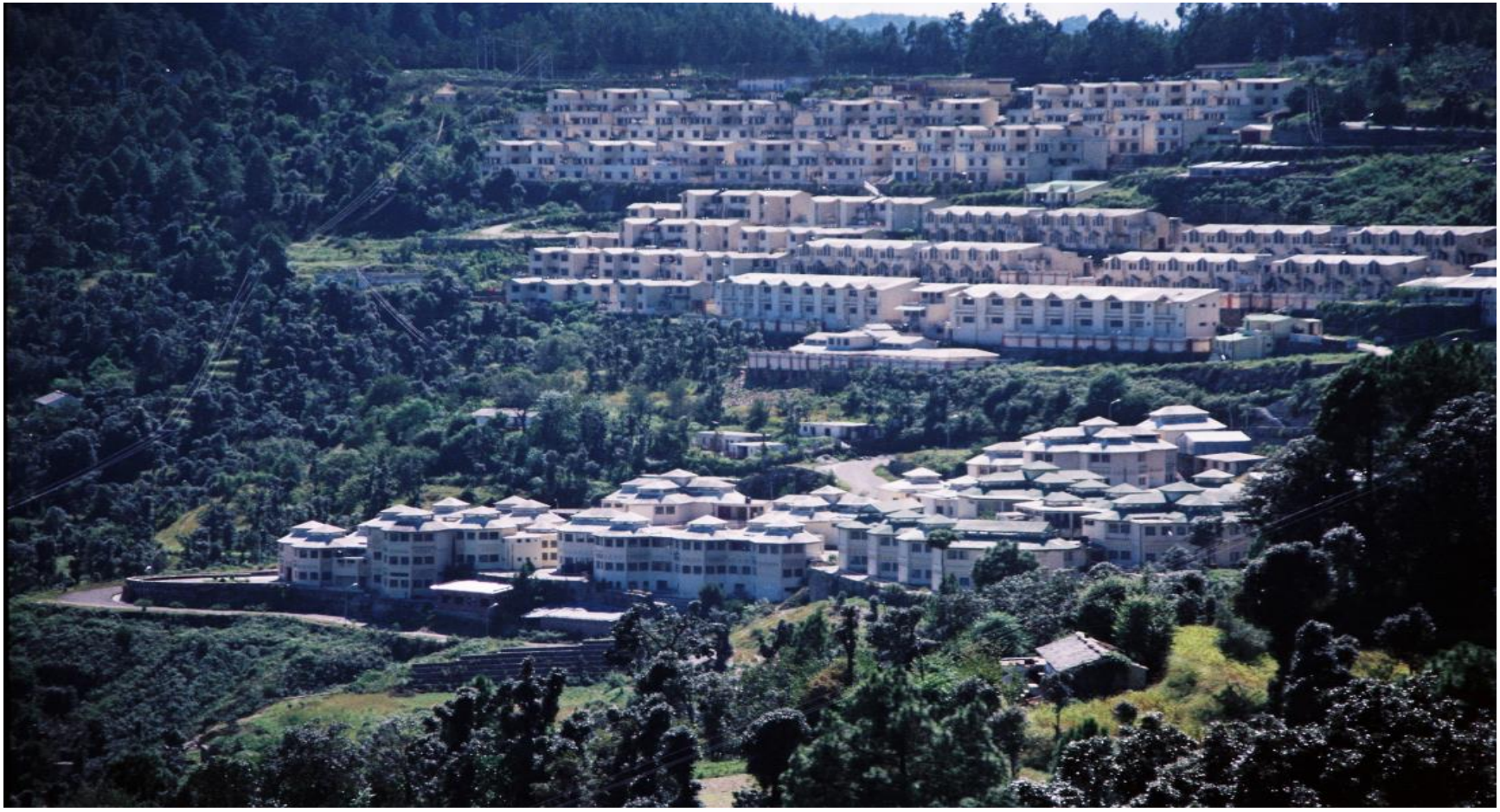
TEMPLE IN NEW TEHRI TOWN

DISTRICT HOSPITAL IN NEW TEHRI TOWN

JAIL COMPLEX IN NEW TEHRI TOWN

CONVENT SCHOOL IN NEW TEHRI TOWN

UNIVERSITY CAMPUS AT NEW TEHRI TOWN



FACILITIES FOR CUT-OFF AREAS

1- Hospitals	i) Bileshwar CHC ii) Lambgoan PHC iii) Madan Negi PHC iv) Jakhnidhar PHC
2- Ropeways	i) Bhaldiyana - Motna ii) Madan Negi - Tipri
3- Roads	i) Chamba - Dharasu – 73 Km. ii) Tipri - Pratapnager – 41 Km. iii) Syansu - Chaundhar– 16 Km. iv) Pipaldali - Rajakhet – 11 Km. v) Chotimani - Siyansu – 13 Km.

FACILITIES FOR CUT-OFF AREAS

4- Ferry Services

i) Bhaldiyana - Motna
ii) Sirain - Rolakot
iii) Cham - Baldogi
iv) Syansu – Mani
v) Ghonti – Padagali

FACILITIES FOR CUT-OFF AREAS

5- LMV Bridges	i) Pipaldali – 390 Mtr. Span
	ii) Siyansu – 390 Mtr. Span
	iii) Chinyalisour
	iv) Ghonti
	v) Bhenga
6- HMV Bridges	i)Dobra-Chanti – 440 Mtr. Span
7- Degree Colleges	i) Agrora Degree College
	ii) Lambgoan Degree College
	iii)Chandrbadni Degree College
	iv) Pokhal Degree College
8- Inter Colleges	i) Tipri Intermediate College
	ii) Chandrashwar Sain I.C.
	iii) Pratap Nagar I.C.
	iv) Silari I.C.

VIEW OF SUSPENSION BRIDGE- SYANSU

VIEW OF DOBRA- CHANTI BRIDGE

- **WIDTH 7.00 M which includes 1.50m path both side**
- **COST OF BRIDGE- Approx Rs 285 Cr**
- **Type- HMV**
- **Span- 440 Mts**

FERRY BOAT SERVICE FOR PAFS

DRINKING WATER SCHEMES FOR PARTIALLY AFFECTED VILLAGES

For supply of drinking water to Partially affected villages all along the reservoir, around 60 schemes have been implemented through Rehab Directorate. An amount of Rs. 34.50 Crs is spent on theses schemes. Further O&M is the responsibility of concerned Deptt of State Govt.

EMPLOYMENT & INCOME GENERATING SCHEMES

a) Employment :

For employment in THDCIL, preference was given to the dependents of the project affected families, particularly in the category of workmen & supervisors and 853 persons were given employment in THDC.

Apart from this, the contractors deployed on the Project a sizable work force from the local area.

INCOME GENERATING SCHEMES

The Project affected families were encouraged to opt for useful vocations, like, poultry farming, floriculture, pisci-culture, animal husbandry, handicrafts, khadi work, etc. for self-employment and income generating schemes.

INSTITUTIONAL MECHANISM FOR IMPLEMENTATION OF R&R

The R&R is being done by State Govt through Director Rehabilitation/ DM Tehri, directly by its officers under the overall supervision and control of Commissioner, Garhwal Division. Funds for Rehabilitation are being provided by THDCIL to the State Government.

GRIEVANCE REDRESSAL CELL

- A Grievance Cell is constituted on the direction of Hon'ble Supreme Court of India where petty complaints & left over cases pertaining to compensations etc are jointly heard by a Retd. District Judge & D.M. Tehri.

- Total 2815 cases were registered, out of which most of the cases have been settled.

R&R UNDER COLLATERAL DAMAGE DUE TO FILLING OF RESERVOIR

- Collateral damage policy 2013 (Amended Policy 2021) is in place to Rehabilitate the affected population due to collateral damages (Land slides etc) above EL 835 mts.

- A Joint Expert Committee (JEC) is constituted to assess the affected area that the damages caused are due to Impact of Reservoir or Natural disaster. R&R is being done as per the recommendation of the JEC.

- The Policy is applicable to those PAFs who's Land /Property is registered in revenue records before cut off date 26.04.2007.

R&R UNDER COLLATERAL DAMAGE DUE TO FILLING OF RESERVOIR

- In addition to the House Compensation as per PWD norms and other grants, cash compensation is being paid as Rs. 74.40 lacs in lieu of Land (2 acre Agriculture & 200 Sq mts Residential Plot).

- As per Rehab Directorate approx 641 families have been identified under collateral damages, out of which 41 families have been rehabilitated as per R&R Policy 1998. At present, rehabilitation of balance families is under progress through Rehab Directorate as per The Collateral Policy.

- An amount of Rs. 252.27 Crs have been estimated by Rehab Directorate for R&R of PAFs affected due to collateral damages. The funds are being provided by THDCIL in a phased manner.

MAJOR FINDINGS OF SOCIO-ECONOMIC STUDY CONDUCTED BY ASCI, HYDERABAD

- 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 THDCIL/ GoUK took initiatives in establishing schools within reach of all households.

- The quality of education in terms of infrastructure like buildings, playgrounds, other facilities like sanitation, drinking water, ventilation, furniture etc have improved a lot in newly constructed rehabilitated colonies.

MAJOR FINDINGS OF SOCIO-ECONOMIC STUDY CONDUCTED BY ASCI, HYDERABAD

- The number of land owners having land upto 2 acres were increased significantly after rehabilitation and the current market price of their land are magnificently higher when compared with the old land.

- The average size of land holding of the sample house holds has increased from 0.8 acres before displacement to 1.90 acres after displacement.

- Irrigation facilities have been increased significantly after rehabilitation as THDCIL has developed /constructed irrigation canals/ channels to the most of the Agriculture lands provided to the PAPs , where such system was not available in the previous location.

MAJOR FINDINGS OF SOCIO-ECONOMIC STUDY CONDUCTED BY ASCI, HYDERABAD

- Due to availability of basic facilities at new Rehab sites, now farmers are cultivating three crops in a year. The cropping pattern also changed to more enumerative crops like paddy, sugarcane, wheat & potato etc thereby increase of income.

- Employment and income levels have increased significantly due to availability of more allotted agriculture land with irrigation facilities, construction of shops in their lands as the allotted land is near to the urban areas, PAPs have better chances to get work in industries, service, transport & other sectors available in nearby urban areas.

MAJOR FINDINGS OF SOCIO-ECONOMIC STUDY CONDUCTED BY ASCI, HYDERABAD

- Most of the PAPs in rural & Urban areas constructed their spacious houses with modern furnishings. The no of households staying in the cement/ pucca houses has increased enormously after rehabilitation, which is a significant development.

- The THDCIL gave much importance to the health care by constructing Hospitals, Primary health care centres and dispensaries were ever necessary.

- The road network of the rehabilitated colonies has also helped patients reaching the health care centres quickly for treatment.

MAJOR FINDINGS OF SOCIO-ECONOMIC STUDY CONDUCTED BY ASCI, HYDERABAD

- The other civic amenities like safe drinking water, sanitation and other community infrastructure, common facilities developed by THDCIL created healthy atmosphere in the newly rehabilitated sites. This led to improvement in the living conditions of the PAPs when compared with the areas where they stayed earlier.

- The socio- economic profile of the women after displacement in terms of status in the village and at home has increased significantly through source of income & employment.

- Having seen the facilities available in their earlier locations and the present once, the PAPs are in a much better position both socially and economically.

Environment

ENVIRONMENT ISSUES

- Hydro projects are site specific & environmental issues differ from project to project

Major issues involved

- Impact on ecology, monuments, seismicity
- Involvement of resettlement & rehabilitation
- Catchment area treatment
- Flora & fauna
- Impact on human health etc.

- Issues addressed with a scientific approach in eia & emp studies

- Environmental issues addressed in overall national prospective by involving local population & representative of the people.

ENVIRONMENT ASPECTS OF TEHRI DAM PROJECT

- Tehri power complex is an ideal example of storage based projects where all possible environmental concerns addressed based on study by expert institutions like Botanical Survey of India (BSI), Zoological Zoological Survey of India (ZSI), National Environmental Engineering Research Institute (NEERI) etc.

- Environmental clearance to Tehri project accorded in july'1990 subject to fulfillment of certain conditions.

- Results of various studies indicate no significant adverse impact on environment rather upgradation based on adoption of appropriate measures.

- Additional environmental measures suggested by Hanumantha Rao Committee appointed by GoI on the demand of local people also addressed.

CATCHMENT AREA TREATMENT (CAT) AND COMPENSATORY AFFORESTATION (CA)

- Catchment Area Treatment (CAT) works were started in 1983-84 itself with afforestation in degraded forest and civil soyam land through the State Forest Deptt. The CAT area was spread over in 16 sub watersheds (149 micro watershed), out of which 12 were in Bhagirathi Valley and 04 were in Bhilangana Valley.

- In January 1988, CAT Plan was formulated for an area of 36000 ha. Based on the land use and erosion intensity classification of catchment area, done by the Land Survey Directorate of UP Forest Deptt.

- A fresh CAT Plan was prepared in 1994 for treatment of additional catchment area of 13500 ha., in addition to the 22746 ha. area already treated, after identification of “very high” and “high” erodibility areas by the Remote Sensing Applications Centre (RSAC), Lucknow, U.P. through satellite imageries.

CATCHMENT AREA TREATMENT (CAT) AND COMPENSATORY AFFORESTATION (CA)

- Subsequently, in 1998, A CAT Plan was prepared by the Forest Department based on the Government of India's decision on Recommendation of Hanumanta Rao Committee for 52204 Ha of "high" and "very high" erodibility areas in the directly draining catchment of the Tehri Dam reservoir.

- Some of the environmental upgradation measures carried out in CAT Plan are;

- Under CAT Plan of 52,204 ha., total 44,157 ha. of forest area and 8047 ha. of agricultural area of high & very high erosion class was treated.

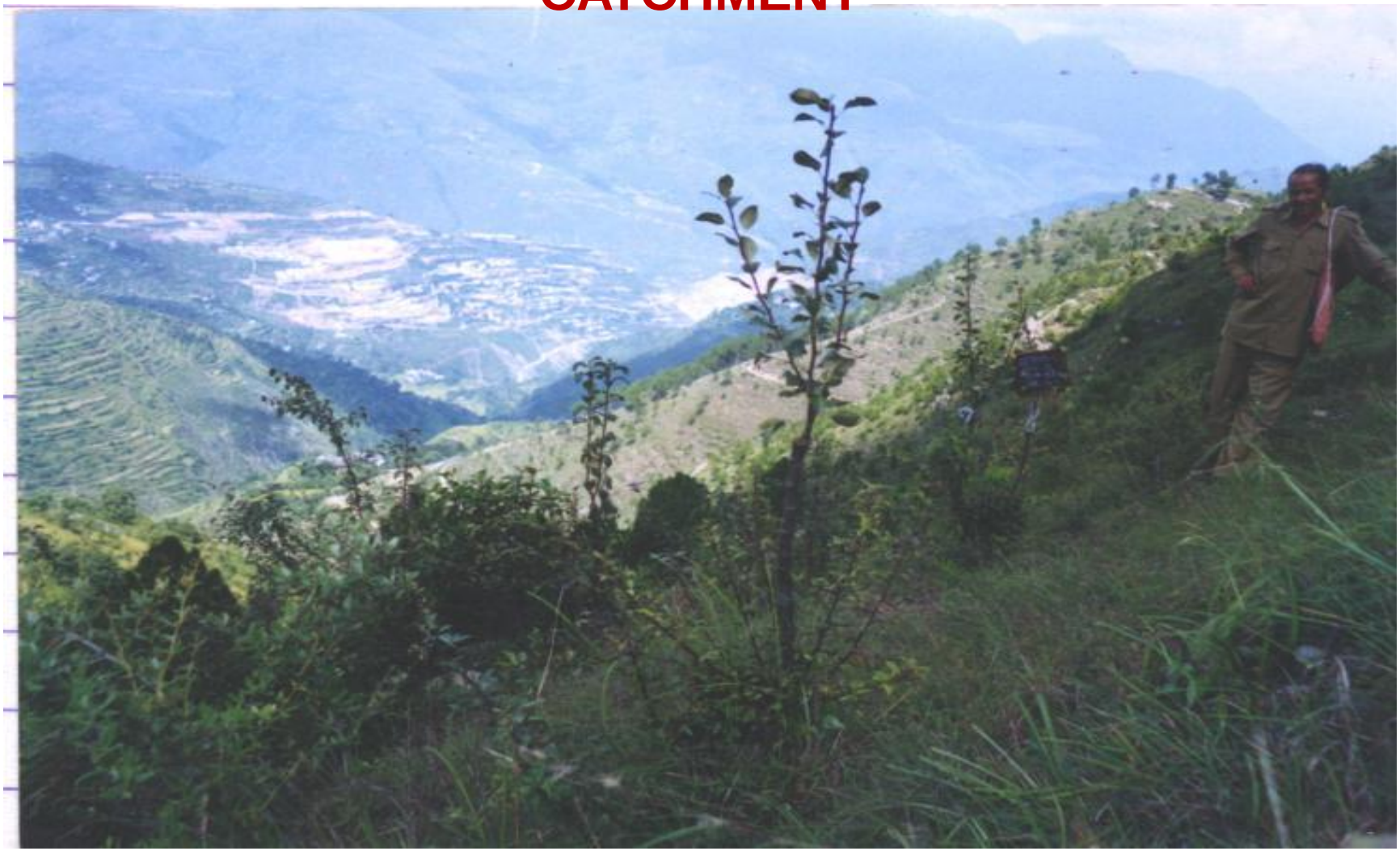
- As per recommendations of BSI, fuel wood plantation, waste land development, pasture development, fodder species, legumes, grasses, fruit species, restoration of degraded forest depending on the need of the community & site conditions were taken up in the CAT Plan.

CATCHMENT AREA TREATMENT (CAT) AND COMPENSATORY AFFORESTATION (CA)

- Various soil stabilization measures like check dams, crate wire mesh, slope stabilization etc. were carried out to prevent soil erosion and to develop agricultural areas.
- Entire CAT Plan was implemented with involvement of local people.
- Under CAT Plan, use of solar cookers, kerosene stoves was encouraged among the villagers to reduce ecological degradation.
- In lieu of 5551.20 ha. of forest land, compensatory afforestation was carried out in a total area of 7313.62 ha., out of which, 4597.22 ha. (3959 ha. in Lalitpur and 638.22 ha. In Jhansi district) was in UP and 2716 ha. was carried out in degraded forest land in Haridwar, Uttarakhand.

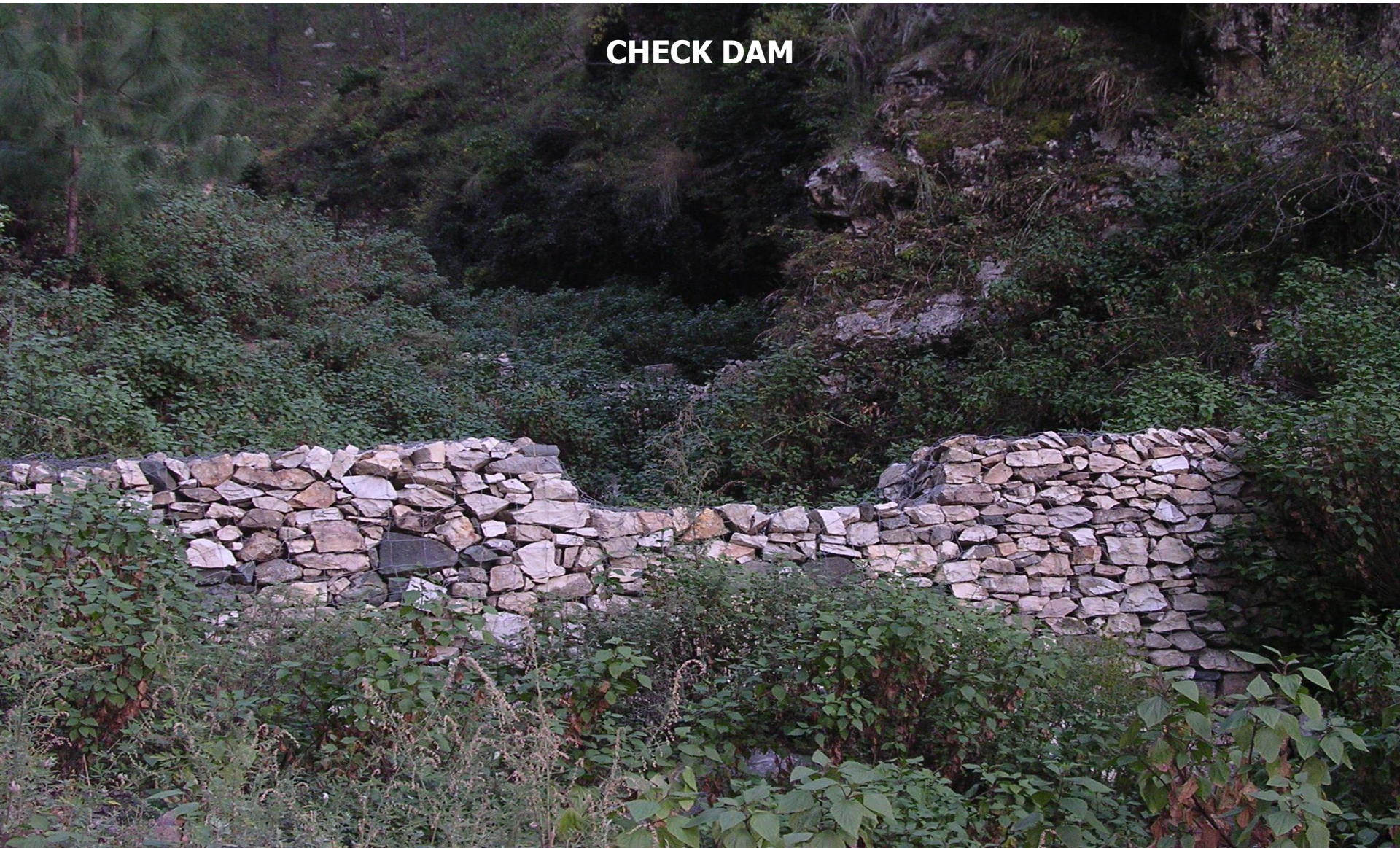
PLANTATION IN CATCHMENT AREA

GRAFTING OF PEAR (FRUIT) IN CATCHMENT



PLANTATION IN CATCHMENT AREA

CHECK DAM



FLORA AND FAUNA

- For assessing potential impact of the project on flora, study was conducted through the Botanical Survey of India (BSI).
- Study revealed that no rare species is coming under submergence.
- Plantation carried out around reservoir with species viz., wild edible plants, medicinal plants, hydrophytic plants etc.
- Botanical Garden established in an area of 14.28 ha. to preserve important flora of the region, along with a high tech nursery at Koti.
- Total 274 different species of plants including medicinal, ornamental, timber and fodder have been planted in the botanical garden.

FLORA AND FAUNA

- For assessing potential impact of the project on fauna, a study was conducted through the Zoological Survey of India (ZSI).
- ZSI study indicates no adverse impact on mammals, avai fauna (birds), reptiles (snakes and lizards), amphibia (frogs & toads) and Pisces (fresh water fishes) except the Mahseer fish.
- For the conservation of Mahseer fish, on recommendation of ZSI, a fish hatchery, having capacity of about 3.00 lacs fingerlings per annum, was developed near Koteshwar Dam (20 km d/s of Tehri Dam) in consultation with the National Research Centre for Cold Water Fisheries (NRCCWF).
- The hatchery was handed over to the State Fisheries Dept. on lease of 29 years in the year 2015 for further operation.
- In addition to mahseer, other fish species viz., Common Carp & Snow Trout were also developed.

BOTANICAL GARDEN

MEDICINAL PLANTS

THDC India Ltd.

International Conference on HYDROPOWER AND DAMS DEVELOPMENT FOR WATER AND ENERGY SECURITY – UNDER CHANGING CLIMATE

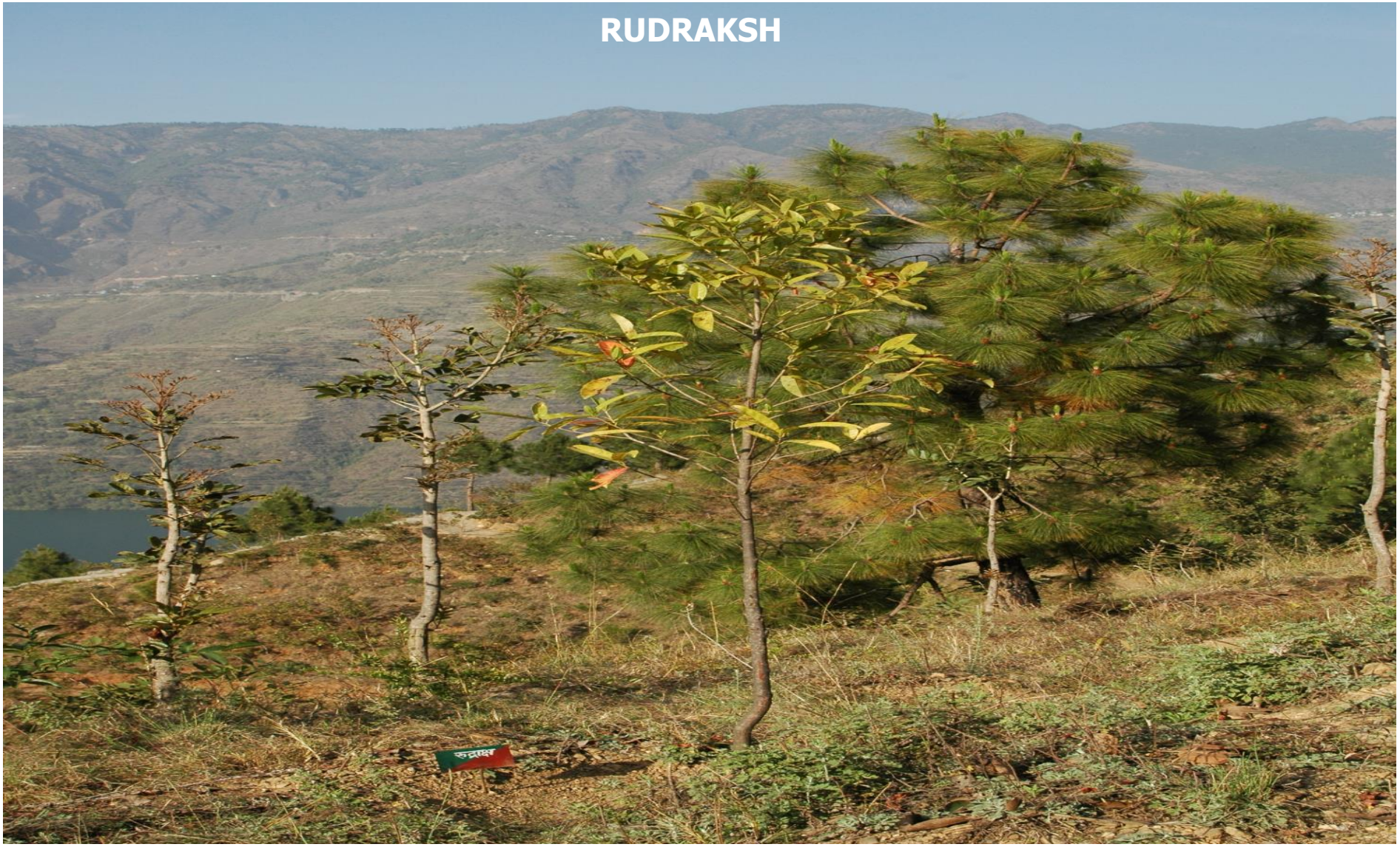
New Delhi

Central Board of Irrigation & Power

INCOLD

Indian National Committee on Large Dams

RUDRAKSH




नाम नैनालालीबन
10 है॰
टिहरी डैम योजना
2002- 2003
ब्राडलीफ रेंज

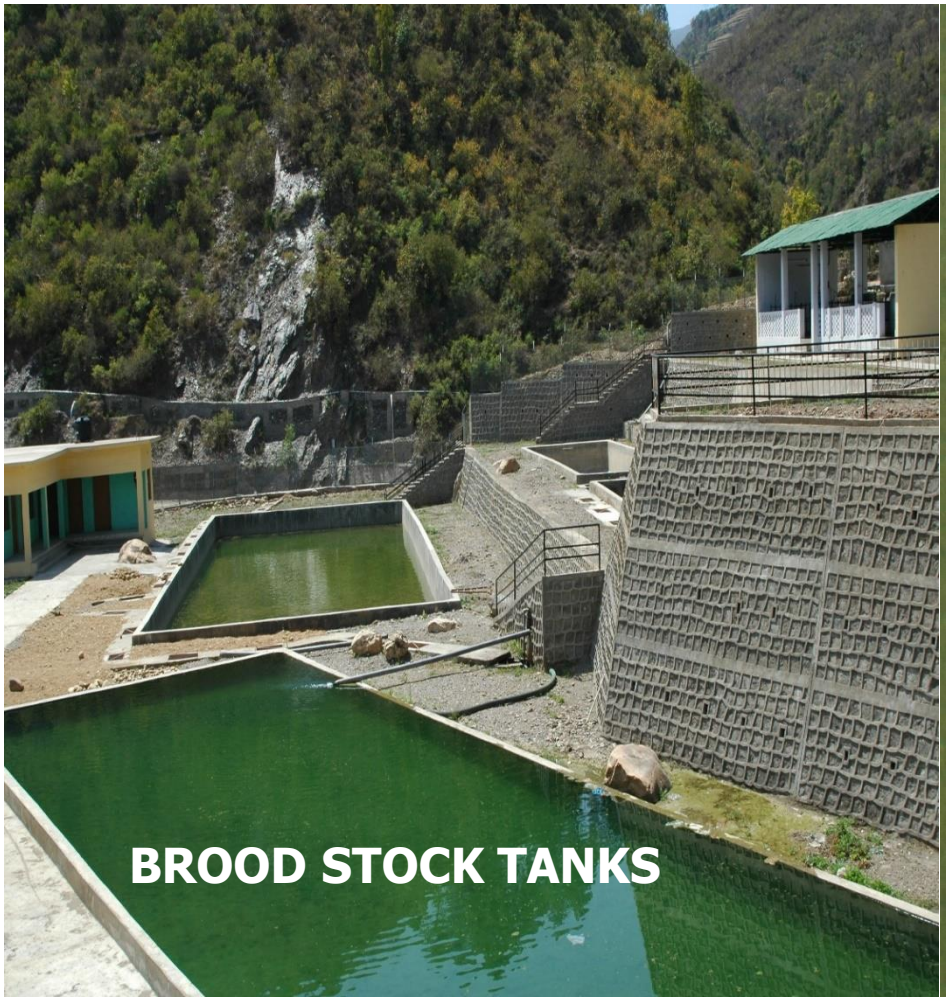
GREEN BELT DEVELOPMENT

- The Government of India accepted the H.R.C. recommendation for creating the green belt along rim of the Tehri reservoir to be extended only in 4 Sub Water Sheds (SWS) of 16 SWS of the catchment

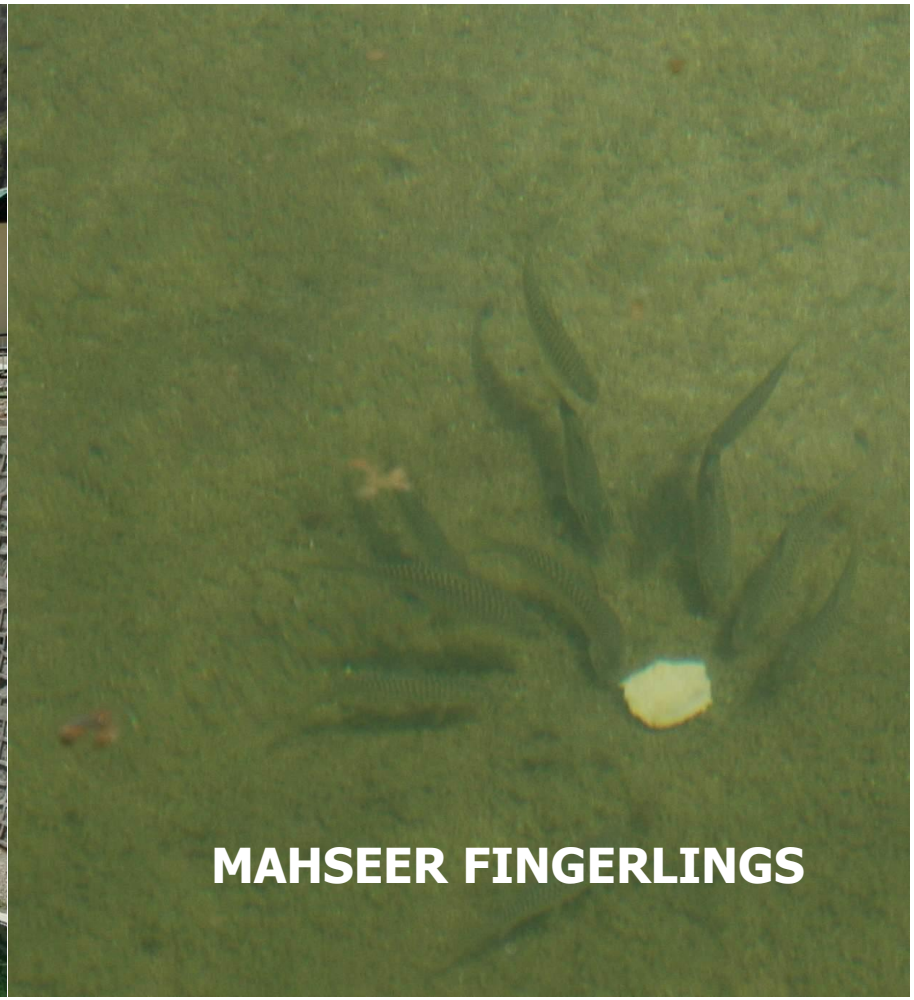
- Accordingly, Green Belt creation was planned just above the reservoir rim between MSL 850 m. To 1050 m. to enhance rim stability.

- Green Belt has been developed in 1588 ha. area along Tehri reservoir rim.

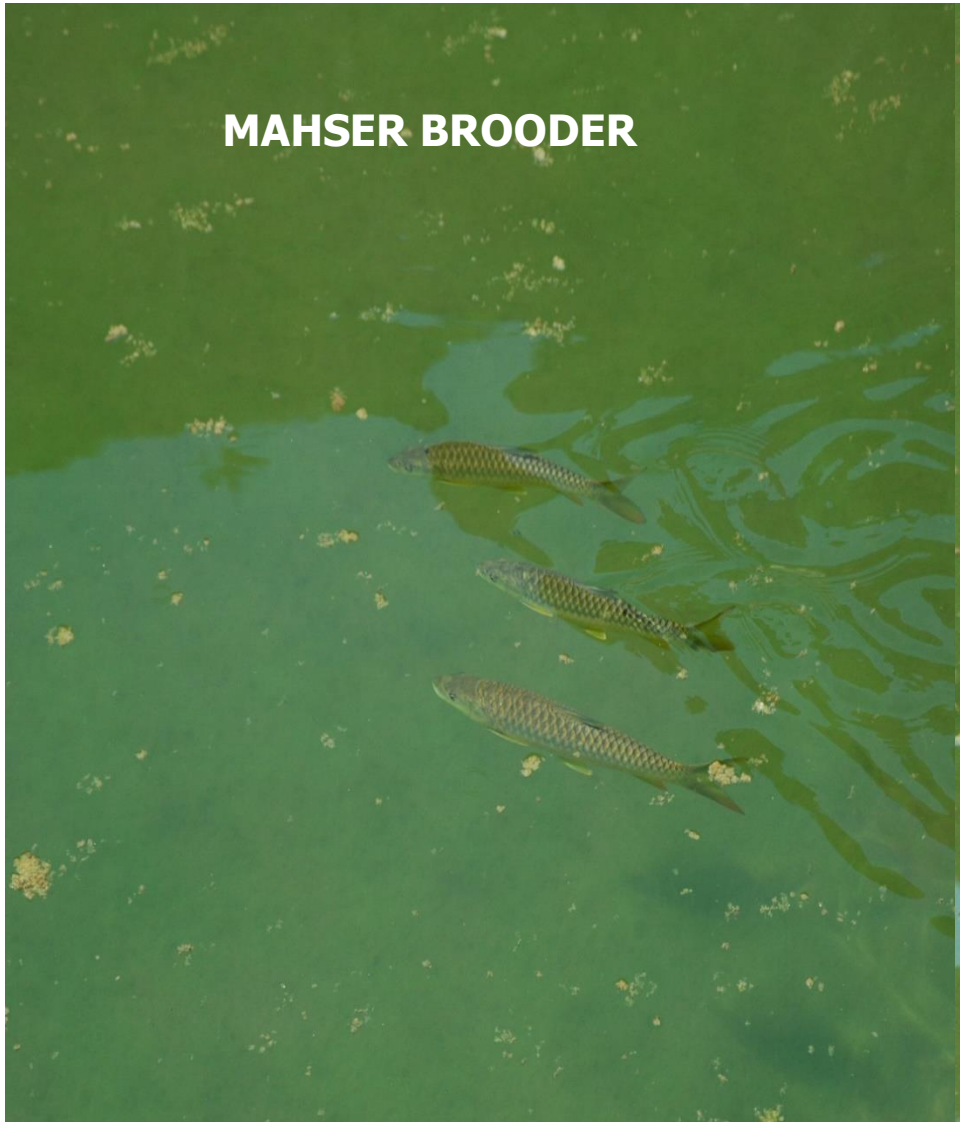
MAHSEER FISH HATCHERY

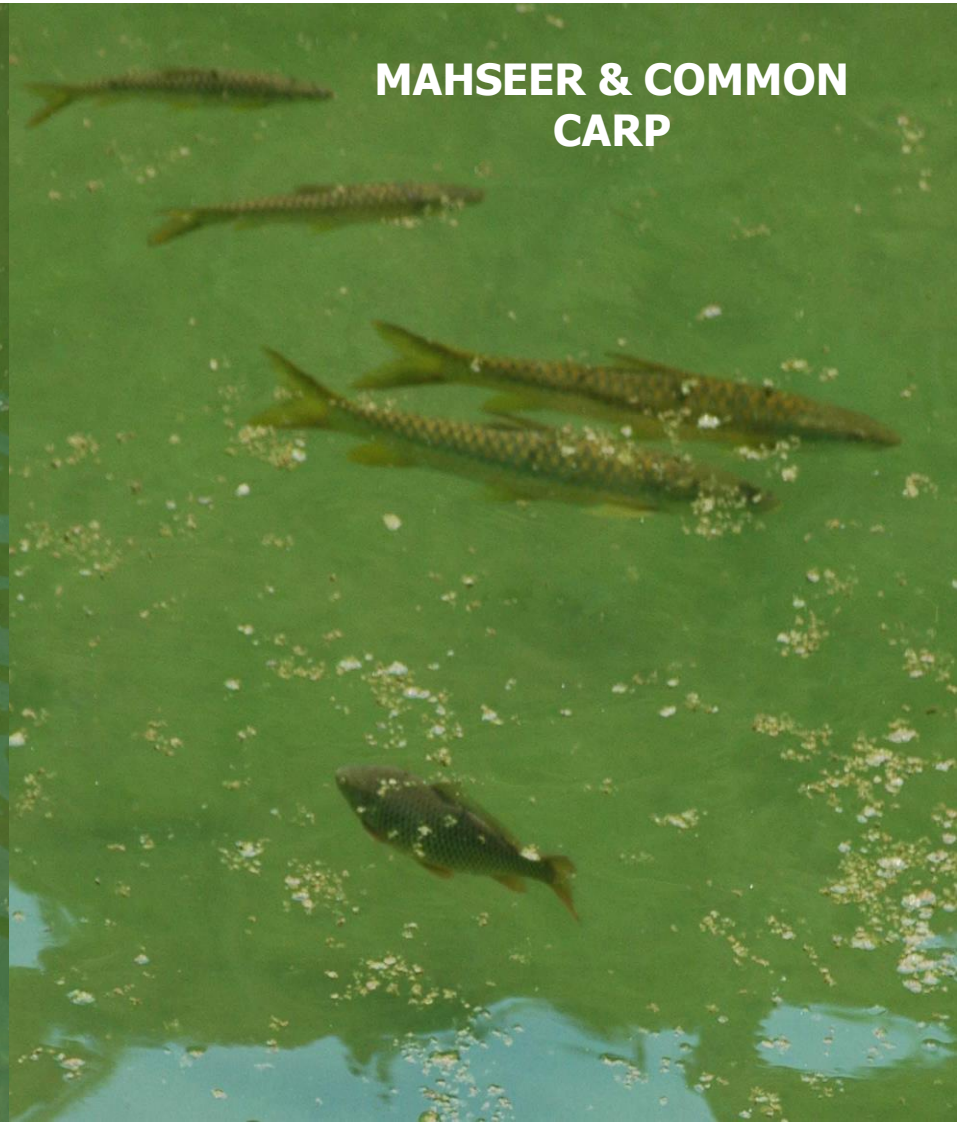


BROOD STOCK TANKS



MAHSEER FINGERLINGS


MAHSER BROODER


MAHSEER & COMMON CARP

WATER QUALITY MONITORING

- Water quality is being monitored on quarterly basis at 5 locations (u/s & d/s) of dam through PCRI, BHEL/IIT, ROORKEE. Results indicate quality of water fit for drinking purposes.

- Air quality monitoring is being carried out once in a year at 6 locations through PCRI, BHEL. All the parameters are within permissible limits.

IMPACT ON HUMAN HEALTH

- Director General of Health Services (DGHS) conducted study for potential health aspects of Tehri Dam reservoir. Through National Malaria Eradication Programme (NMEP) & Malaria Research Center (MRC).

- Strict compliance of directions issued by the DGHS as per recommendations & preventive measures brought out in above studies was ensured.

ENVIRONMENTAL SCENARIO-STUDY

Various pre and post impoundment studies were conducted through prestigious organizations to assess the change in the environmental, socio-economic setting of the project and surrounding areas. The details of studies are given below;

Pre Impoundment

- Environment Impact Assessment was conducted through BSI- 1993.
- Effect of Impoundment in Tehri Reservoir on Water Quality by IIT Roorkee-1992
- Report on faunal Analysis by ZSI-1993
- Socio-economic Study of Tehri Project Area by ASCI-1993
- Mathematical Model Studies to investigate hydrodynamics of the Tehri Reservoir by Central Water and Power Research Station (CWPRS), Pune
- Self-Purification capacity of river Bhagirathi by National Environmental Engineering Research Institute (NEERI), Nagpur- 2002 – 2004

ENVIRONMENTAL SCENARIO-STUDY

Post Impoundment

- Updation of socio Economic Study by ASCI in May, 2009
- Post Impoundment Faunal Survey & Analysis by H.N.B. Garhwal University, Uttarakhand in 09-11.
- Post Impoundment Floristic Survey and Analysis by Botanical Survey of India, Oct-2011
- Water Quality of Bhagirathi / Ganga River in Himalayan Region by National Environmental Engineering Research Institute in July 2011
- Measurement of Methane in Tehri Dam, CSIR-National Institute of Oceanography, May-2016
- Water Quality of Bhagirathi / Ganga River by National Environmental Engineering Research Institute (NEERI), Nagpur -April 2008 – July 2011.

SUMMARIZED CONCLUSION OF POST IMPOUNDMENT STUDIES

Environment:

No adverse impact was observed on flora and fauna population of surrounding area. Also, Botanical Garden and Mahseer Fish Hatchery is operational to protect and conserve the ecosystem and maintain the sustainability.

No adverse effect was found in the river water quality due to creation of Tehri Dam. Studies reveled that self-preservation property of river Bhagirathi/ Ganga remain intact.

Development of project has enhanced the aesthetic appearance of the area and attracted the tourism opportunity.

Central Water And Power Research Station (CWPRS), Pune study also concluded that water in reservoir remains under dynamic circulation throughout the year & does not remain stagnant.

SUMMARIZED CONCLUSION OF POST IMPOUNDMENT STUDIES

Socio-Economic:

Although R&R was performed at a very large scale, huge number of house holds i.e. PAF's were shifted, but the scheme followed by THDCIL uplifted the socio-economic status of PAF's.

Social upliftment in term of Education, Employment, Hospital facilities, women empowerment, house, drinking water facilities and agriculture facilities enhances the
individual socio-economic status.

Hence, it is concluded that Tehri HEP full fill the technicalities of Sustainable Development.

Thanks