

## *CHAPTER – I : INTRODUCTION*

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## CHAPTER - I

### INTRODUCTION

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Development is the major concern at global and national level. Development is undertaken to generate benefits for the society at large. The core issue of development in the country is to manage its natural resources. Two pre-requisites for the development of nation are energy and water. Dams in independent India have become the new icon of development and are considered a source of irrigation and power. "Dams are both – technology option and a development choice" – said South African Minister of Education and World Commission on Dams chair Professor Kadar Asmal (Dec. 2000).

Irrigation and power play a vital role in Indian economy as it is predominantly agricultural economy. The economic progress of the country and the rise in quality of life (QOL) of the people depend upon the development and utilization of available natural resources. India is rich country in water resources and its maximum utilization is contributing greatly to the prosperity of the country. River valley projects have been given prominence in successive five year plans.

#### 1) After Effects of the Projects :

Development is undertaken to generate benefits for the society at large but the process has often ended up being painful. It is estimated that owing to construction of over 1,500 major irrigation development projects since Independence. Over 16 million people were displaced from their habitat, of which about 40% belong to tribal population. Past experience relating to R&R (Resettlement and Rehabilitation) of development induced displaced people have been far from encouraging. In-depth studies on induced displacement due to agricultural projects like Hirakud dam, Nagarjunsagar dam, Pongdam, Baliraja dam, Ukai dam have shown that till very recently the state was adhoc in its R&R (Resettlement and Rehabilitation) approach and insensitive to displacement, Problems in identification of PAFs (project affected families), inconsistency in acquiring land and inadequate compensation, multiple displacement of PAPs (project affected persons), lack of gainful employment, lack of amenities in new sites and above all socio-cultural void are a few consistent

occurrences in these R&R efforts, mainly due to absence of comprehensive rehabilitation policy. Thus the process has often led to forced relocation of thousands of people, uprooting their communities and shredding to pieces their essential social fabric. It is now being increasingly acknowledged that the key problem with projects requiring resettlement is that the costs are unequally shared. Those who bear the cost may not be those who enjoy the fruits of development and otherwise.

Involuntary displacement is an issue that currently is high on the development agenda. In India approximately 50 million people are estimated to have been displaced in last five decades by the construction of dams, power plants, highways and such other infrastructure development projects. Subsequently no more than a quarter of them could be assisted to regain their livelihood. The majority get reduced to poverty from the loss of land and other means of making a living and continue to face uncertain future (Hari Mohan Mathur – Involuntary Resettlement and Voluntary Organisation, 1999, p.14). Thus development induced resettlement leads to loss of habitat, traditional organisation, family and community, socio-economic status of affected population. Starting life afresh in new settlement which leads to deterioration of their socio economic and living conditions. Though the Government as well as NGOs (Non-government organisation) and World Bank have come up with various R&R programmes, the fate of the displaced continues to be grim. The experience with development projects across the country suggests that the long drawn process of displacement has caused widespread adverse psychological and socio-cultural consequences. It is also well established that except in the rarest of the rare cases, forced displacement has resulted in a “spiral of impoverishment” (Micheal Cernea – 1991 – A senior sociologist of World Bank). Thus, though many of the development projects have been instrumental in the faster economic growth of the nation, they have often proved to be painful.

## **2) Sardar Sarovar Project :**

This study is about the project affected families of Sardar Sarovar Project on the river Narmada. River Narmada is the fifth biggest river in India and the biggest in central India and in the state. It originates from 3500 feet high mountain range of Amarkantak in ‘Shahdol’ district in eastern part of Madhya Pradesh and meets the sea in the gulf of



Cambay. In Gujarat state, it flows through Baroda and Bharuch district. In state of Madhya Pradesh it flows in districts like Shahdol, Bilaspur, Jabalpur etc. From Hanfeshwar to Vadagam, it flows on the border of Gujarat. In the hills of mountain ranges live tribal communities mainly 'Bhils' (Vasawas); Rathwas (Bhilalas and Pavras) and Tadavis (Anil Patel – "Resettlement Politics and Tribal Interests" – Archvahini – Gujarat based NGO, 1977).

A dam on river Narmada at Kevadia just before it's confluence with sea is one of the unique engineering works in India. The project was envisaged by late Shri Sardar Patel – 'The Iron Man and Maker of Modern India' in 1946 but taken up for implementation in 1980 – based on NWDT (Narmada Water Dispute Tribunal) Award headed by a sitting judge of Supreme Court and assisted by a galaxy of eminent technocrats, economists and hydrologists of our country. It has been taken up for implementation in the era of acute environmental awareness and also after the Forest Conservation Act came into effect, thus it has undergone a rigorous scrutiny from environmental angle and also fulfilled all the requirements of the Forest Conservation Act.

#### **Benefits of the Project :**

According to official figures, the Sardar Sarovar dam will provide multiple benefits as follows –

- a) The project would provide irrigation coverage to 17.9 lakh ha. spread over 3,393 villages of 14 districts in Gujarat. This would be more than existing total irrigation potential of all major, medium and small irrigation projects of Gujarat together,
- b) Maharashtra tribal areas and Rajasthan drought prone areas also would get irrigation benefits.
- c) Water for 20-30 million people all year around especially in the arid areas of Kutch, Saurashtra and state of Rajasthan.
- d) The project will generate between 856 to 1007 million units per year of cheap and ecofriendly indigenous hydropower.
- e) The project would meet the drinking water needs of 8,215 villages and 135 urban centres which are today suffering from acute shortage of water.

- f) The project will benefit areas like Bhal – affected by high impact of saline soil / water.
- g) The project would contribute to food security and energy self-sufficiency in our country.
- h) It will produce 1,450 megawatt of hydroelectric power.

**Unique Features :**

- a) S.S.P. has the lowest ratio of submergence to area irrigated being 1.65% of C.C.A. against an average of 4 to 5% of other major irrigation projects.
- b) With 40,727 families (1,27,446 persons) being affected by pondage as well as temporary backwater effect, it has the lowest ratio vis-à-vis water source.
- c) Land based and community group based resettlement programme being adopted for the displaced families is the first of its type in India.
- d) An autonomous organisation free from bureaucratic constraints looking after resettlement of agriculture land, pucca house and all civic amenities in *vasahats* (resettlement and rehabilitation sites) being specially developed.
- e) Project funded by contributions from Government of India, the four participating states and mobilization from open market. An amount of Rs.7,980 crores already invested in dam, power house, canal system and resettlement.

**SARDAR SROVAR PROJECT IMPLEMENTATION :**

The S.S.P. is the largest water resource development project of India, aimed at food and energy security and upgrading the quality of life of people including those required to shift from submergent area. This project will submerge around 37533 hector of land spread over the three states of Gujarat, Madhya Pradesh and Maharashtra. Following tables present extent of submergence and statewise affected villages and families.

**Extent of Submergence :**

Statewise total land coming under submergence :

No.	State	Type of Land			Total Land in Ha.
		Agri.	Forest	Other	
1	Gujarat	1877	4166	1069	7112
2	Maharashtra	1519	6488	1592	9599
3	Madhya Pradesh	7883	2731	10208	20822
<b>Total.....</b>		<b>11279</b>	<b>13385</b>	<b>12869</b>	<b>37533</b>

Source: Joshi Vidyut, 2000. "Rehabilitation is possible" P.No.32

**Villages and affected families :**

No.	State	Villages Affected			PAFs
		Full	Partial	Total	
1	Gujarat	3	16	19	4600
2	Maharashtra	-	33	33	3113
3	Madhya Pradesh	1	192	193	33014
<b>Total.....</b>		<b>4</b>	<b>241</b>	<b>245</b>	<b>40727</b>

Source: Joshi Vidyut, 2000. "Rehabilitation is possible" P.No.32

**Sardar Sarovar Project Implementation :**

As per NWDT Award, full implementation of different components of the project is to be carried out by the state of Gujarat, while the states of Madhya Pradesh and Maharashtra are to carry out related Resettlement and Rehabilitation works in their respective areas. For the full implementation of project excluding R&R works, Government of Gujarat has formed a state-owned company, namely 'Sardar Sarovar Narmada Nigam Limited (SSNNL)'. To carry out works of R&R in Gujarat, Government of Gujarat has constituted an autonomous agency called 'Sardar Sarovar Punarvasavat Agency (SSPA). The related works of R&R (Resettlement and Rehabilitation) in Madhya Pradesh are being carried out by 'Narmada Valley Development Authority (NVDA)' that was constituted for the development of numerous projects on Narmada within Madhya Pradesh. In Maharashtra, the Irrigation Department is looking after R&R works of Sardar Sarovar Project.

Though envisioned by late Sardar Patel in 1946, the project in its present form emerged only in December 1979 after the final Award of the Narmada water Disputes Tribunal. An agreement with World Bank for a loan of \$450 million was finalised in 1985. Understanding was also reached with the 'Overseas Economic Cooperation Fund (OEFC)' of Japan for credit of 27 billion Yen for the supply of Turbine Generator (TG) sets of riverbed powerhouse. However, the actual work on the project commenced in June 1987, after clearance from the Ministry of Environment, Government of India.

#### **Organization Involved in Construction and Supervision Activities :**

The main agency entrusted with the task of construction and operation of SSP is 'Sardar Sarovar Narmada Nigam Limited'. Formulated under 1956 Companies Act, the SSNNL is a state public sector enterprise of Government of Gujarat and holds 100% assets of project. Apart from the Chairman (usually a political appointee) and Vice-Chairman, the Board of Directors of SSNNL has four full time Directors (including the Managing Director and Directors representing Dam-site construction, Canal construction and Finance), three Directors representing Government of Gujarat, and three Directors representing other party states of Madhya Pradesh, Maharashtra and Rajasthan. The majority employees of SSNNL are technical and are deputed from other departments of Government of Gujarat, bulk of them coming from water resource department and some from Gujarat Electricity Board. As pointed out earlier, a separate organization called – Sardar Sarovar Punarvasan Agency – has been entrusted with the task of R&R of the project affected people in Gujarat and those of Madhya Pradesh and Maharashtra who opt for resettlement in Gujarat. Headed by the Commissioner (who is also the CEO), the SSPA has been conceived for a limited span and its employees are also drawn from various departments of Government of Gujarat, majority of them being from the revenue department.

The Sardar Sarovar Construction Advisory Committee (SSCAC) is supervising the construction of main dam and power complex works on behalf of all party states. The main body of SSCAC is in the form of a committee chaired by the Secretary, Union Ministry of Water Resources, and consists of several other secretary level officials of the centre and four concerned state governments. The SSCAC is essentially a technical body that looks into



such aspects of project construction as : specification, scheduling, contracts, project economics, financing and appropriation of funds. It has a Permanent Standing Committee that examines technical issues in detail, and also acts as a claims committee to settle contractor's claims exceeding the powers of project authorities. Headed by a Chief Engineer level officer, its secretariat is situated in Vadodara for closer monitoring of the project. The SSCAC has a limited tenure lasting till three years after completion of dam and powerhouse works, and hence has no permanent cadre. Its officials are drawn from the Central Water Engineering Service Cadre, while the staff is taken on deputation from central / state governments.

The organizations of SSNNL and SSPA associated with project execution, and SSCAC associated with project monitoring, do not have permanent cadres. This organizational feature frees the project from liabilities of excess manpower after project completion. Besides, the temporarily placed employees are free from the syndrome of resolutely delaying the project, fearing joblessness.

The Narmada Control Authority (NCA) which is entrusted with the task of implementation of NWDT Award provisions is also an important stakeholder of SSP. Similar to SSCAC, the main body of NCA is also in the form of a committee chaired by the Secretary, Union Ministry of water Resources. It also consists of Secretaries of other related Union Ministries (Ministries of Power, Environment and Forests, Social Justice and Empowerment, Tribal Affairs), Chief Secretaries of the four party states, and a permanent executive Member and three full-time Members appointed by the Central Government. The NCA through its regular meeting attempts to resolve numerous interstate disputes related to SSP, and in the past has held long deliberations on the issue of reduction of dam height, construction of irrigation by pass tunnel, and sharing of disputed costs. It also gives intermittent clearance for dam construction with *pari passu* completion of R&R measures. The NCA has two main sub-groups, namely the Resettlement and Rehabilitation sub-group headed by the Secretary, Union Ministry of Social Justice and Empowerment, and the Environmental Sub-group headed by Secretary, Union Ministry of 'Environment and Forests'. The other sub-groups of NCA are the Power sub-group, Hydromet sub-group and Main Canal sub-group. Besides the

headquarter at Indore, the administrative machinery of NCA has three regional offices at Indore, Bhopal and Vadodara.

While constituting the committee form of SSCAC and NCA, they were perhaps viewed by NWDT as appropriate platforms for the four party state governments to resolve common interest issues, and conceivably the central officials were incorporated to give voice to the interests of other stakeholders such as project oustees and beneficiaries, ecological and environmental voices, suppliers and contractors, financiers and scores of other institutions concerned with the SSP. Contradictory to this objective, the Committees sometimes presented a stage for state governments to highlight their individual interests overshadowing the common ones; and where unending problems were put forth and discussed inconclusively. In the intense one-upmanship games played in these meetings, the central representatives often turned into mere spectators rather than becoming active participants or referees of the game. Many a times resolutions that were achieved did not happen because of achieving a meeting point on diverse views of party states or because of acceptance to a fair view of central party, but because of the tacit political agreements reached between the state governments outside the committees. In such circumstances, the interests of other stakeholders evidently did not find sufficient voice; and this organizational failure – in respect of project displaced stakeholders – was even castigated by the Supreme Court (Supreme court Orders, 1995-2000).

#### **Impediments in Project Progress :**

Controversial issues surrounded the project right from its inception. Due to the June 1992 controversial report from Bradford Morse Committee constituted by World Bank. Government of India backed out from its loan given to Sardar Sarovar Project. The main dam was originally scheduled for completion by June 1996, which was later revised to January 1998 to account for mobilisation delays. In May 1995, when more than 82 percent of concreting work had already been completed, the work on the main spillway portion of the dam came to stop due to a writ petition filed by 'Narmada Bachao Andolan (NBA)' in the Supreme Court of India; and the deadlock continued for over five years till Court's final judgement in October 2000 (SSCAC, 2003a).

The work of 250 MW canal head powerhouse started in March 1989 and erection of first unit was completed in August 1995, while the last unit was completed in January 1998. The works on 1200 MW riverbed powerhouse started in July 1987, with target of commissioning of first unit by September 1995. The order for supply of six units of 2000 MW Pump Turbine Generator (TG) sets was awarded to Sumitomo Corporation of Japan, for which financial assistance was to come from OECF. The first tranche of 2.85 million Yen of assistance was utilised by 1987-88. Subsequently, with intensification of agitation by anti-dam groups in India and its ramification in Parliament of Japan, the OECF opted for abrupt withdrawal of financial assistance sighting environmental concerns. This resulted in stoppage of the supply of TG set parts, due to which civil works of RBPH had to be suspended. The stalemate continued till September 1998, when contract was amended and a fresh loan agreement signed with Sumitomo (SSCAC, 2003b).

The SSP has been confronted with many factors that have impeded its progress and hampered project implementation as envisaged in original plan. The four most critical factors can be identified as : (i) prolonged litigation in Supreme court, (ii) enduring agitation by anti-dam groups, (iii) short comings in execution of resettlement and rehabilitation programme, and (iv) conflicts amongst beneficiary states of the project. Besides being responsible for substantial delays in progress, these factors at times have also raised serious doubts on the viability and fulfilment of the project. These factors are not mutually exclusive, and a closer examination may also reveal that the first three factors have taken critical dimensions largely on account of the fourth factors, i.e. conflicts amongst beneficiary states.

#### **Litigation in the Supreme Court of India :**

Challenging the construction of SSP on the grounds of protecting the rights of life and livelihood of project affected people, the NBA's writ petition claimed that (i) project has been designed, planned and approved without adequate information and knowledge about costs, benefits and 'environmental and social impacts' of the project; (ii) project is violating the stipulations of NWDT Award; (iii) project affected persons have been treated with callousness by project authorities and their land will get submerged without their

resettlement and rehabilitation; (iv) continuation of project would violate conditions of environmental clearance, 'Forest Conservation' Act and 'Environmental Protection' Act; (v) costs of the project would be much higher and benefits much lower than the original estimates, thus making it nonviable; (vi) lack of hearing to the persons going to be displaced constitutes negation of their fundamental rights and violation of principle of natural justice; (vii) project will destroy life support system of over ten lacs people mostly belonging to tribal, other backward class, and downtrodden section; (viii) land for resettlement of project affected persons is not adequately available; (ix) authorities have failed in monitoring and controlling the necessary studies, action plan, and their implementation *pari passu* with the construction, as per the directives of tribunal; (x) authorities have failed in adhering to schedule set up by tribunal about land acquisition, rehabilitation master plan, and its implementation (NBA's Writ Petition, 1994).

NBA, through its petition, prayed to the Court to (i) restrain authorities from proceeding with dam construction; (ii) appoint independent expert body to re-examine project's costs and benefits; (iii) give opportunity to project affected persons to place their views before expert body; (iv) establish link and schedule of construction, submergence and rehabilitation of project affected persons; (v) appoint independent body with representation of oustees to monitor and control the project; (vi) appoint independent members and representatives of oustees on statutory bodies like NCA, SSCAC, etc. (NBA's Writ Petition, 1994).

At an interim stage of Court proceedings (5<sup>th</sup> May 1995), the counsel for Union of India made a statement to maintain the effective height of the dam at a level of 80.30 m till further orders from court. The status-quo was maintained, and no works on spillway portion (block nos. 30 to 46) were taken up till 18<sup>th</sup> February 1999 when Court eventually permitted the raising of dam up to 85.0 m level. In this hearing, Court was also informed about creation of independent Grievance Redressal Authorities (GRA) for redressing R&R related grievances. Not happy with Court's interim order permitting increase in dam height, NBA resorted to street agitations and even targeted Court judges; both the actions were viewed seriously by the Supreme Court (Supreme Court Orders, 1995-2000).

On 18<sup>th</sup> October 2000, the Supreme court Delivered its final judgement in favour of continuing dam construction as per Award of NWDT. The dam height was initially cleared by Court up to 90.0 m level and guidelines were given for further clearance by NCA (Supreme Court Judgement, 2000). Subsequently, when the first further incremental clearance was given by NCA in May 2002, it was immediately challenged by NBA in the Supreme Court on grounds of breach of NWDT Award provisions. However, Court turned down NBA's plea, and directed that any dissatisfaction on R&R measures must be first raised with concerned GRA, and if not satisfied, shall be raised before Court by the concerned project affected person only (Supreme Court Orders, 1995-2000). With this ruling of the Court, the capacity of NBA to affect impediment in project construction by legal avenues was considerably diluted.

#### **Agitation by Antidam Groups :**

The agitation against Sardar Sarovar Dam started way back in 1988. Spearheaded essentially by the NBA, it gained momentum in subsequent years and also brought international pressures leading to the stoppage of OECF (Japan) credit and the World Bank loan. The NBA's prolonged litigation in the highest court of India (1994-2000) also practically halted the works of main dam for over five years (SSCAC, 2003).

Though the number of people directly involved in agitation – lead by Medha Pathkar – has not been that large, yet the agitation frequently drew considerable media attention because of the involvement of Booker Prize winner Ms.Arundhati Roy and other renowned personalities (former Navy Chief admiral Ramdas, retired Justice Rajinder Sachar etc.). After savouring success on many initial instances, the NBA's agitation also saw a few setbacks (e.g. final judgement of the Supreme Court), though the viewpoints of its leaders consistently continued to grow harsh against the project. Originally oriented towards seeking relief to the displaced persons (NBA's Writ Petition,1994), the total annulment of Sardar Sarovar Dam became sole objective of NBA's later part of agitation. The NBA on its own has sought Supreme Court's intervention on behalf of the project affected persons. For over five years NBA was given every possible opportunity to present its viewpoint before the Court, while the dam height was kept stagnated. The Court also evidently accepted the

concerns of NBA against R&R measures of the project, and hence sought to empower the project affected persons by setting up separate and independent Grievance Redressal Authorities in the three affected states. Thus, despite having given the sought out relief to the project affected persons to a larger extent, the failure of the Court in permanently halting the project was seen by NBA as denial of justice.

Despite the final setback in Supreme Court, NBA's overall agitation against SSP can be viewed as mostly successful. As to be discussed shortly, NBA's short-term (but radically significant) gains in the matter of litigation have also been due to the prevalence of conflict amongst beneficiary states. The other successes of NBA have come largely from its network with the other international anti-dam lobbies, and from the ability to project its acts as reflection of global consciousness on social and environmental issues. Further, NBA's purposes also gained strength from the effective media campaigns focussing on its numerous events of *dharnas*, rallies and threatened *jalsamadhis*; against which the central and state governments remained largely silent during critical period of litigation.

Another crucial factor of NBA's success against Sardar Sarovar Project can be attributed to its leadership, though the assertion is debatable, and it is so for two reasons. Firstly, the NBA is not a formal or structured organization. It is neither registered, nor its financial sources are disclosed or the accounts audited. In such circumstances the lines of formal authority and leadership are not distinctly ascertainable. For example, it may be difficult to point-out as to when Medha Patkar took over the mantle of NBA leadership from the original crusader Baba Amte. Secondly, the importance of leadership in running an organization is in itself an issue of controversy (Thomas, 2003). The leadership on one hand may be defined as a social influence process in which a person steers members of the group towards a goal (Bryman, 1986), and on the other hand, it may be considered as exertion of managerial influence on organizationally relevant matters by any members of the organization (Katz and Khan, 1978; and Mintzberg, 1973). Evidently, in the case of NBA the former definition is applicable both from the point of view of unstructured organization and the revolutionary characteristic of the leadership. However, according to Tolstoy (1957), the real role of leaders is less one of determining the course of events than one of justifying

the collective activity that leads to such outcomes as revolutions and war. Though the issue of leadership may remain debatable, its significance cannot be entirely ignored considering the fact that NBA's moment against SSP has been far more successful than the contemporary anti-dam moment against Tehri Project, which fizzled out under the person-centric leadership (Yadav, 2002).

#### **Slow Pace of Resettlement and Rehabilitation Progress :**

The trial in Supreme Court was mostly focussed on matters related to R&R (Supreme Court Orders, 1994-2000); and even after Court's final judgement the issue of R&R continues to remain the most critical factor in completion of full dam height. As per latest estimates, the total number of project affected families (PAF) is about 49,963. State-wise break-up of affected villages and number of affected families are presented in Table.

**Table : Villages, families and population affected by project submergence :**

Sl. No.	Beneficiary State	Villages affected		Families to be rehabilitated	Population affected (1991 Census)
		Fully	Partly		
1	Madhya Pradesh	01	191	33,014	89,796
2	Maharashtra	00	33	3,221	19,650
3	Gujarat	03	16	4,728	18,000
Total.....		04	240	40,963	127,446

(Source : Sardar Sarovar Construction Advisory Committee)

As per the directions of NWDT, Gujarat has to resettle all the project affected persons who are willing to resettle in Gujarat, including those from the state of Madhya Pradesh and Maharashtra. As per Tribunal's stipulations, each project affected persons from whom more than 25 percent of land holding is acquired, has to be offered an equivalent area of land – subject to a minimum of 2 hectares – in the command area of project. The persons who are unwilling to resettle in Gujarat are to be resettled in their respective states based on similar land based policy (NWDT, 1978b). The rehabilitation policy was further liberalised to include joint-holders and major sons as co-sharer of acquired land; thereby making them eligible for land equal to their share subject to a minimum of 2 hectares each. Gujarat further

liberalised the package by including encroachers and landless agricultural labourers, and making them entitled for 2 hectares of agricultural land. Each project affected person, including major sons, is allotted 500 square meters of residential plot free of cost, and also given certain grants (NCA, 2003a). Attempts are made to resettle project affected person in groups so as to maintain their social life. The relocation sites are provided with living amenities like approach road, internal roads, drinking water facilities, electrification etc. apart from several civic amenities prescribed by the Tribunal. Other services like registration in electoral rolls, issuance of ration card, accessibility to cooperative societies, and vocational training are also being given (SSNNL, 2000).

Despite mammoth proportions, some positive progress has already taken place with about 22,162 PAFs resettled, indicating a progress rate of about 54 percent. Nevertheless, the pace of progress of R&R has been very slow. As per the action plan prepared by the NCA subsequent to Supreme court's final judgement, the R&R corresponding to dam height of 100 m and 100 m, were required to be completed by December 2001 and December 2002 respectively, but both target dates were missed (SSCAC, 2003a). The R&R works were completed corresponding to 100 m height in May 2003, and the target set for 110 m height was considered as achieved in March 2004 only.

Many factors have been responsible for the slow pace of R&R works in the past, but four such important factors that may influence future pace of works as well as identified herewith. Firstly, the rehabilitation package given by NWDT was in itself much ahead of the time, and it got evolved further under the guidelines of World Bank, pressure mounted by the anti-dam agitation, and serious concerns expressed by the Supreme Court. Thus, SSP has been caught on an escalator of evolving R&R policies (Varghese, 1994). And, having set very high norms, meeting the stipulations of balance R&R works especially the land for land policy, and the policy of giving minimum 2 hectares of land each major son of oustees – has become difficult. Secondly, with the setting up of Grievances Redressal Authorities by the Supreme Court, it has become possible to closely monitor the physical aspects of resettlement and rehabilitation works; but satisfying the largely qualitative criteria of resettlement and rehabilitation has become all the more difficult. Thirdly, with the



incrementally evolving policy and the delay in land acquisition notifications, the estimate for the R&R works has increased to a mammoth proportion; and the requirement of balance R&R – estimated at Rs.2000 crore – before the final target date of December 2004 may not be easily met. Fourthly, the continuance of anti-dam agitation, non-cooperation of some of the project-affected populace, and the political influence of NBA has caused hurdles in R&R progress and the dam height clearances, and may continue to have significant bearings on future clearance as well.

#### **Conflict Among Beneficiary States of the Project :**

Till recently the views of Madhya Pradesh on the interpretation of certain aspects of NWDT Award, and on some other technical / financial issues, have been different from those of Gujarat. Except for certain issues on sharing of costs and timing of its payment, the states of Maharashtra and Rajasthan have been largely on the side of Gujarat on all contentious issues. It may not be inappropriate to deduce that Madhya Pradesh's long time persistence with its divergent views on issues related to SSP has been due to its seemingly dissatisfaction with the final verdict of NWDT. The Table highlights the extent of dissatisfaction of the state of Madhya Pradesh by listing out its main contentions before the NWDT, and the decisions of NWDT there upon.

#### **Contentions of Madhya Pradesh and the Decisions of NWDT**

Contentious issue	Contention of M.P.	Decision of NWDT	Extent of MP's dissatisfaction
Water requirement of M.P.	24.08 MAF	18.25 MAF	5.83 MAF
Water requirement of Gujarat	4.44 MAF	9.00 MAF	4.56 MAF
Fully supply level of SSP main canal	190 feet	300 feet	110 feet
Full reservoir level of SSP dam	210 feet	455 feet	245 feet

(Source : NWDT, 1978)

Of the many issues in which the state of Madhya Pradesh took diverse stand, the prominent one was related to the issue of reduction in dam height. In April 1994, Madhya Pradesh requested the Narmada Control Authority to consider their proposal for reducing the height of Sardar Sarovar Dam from 455 feet to 436 feet. This proposal was objected by Gujarat on

the ground that review of NWDT Award could be done only after 45 years, and that the proposal was beyond the jurisdiction of NCA. The state of Madhya Pradesh – taking a stand that NWDT Award has kept provision for alteration, amendment and modification of its clauses by agreement between all party states – persisted with the demand for dam height reduction. Even in Madhya Pradesh's petition (1995) filed in the Supreme court in response to NBA's case, the state reiterated the demand for reduction in dam height justifying it on following grounds :

- About 1,14,000 population of Madhya Pradesh was affected by the Sardar Sarovar Project. Out of these about 38,000 people would be saved from displacement, if the dam height were to be reduced by 19 feet (5.79 m).
- About 25,000 acres of land, including some good productive land could be saved from submergence.
- The latest (1994) estimate of Project Affected families was 33014 (in 193 villages) compared to the number of 6147 (in 158 villages) taken into account by NWDT. The trauma of displacement and problem associated with resettlement and rehabilitation had thus increased by manifolds, and was difficult to handle.
- Difficulties were being encountered by Gujarat in arranging sufficient irrigable land in command area of project for rehabilitating project affected persons. Villages coming under submergence in last stage of dam construction would be settled further in the Saurashtra and Kuchh areas where project affected persons of Madhya Pradesh would be subjected to a totally different social and cultural milieu.
- Availability of utilisable Narmada water has become less by about 4.5 MAF when compared with the figure of 28 MAF agreed by NWDT, and hence a major parameter considered for dam height has changed.
- Irrigation needs of Gujarat (as per NWDT Award) could be fully met with a reduced dam height of 436 feet.
- Only power generation quantum would be affected by reduction in dam height, which could be justified on the grounds of reduction in hardships associated with rehabilitation of displaced persons. Only limited power would be available from SSP and that too for a few years, and hence there would be no significant loss as such. The loss of power to

Gujarat and Maharashtra on account of reduction in dam height could be compensated by the state of Madhya Pradesh from its share.

- Financial positions of party states have altered, and adequate funds would not be available for this joint project.

Gujarat's main concern in rejecting the proposal for reduction in dam height was its apprehension regarding getting sufficient water for meeting irrigation demands with a truncated dam. Even with a full height of 455 feet, the complete potential of SSP could be developed only when upstream reservoirs in Madhya Pradesh get completed so as to uniformly release 0.677 MAF of water per month below Madhya Pradesh's terminal Maheshwar Project. In case of delays in construction of Madhya Pradesh's main Indirasagar dam alone, apart from substantial loss of power from SSP, Gujarat could lose about 17.8% of its annual irrigation potential even with full height of Sardar Sarovar Dam (Pillai, 1999). Since the construction of Indirasagar dam at that point of time was lagging behind schedule, and was expected to have its own share of problems associated with displacement of people, Gujarat was not willing to take any risks on the issue of Sardar Sarovar dam height. Though Gujarat, on certain occasions, has gone to the extent of agreeing to keep the reservoir level at 436 feet by truncating regulatory gates, yet the demand of Madhya Pradesh to alter dam profile so as to restrict its height permanently was not found favourable. The state of Gujarat, apart from disagreeing with Madhya Pradesh on the stated benefits of dam-height reduction, also felt that issues related to assessment of utilisable quantum of water, the dam height, power sharing formula etc. were already settled by NWDT, and should not be reopened till December 2024 as ordered by the Tribunal. On the issue of height reduction, Maharashtra and Rajasthan were fully aligned with Gujarat. The issue was however put to rest by Supreme court's final decision, directing completion of full dam height as per NWDT Award provisions.

Another contentious issue between Madhya Pradesh and Gujarat has been on construction of twin Irrigation Bye Pass Tunnels (IBPT). The IBPT was proposed by Gujarat in 1989 to meet irrigation requirements under eventualities of shutdown in the canal head powerhouse. Madhya Pradesh objected IBPT for the alleged reasons of alteration in water by Gujarat

over and above its allocated share. Initially, disagreement was only on the capacity of tunnels and the level up to which they can draw water from reservoir. But later – while hardening its stand on dam height issue – Madhya Pradesh started questioning the necessity of IBPT. At the peak of conflict, Madhya Pradesh proposed to agree for the IBPT quid-pro-quo of an agreement by Gujarat for reduction in dam height. The issue of IBPT was repeatedly discussed in NCA meetings, and finally (in July 2000) it was decided to construct the tunnels considering them a technical necessity. This decision of the NCA was however challenged by Madhya Pradesh in the Review Committee of NCA (RCNCA). However, in August 2001, RCNCA opportunely resolved the complex issue by its decision that Gujarat will fully compensate the power loss (if any) caused by IBPT to the state of Madhya Pradesh and Maharashtra. Gujarat constructed the IBPT immediately thereafter, and even at partial stages of completion it drew water into the partially completed canal system without reaching the dam height of 110 m. The IBPT thus immensely helped in mitigating the draught situation of Gujarat during 2002, and improved the drinking water situation in subsequent year.

Would these PAFs in changed socio-cultural, economic and environmental conditions, be

- able to re-establish livelihood?
- able to sustain family cohesion?
- able to maintain social fabric?

and ultimately get rehabilitated in new R-R (resettlement and rehabilitation sites) sites?

The Government of Gujarat, keeping in view the complex human problem of resettlement and rehabilitation has formulated an extensive R-R policy and R and R package.

#### **Resettlement and Rehabilitation :**

So far, displacement has been treated on adhoc basis and not as an integral part of development i.e. development project formed their own norms to tackle displacement the way the project authorities considered appropriate. Some states brought periodic government resolutions on project to project basis. Thus, in irrigation projects prior to Narmada project, there was no definite rehabilitation policy and certain programmes were implemented on

ad hoc basis and the efficiency of implementation relied on goodwill of the respective officials. The resultant situation was that the big farmers on the plains were benefited and the tribal oustees suffered damage. The condition of Adivasi oustees was quite against the principles laid down by our late prime minister Jawaharlal Nehru, who announced 'Adivasi Panchshil'.

#### **Resettlement :**

R & R (Resettlement and Rehabilitation) essentially are two separate processes. The process of Resettlement is basically a physical administration i.e. process of providing necessary conditions by R&R machinery i.e.

- a) Land acquisition and declaration of PAF's status
- b) Shifting at new sites
- c) Relocation at new sites
- d) Settling down in terms of housing and livelihood.

As per the revised implementation schedule of dam, on December 1989, approved by the Sardar Sarovar Construction Advisory Committee, a total of 245 villages will be affected in 3 states. The lowest level of huts / farms of the villages are considered for estimating the number of villages affected each year for planning R&R works and ascertaining the impact of submergence.

According to *Risk Impoverishment Model* by M.Cernea (1990) – as a conceptual framework to understand the problems of displaced population, gamut of risks that the displaced persons undergo by the process of relocation are –

- a). Landlessness;
- b) Joblessness
- c) Homelessness
- d) Marginalisation
- e) Morbidity
- f) Food insecurity
- g) Loss of access to CPR (common property resource)

#### h) Social disarticulation

According to these criteria, so far as resettlement of PAFs (project affected families of SSP) is concerned, not a single PAF has remained either landless or homeless. Community-level facilities like *school, dispensary, children's park, panchayat ghar* etc. have been provided liberally. The question of social disarticulation does not arise as the PAFs have shifted in groups. The avoidance of these risks indicate a successful resettlement at S.S.P. The question is whether they are being rehabilitated or not?

**Rehabilitation** : Rehabilitation is a big word with big objective. The broad concept is known in philosophy, medicine, social sciences and social work. It involves many disciplines as well as diverse humanitarian and economic factors.

As per Webster's dictionary rehabilitate means "to restore to rank, privilege or property one has lost, to reestablish on firm, sound basis".

"Rehabilitation in it's practical conception is not only the services and techniques of functional restoration but also the organisation of all the efforts of all the people involved as well as the end result or goal of those efforts (W.Scott Allan ) - Rehabilitation – A community challenge – W.Scott. Allan). Rehabilitation has become an important subject and activity because of spiritual and social concern for human welfare and economic pressures of the time.

The word 'rehabilitation' in the context of project affected families of Sardar Sarovar Project is a post-displacement phenomenon and would mean gaining quality of life (QOL), which they used to enjoy earlier and minimize or remove the sense of dependence and deprivation. Regaining QOL is one major criterion of good rehabilitation. It is imperative and urgent that any effort towards development must address itself to QOL of human beings. As development is now described in the social, economic and political context, there are various aspects associated with the conceptual part of the phrase QOL which conveys the meaning of wellbeing of an individual, a group, a community, a society, a nation and cosmos. Among them, it refers to basic needs, income and expenditure along with some

aspects which are qualitative and non-measurable. Quality of life is a function of all the needs, i.e. physical, social, psychological, cultural and spiritual needs.

Thus there are two issues related to development project and process :

i) Quantitative and ii) Qualitative.

The balance between the two is necessary for development, because development means increase in both material (quantitatively) and non-material (qualitative) things necessary for existence and improvement of man-living on this planet.

According to Ramkrishna Mukherjee (1989) "Quality of life is all inclusive concept which includes all aspects of living including material satisfaction of vital needs as well as more transcendental aspects of life, such as personal development, self realization and a healthy ecosystem. Four empirically validated attributes namely are (a) survival; (b) security; (c) material prosperity and (d) mental progress".

The basic concern of rehabilitation is people, but human beings don't live and suffer in isolation. Individual has his roots in the family and the community. Human beings and environment are inseparable. Social Work practice focuses on the interaction between the person and environment and the emphasis is on mental health and psycho-social issues.

### **3) Psycho-social concept for Social Work :**

Social work which is human service profession, addressing life realities of the people their struggle to meet basic needs and enhance quality of life (QOL) has been defined differently.

#### **Few Definitions of Social Work :**

1) Young Dahl (1949) "Social work seeks two things for people-economic wellbeing and the deeper source of happiness i.e. self realization. The major concern is human behaviour and relationship. It's focus of attention is the individual and his self adjustment to a recognized reality".

2) Pincus and Minahan (1978) : Social work is concerned with interaction between people and their social environment, which affects the ability of people to accomplish their life tasks, alleviate distress and realize their aspirations and values.

3) Sushil Chandra (1954) : Social work is a dynamic activity undertaken by public or private effort in the implementation of social policy with a view to raising the standard of living and bring about socio-economic, political and cultural wellbeing of the individual, family and the group with a society; irrespective of its stage of development.

Examining various definitions of social work and understanding of relevant definitions highlight that the basic social work concerns and concepts at microlevel emphasize on family and building ego strengths among it's needy members. Moreover in recent times there is an increased emphasis by social work discipline on macrolevel issues of the people and of society.

Social work theorists have drawn several approaches to analyse environment interdependencies. One of the approaches is '*social system theory approach*' which concentrates on the way in which individual interacts with other systems meaning thereby that the problem client brings to social worker isn't seen as a result of client personality alone but as a result of exchange between people and their environment. Some of these exchanges are conducive to development and wellbeing, whereas others are maladaptive. Under the latter circumstances, the feelings and thinking of people may be injured, their social functioning may be impaired.

'*Psycho-social Approach*' which is drawn from Mary Richmond's formulations from many sources such as practice material thesis, social sciences etc. is also a '*system approach*' and the basic unit of attention is '*person-in-situation configuration*' i.e. person must be seen in the context of his interactions with the external world with which he is in close interaction must also be understood ("The psycho-social approach to practice of case work" – Florence Hollis). It has been recognised throughout that changes in one part of '*person-in-situation configuration*' brings changes in other parts and that interchanges between various components are continuously in progress. Psycho-social approach has always addressed itself to environmental problems as well as to those of an interpersonal and intrapsychic nature, because human-beings don't live in isolation, it is the community that spawns, nurtures and produces human-beings.



The ecosystem model as well as growth and development related life cycle – theories developed by Freud, Erikson, Bowlby etc. highlight that family environmental, structural, cultural and individual factors need to be analysed because both individual and group behaviour are part of a socio-cultural fabric. It has long been recognised that cultural factors rooted in ethnic, religious background transmitted by family have a profound influence on ego and superego development, which in turn interpret the actual event (reality), which is considered as perception.

The basic concern of rehabilitation is people. Rehabilitation is a complex social phenomenon, with its roots firmly set in the life of community and hence, it becomes community's responsibility. If we believe in immeasurable, innate worth of human life and spirit then the most important contribution of society is its concern for and efforts on behalf of individual.

PAF's perceptions of R and R are demonstrative of the extent of rehabilitation and regaining quality of life (QOL). Perceptions are subjective and are situation specific. Perceptions are significant as those give an insight in living conditions at a given point of time.

#### **4) Significance and Relevance of the Study :**

Social work profession is human service profession, addressing human life realities and struggles to meet their basic needs and enhance quality of life (QOL). Developmental dimension in social work profession is concerned towards the development of weaker and vulnerable sections in society and hence, is concerned towards social justice, human rights, environment and sustainable development.

Sardar Sarovar Project is National Development Project. Involuntary migration is so intricately mixed with development that sincere efforts to study relocation (Resettlement and Rehabilitation) of Project Affected Families (PAFs) with focus on their psycho-social status is of utmost concern being a social work student.

Project Affected Families to be addressed in the study are tribals, constitute almost 90 percent are the masses struggling for their survival needs, human rights and social justice.

They are at unfavourable position in terms of assets and income, disadvantaged due to increasing inequalities in income, resources and access to it.

Basic social work concepts and concerns at microlevel emphasize on family and building ego strength of an individual. It is the family and community that spawns, nurtures and produces human beings. The entire reaction of a person to his displacement and process of rehabilitation is based on psychological adjustment. As human beings all of us want to live in peace and harmony. Broader aspects in one's life concerns are personal wellbeing, peaceful, happy progressive life, family life, neighbourhood, life at work, career are nodal points in one's life. The accomplishment of aims requires the solution of many personal and family problems which may act as a barrier to full development, recovery of self-confidence and physical and mental readiness.

This study is about PAFs (project affected families) of Sardar Sarovar Project. It lays main focus to visualize the post effect of resettlement and rehabilitation on social and psychological conditions i.e. experiences, needs and the perceptions of losses and gains of R and R and its impact on PAF's – psycho-social aspect i.e. social and psychological conditions of the displaced population in the changed socioeconomic and environmental conditions.

Review of the existing literature on R and R, health hazards due to displacement health and living conditions of the displaced population reveal that -

- a) Studies were conducted by researchers belonging to different disciplines using diverse perspective.
- b) Most of the studies are exploratory in nature trying to answer general question.
- c) Studies reveal socio-economic characteristics.
- d) Socio-demographic characteristic of the sample under study are explored.
- e) Incidence of problem in specific region and time is studied
- f) Some studies are undertaken to answer specific question, thereby making their scope limited, though certainly provide useful and important insights e.g. (i) cropping pattern and waste and demand study (1987 – ORG, Vadodara), (ii) some aspects role

of panchayats and institutional arrangements for canal, irrigation (1982, Institute of Cultural and Durban Anthropology, Ahmedabad).

- g) Considerable number of studies have used survey designs (e.g. socio-economic benchmark survey of 72 talukas of Narmada Command Area – 1982-83 by Group of Research Institutes) while some aspects such as sustenance of families, role performance as well as quality of social life can be studied meaningfully, eliciting qualitative data.
- h) The extent of information available is of low volume regarding support structures, social-cohesion, tolerance, self confidence and self-determination etc.
- i) On one hand there is availability of considerable published and unpublished material on the other hand there is major scope for such material on family and social life as well as overall psycho-social status.

Thus the significance of the present study is from triple perspectives –

- 1) Research Methodology Perspective : Social work research is a systematic, scientific method of discovering new facts, verifying old ones, cause and effect relationships, it's explanations. It encompasses entire canvas of social work knowledge and practice. Entire gamut of social phenomena, social problems, human-beings responses, perceptions, interventions etc. form the part of this problem-solving endeavour with humanistic goals of social work profession. This study makes use of quantitative as well as qualitative data thereby making an attempt to satisfy the need for an intensive study.
- 2) Social work education perspective : The study focus on psycho-social aspect of PAFs which includes person-in-situation / person-in-environment theories the same constitute the primary knowledge base for curriculum as the same focus on individual, family and community as well as mutuality between people and their environment. This study makes an attempt to understand project affected persons and families in changed socio-economic and cultural environment. It also tries to develop insights into intricacies of processes of R and R and PAF's living and functioning.

- 3) Social work practice perspective : Social work so far has made significant contribution to the development of both theory and practice in the field of family and marriage. Clinical social work practice with individuals and families form vital component of curriculum. This study tries to identify and develop basic understanding of the problems faced by Project Affected People prior, during and after displacement which will enable, clinical social work practitioners to offer need based, effective services to family members at various developmental stages of family life cycle. Thus, the identification of the potential stress points in the implementation of the development project is of vital importance and may provide a base for future experience.

#### **Research Questions :**

- 1) Does displacement lead to reduced 'psycho-social status' because of change in socio-cultural, economic environmental and living conditions?
- 2) Does R&R package attempt to provide better living conditions and enhance their quality of life (QOL) even in new locale?

#### **5) Objectives of the Study :**

This study is about PAFs of S.S.P., having main focus on post effect of R&R on social and psychological conditions of PAFs. Displacement results in significant changes in socio-cultural set up, economic and environmental conditions of households, changes in occupation, dietary intake etc. Lifestyle of resettled population may result in adjustment related, health and psychological problems.

The psycho-social status of an individual is affected by factors like family, social support network and individual factors (like values, attitudes, educational attainment, coping strengths when faced with stresses). Thus, the main attempt is to develop researcher's understanding on social and psychological conditions of the displaced population in the changed socio-economic, cultural and environmental conditions.

Against this background the following objectives have been delineated for the present study.

**Broad Objective :**

(I) To study perceptions of PAFs (project affected families) of S.S.P, Gujarat of their psycho-social status.

**Specific Objectives :**

- 1) To understand PAFs perceptions of important aspects of their life (need fulfilment, role performance, material, wellbeing, social status etc.)
- 2) To study PAF's perceptions of the availability, accessibility and utilization of civic amenities.
- 3) Locating inadequacies in personal functioning (i.e. communication, relationships, behaviour etc.)

(II) To identify prevailing social support network at R and R sites for PAFs.

(III) To enhance PAF's comfort and satisfaction by –

- a) Locating sitewise aspects in which improvement is needed.
- b) Locating suggestions for desired environmental changes to facilitate adaptation and reintegration.

**Key Concepts used in Study :**

- 1) **Psycho-social** : Psycho-social means psychological and social aspect of an individual (PAFs). Psycho-social status of an individual is affected by family, social support network, individual factors like values, attitudes, educational attainment and coping strength when faced with stresses.
- 2) **PAFs (Project Affected Family)** : This term is used by the World Bank. The term PAFs in this study connotes project affected families of Gujarat, i.e. have undergone submergence and resettled in Gujarat.
- 3) **Resettlement** : Resettlement is basically a physical administrative process of providing land acquisition, declaring PAF's status, relocation at R and R sites, facilities, housing etc.

- 4) **Rehabilitation** : The word 'to rehabilitate' as per Webster's dictionary means to restore to rank, privilege or property which one has lost. In Sociology it means "to restore to a state of physical, mental and moral health through treatment". In context of PAFs, it means optimum physical and psychological restoration and regaining relative autonomy and quality of life (which they used to enjoy earlier).
- 5) **Displacement** : It is a process of expropriation of land, other assets.
- 6) **Vasahat (R-R site)** : It means resettlement colony where the displaced population is relocated.
- 7) **Host village** : It means a village community residing near the area in which affected people are relocated.
- 8) **Relocation** : It means rebuilding housing assets, productive land and public infrastructure at host location.

#### 6) METHODOLOGY OF THE STUDY :

**Research Design** : The study is exploratory and descriptive, wherein researcher has attempted to study psycho-social status of PAFs in Gujarat.

#### Universe Sample and Method of Study :

- Universe of the study consists of PAFs from Gujarat, Maharashtra and Madhya Pradesh. The present study focuses on project affected families in Gujarat as villages have been submerged and PAFs have been resettled. The area of study has been selected judiciously by keeping in mind the objectives.
- Study population : It comprises of Project Affected Families (PAFs) in Gujarat, resettled in Gujarat. Those are resettled mainly in three districts namely Vadodara, Narmada and the Panchmahal.

Table. 1 : District and Talukawise distribution of R and R sites (Resettlement and Rehabilitation) in Gujarat.

District	Taluka Number & Names	No.	Total Number and Names of Sampled Talukas	No.	Total Number of R & R Sites
1. Vadodara	(i) Dabhoi	7	(i) Dabhoi	4	22
	(ii) Sankheda		(ii) Sankheda		43
	(iii) Naswadi		(iii) Nasawadi		22
	(iv) Pavi-jetpur		(iv) Pavi-jetpur		5
	(v) Waghodiya				
	(vi) Chotaudepur				
	(vii) Shinor				
2. Narmada	(i) Tilakwada	3	(i) Tilakwada	2	7
	(ii) Dediapada		(ii) Nandod		24
	(iii) Nandod				
3. Panchmahal	(i) Jambughoda	1	(i) Jambughoda	1	1

Table 2 : The sampling frame of the study :

District	Names of the sampled Taluka	No. & Name of the R & R sites	No.
1. Vadodara	(i) Dabhoi	(a) Shinor (b) Vadaj	2
	(ii) Sankheda	(a) Golagamadi (b) Paniya	2
	(iii) Naswadi	(a) Kolu (b) Kankuvasana	2
	(iv) Pavi-jetpur	(a) Ferkuva (b) Simalghoda	2
2. Narmada	(i) Tilakwada	(a) Agar (b) Sheera	2
	(ii) Nandod	(a) Khadagada (b) Vaviyala	2
3. Panchmahal	(i) Jambughoda	(a) Dhanakiya	1
Total 3	7		13



- (1) PAFs in Gujarat are mainly resettled in three districts i.e. Vadodara, Narmada and the Panchmahal.
- (2) In Vadodara District PAFs are inhabited in 7 Talukas (Namely Sankheda, Dabhoi, Nasawadi, Pavi-jetpur, Vaghodiya, Shinor and Pavi-jetpur. In Narmada Dist. they are reside over in 3 talukas (namely the Tilakwada, Dediapada and Nandod). In the Panchmahal district, they are located only in 1 taluka namely Jambughoda.
- (3) The number of sites in Taluka is mentioned from wherein 2 R and R sites and PAFs will be selected for the study.

Sample and sampling technique – It involves multistage PPS (probable proportionate to size) sampling unit i.e. a sample proportionate to size of sampling unit is taken. It involves selection of subsample proportionate in size to the total population. Thus,

- The first sampling units are talukas
- The secondary sampling units are → R and R sites
- Final sampling units are → PAFs
- Out of seven Talukas in Vadodara district, four Talukas and minimum two sites, out of three Taluka in Narmada district, 2 Taluka and minimum two sites and 1 Taluka in Panchmahal district and one site are selected considering the proximity of the sites.
- 20 PAFs from each R and R site are selected at random.
- 2 key-informants per site will be included.
- Thus, the total sample size consists of 260 PAFs and 26 villages knowledgeable i.e. 286.
- 260 number includes 160 respondents from Vadodara dist. 80 from Narmada and 20 from the Panchmahal district.
- Thus, multistage stratified probable proportionate to size (PPS) sampling method is adopted for the present study.

### Tools of Data Collection :

A semi structured interview schedule is used for collecting data.

The schedules were validated by the experts and academicians. Those were translated into simple Gujarati language and pretested, they were finalised after incorporating modifications. The schedules were pretested.

The data is collected from the following sources :

- (i) Primary sources – The respondents are Heads of the households of PAFs and key informants at the sites.
- (ii) Secondary sources of data constitute baseline data, statistical record, R and R officials etc.

**Reference Period : May and June 2005**

### Details of Research Tools

Sr. No.	Interview schedule number	Administered to	Purpose	Total number of respondents
1	3	Key informants	Profile of the R&R site	26
2	2	Key informants	To study their perceptions about R&R	26
3	1	Heads of the Households (PAFs)	To study their perceptions about R&R (Resettlement and Rehabilitation) and psycho-social conditions	260
Total 3		--	--	286

### Areas and Contents of Tool :

- 1) **Material well being** : Rehabilitation is closely related with integration which is a complex issue and is closely associated with economic opportunities available to PAFs. It includes an inquiry into land, its quality, farm economy, income, expenditure, saving etc.
- 2) **Quality of family life** : Family structure, interpersonal relationships, performance of social roles mutual trust and emotional bonding construct psychological environment which contribute to mental health / ill health of an individual. As family plays an

important role in providing social, psychological and economic support, it helps individual mobilize their available psychological resources.

- 3) **Quality of social life** : Mental health is the function of the interaction between an individual and entire social structure, focus is on the –  
 Neighborliness; Social consciousness on civic sense and Adaptability to changes

It focuses on examining relationship among PAF's at the site, in different sites and between PAF's and host village people.

- Environment and infrastructural facility
- **Rehabilitation – potential** : (with focus on personality strength, coping strength when faced with physical and psychological stresses)
  - Self-confidence
  - Love and respect for others
  - Compassion / helpful nature
  - Motivational force in life

#### **Chapterization Plan of Research Report :**

The research report consists of the following chapters.

- Preface
- Acknowledgement
- Contents
- List of tables

#### **Chapter – I : INTRODUCTION**

- Theme of Study
- Overview of displacement
- Project affected families
- Resettlement and rehabilitation policy and R-R package by the Govt. of Gujarat
- Research Methodology
  - Design
  - Universe

➤ Sampling and sample size

## **Chapter – II : REVIEW OF LITERATURE**

- Project affected families (PAFs) of dams / projects at International, National Level and S.S.P.
- Studies on rehabilitation
- A brief review of rehabilitation policy in India.
- Rehabilitation policy in Gujarat with special reference to Sardar Sarovar Project.

## **Chapter – III : PROFILE OF THE RESETTLEMENT AND REHABILITATION (R AND R) SITES AND SOCIAL BACKGROUND OF THE RESPONDENTS.**

I.A) Profile of the R and R Sites

I.B) Profile of the Respondents

II) Perceptions of the respondents regarding their experiences in preshift

## **Chapter – IV : PERCEPTIONS OF THE RESPONDENTS OF THE R AND R PROCESS AND PACKAGE**

- The focus of the study being psycho-social aspect of PAFs with reference to post displacement phenomena, the views, feelings and perceptions of PAFs regarding the following aspects are studied :
  - (i) Changed socio-economic, cultural and environmental conditions in the R and R sites
  - (ii) Facilities availed in sites from Government of Gujarat
  - (iii) Difficulties faced by PAFs
  - (iv) Coping and rehabilitation potential of PAFs
  - (v) Views of key-informants regarding R and R will be documented.

The data will be presented in single frequency tables. To highlight relevant, important issues and concerns visual aids are employed such as maps, graphs, boxes etc.

The appendices provide R & R policy tools of data collection, map, news clippings.

## **Chapter – V : FINDING, CONCLUSIONS AND SUGGESTIONS**