

CHAPTER SIX
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

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CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

(I) SUMMARY:

(1) Introduction:

In this chapter an attempt has been made to present in brief the summary, findings and conclusions drawn from the summary. The recommendations made will hopefully be useful not only to the policy-planners and the concerned government officials but also it will be very useful for the scientists, technologists, sociologists, economists, lawyers, geographers, media-representatives, voluntary, non-government community or organizations to take protective action when wome isolated villagers are in danger.

(2) Dam Construction and Affected Villages:

The construction of a dam is not a new phenomenon in India. While a dam is a boon to those whose lands get their lands irrigated, on the other hand, for those whose lands get submerged with little or no benefit from the dam construction it is more than a curse. Obviously, hundreds of thousands of people displaced due to the thousands of dams constructed in India since Independence face a calamitous situation bringing to them a very bleak future. According to experts, some

200 lakhs of people have been uprooted due to various development projects since Independence, like dams, mines, industries, wildlife sanctuaries etc. of which 140 lakhs, i.e., 70 per cent of the total direct project-affected people are displaced due to construction of dams, of which many have not received reasonably adequate compensation.¹

(3) Dam-Affected Villages:

The dam-affected villages are of two types, one direct dam-affected villages - the villages coming under direct submergence of the river dam reservoir, seat of dam, residential colonies, etc. are considered direct dam affected villages; these are resettled in the first phase of resettlement programme; but the villages (Gaothans) do not come under direct submergence but their land partially comes under submergence. Such cases are considered as indirect-dam-affected villages and are not considered in the process of resettlement and rehabilitation throughout India. These are the forgotten victims of development. Especially in the hilly areas like Sahyadri, when a dam is constructed, and the water-level in the reservoir goes on increasing step by step, the people living in the catchment area of the dam become isolated. Rugged terrain, dense forest, deep valleys, poor accessibility etc. factors force

them into isolation physically, economically, socially and politically. There is no national or state government policy to cope with these indirectly affected villages. The environment and human rights lobby and the leaders of the organizations like Narmada Bachao Andolan (NBA) (Save Narmada Agitation) have paid scant attention towards these isolated villages in the catchment area of dams. The direct dam affected people are resettled somewhere in the command area or irrigation project, but what about these indirect dam affected people? They have lost their fertile land under submergence, they are cut off from their social groups, original Gaothans, relatives and even separated from their family deities (Kuladaivata) and thus partially or fully uprooted and neglected. There is an urgent need to re-examine the concept of resettlement.

(4) Isolated Villages - Problems:

According to the present study there are 25 villages and 5,811 inhabitants in the 301 sq km catchment area of Warna dam. Most of the villages are located on the top of the spurs and along the slopes of the spurs at an elevation of about 750 mtrs to 970 mtrs above MSL. A majority of the villages, i.e., 14, belong to Shirala taluka of Sangli district, 7 villages to Shahuwadi taluka of Kolhapur district, 3 villages come

in Patan taluka of Satara district and one village comes in Sangameshwar taluka of Ratnagiri district. A majority of the villages, i.e., 17 villages, have lost their 2,713 hectares of land, i.e., 11 per cent of the total geographical area under the submergence since 1986. In the upper part of the Warna valley the local market place (Pethlond), main approach road and most of the original Gaothans are gone under submergence. The remaining villages are mostly sub-Gaothans, Wadis and Dhanagarwadas of the main villages, which are already resettled in the downstream command area of Warna Irrigation Project. Since 1986 the remaining villages are being isolated. They have been set apart physically, economically, socially, politically from the people, places and organizations. Almost they have become 'Islanders'.

The population sizes of the villages in the area range from 21 in Aloli to 535 inhabitants in Gothane village. According to the population classification a majority of the villages, i.e., 15 belong to 201 to 400 class. Most of the population is non-tribal and S.C., S.T. population is less than one per cent of the total population in the catchment area of Warna dam.

The people living in the catchment area are

either totally illiterate or less educated, i.e., upto 4th standard only.

In most of the villages, almost 95 per cent of the total working population is engaged in agriculture sector; a majority of them are agriculture cultivators-cum-labourers.

Predominance of female population is observed because of the migration of male population to Bombay in search of livelihood. It is quite an astounding fact that very few villagers are engaged in dam service or forest service.

(5) Landuse Pattern and Agricultural System:

The area under study is situated in entirely hilly terrain. Sharp slopes, escapements, deep valleys, interlocking spurs are the main features of the relief in the area. The soils of the region are in general red laterite. The thickness of the soil varies from place to place, i.e., on convex slopes the soil layer is poor and less fertile; especially on the upper structural terraces the land is unirrigated and of poor quality. The alluvial soils are found on the alluvial structural terraces on the banks of the streams. The fertile alluvial soils on the bank of the Warna river have gone under submergence. The lower structural terrace land in the area, along the stream sides is rich in

quality and irrigated with natural Paats (canals). But this irrigated land is only 3 per cent of the total cultivated land in the area. Thus, the terrace fields lie both above and below the villages. Mostly the interlocking spurs have been used for field terraces in the area.

The existing landuse pattern of the catchment area follows the nature of the climate and physiographic elements of relief and slope. In the area about 60 per cent area is under forest cover, 10 per cent is under cultivation, 9 per cent is fallow and 11 per cent land is not available for cultivation, e.g., grazing barren land, stony waste etc., of the total geographical catchment area of Warna dam. In the catchment area 11 per cent of the total area has gone under submergence.

(6) Agricultural System:

The rugged terrain and climate have involved a specific agricultural system in the upper Warna valley catchment area. The long sharp slopes of the interlocking spurs, deep valleys, heavy rainfall, soil erosion due to torrential runoff and the narrow, elongated and irregular field terraces etc. are the diverse conditions in which the present agricultural set up has been evolved after long experience in the catchment area of Warna dam.

The land of the upper field terraces is usually found unirrigated (rain-fed) in which Nachani, Vari, Bajri, Barag are harvested in Kharif season and on the lower terraces some fields are irrigated to harvest rice in Kharif season and wheat, maize, pulses like Tur, Gram, vegetables etc. in Rabi season. On the moderate to sharp slopes slash-and-burn cultivation is practised in certain pockets in the area.

The agricultural yield of different crops is very low. It is due to poor quality of soil, traditional farming techniques, inadequate use of fertilizers, small land-holdings, inferior seeds, soil erosion, irregular and haphazard landuse and neglect of land resource conservation measures, reduce the crop yield in the catchment area.

(7) Horticulture:

According to the climate and topographical conditions of the area, it is ideally suited for the development of horticulture, but unfortunately adequate efforts have not been made to develop modern fruit plantation in the area by both local people and government officials.

Livestock is an important aspect of the rural economy in the valley, but it is just in the subsistence form due to lack of market and less diffusion of modern techniques and information about livestock rearing

in the area. Bee-keeping is a good supporting occupation in the upper zone of the catchment area, but it has almost vanished as the local market (Pethlond) has submerged.

(8) Socio-Economic Problems:

The rural life in the catchment area of Warna dam is primarily based on subsistence agriculture. The villagers have to depend on this acute source of their livelihood. In the hilly area, like Warna catchment area, the villagers have attempted to cultivate the lands which are not suited for cultivation. In addition to these the poor quality soils, inferior seeds, less use of fertilizers, primitive agricultural methods and poor yields are the major barriers in the development of modern agriculture in the area. In addition to these, since 1986 the people are facing several socio-economic problems due to the imposed isolation on them because of the construction of Warna Irrigation Project.

(9) Cut-off Market Links:

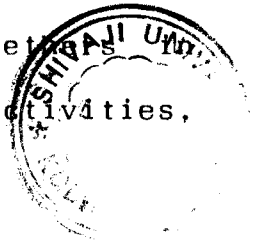
Before the submergence the upper part of the Warna valley was depending on the Pethlond market. But after 1986 they lost their local traditional market place due to the submergence. At present the unique transitional set up of the market links has been broken.

The people have to walk at least 20 to 50 Kms to reach their nearest market place, e.g., Nayari (20 Kms), Morgiri (35 Kms) new market places for the interior zone villages, Jinti-Dhebewadi (20 to 30 Kms) for the middle left bank villages. And lower right and left bank villagers have found Mandur-Arle (20 to 35 Kms) as their market places.

It is clear that the entire catchment area is facing common economic problems, such as lack of transportation and communication facility, poor market facility, lack of education, no electricity, no irrigation facility, no medical facility, not even a single retail shop in the entire area. All these factors have forced the villagers into abject poverty.

(10) Cross Cutting of Social Fabrics:

Before the submergence, in the entire upper Warna valley, strong compact social groups were developed, but today after half of the population has shifted due to the submergence have made cross-cutting of social groups. This has disordered the traditional social fabrics, which villagers had been enjoying for several years in the valley. Today the people in the catchment area are faced with certain difficulties, especially in establishing marriage links and get together different social and cultural communal activities,



because of the distance between isolated villages in the catchment area of Warna dam and their counterparts resettled in the downstream command area of Warna dam.

Because of this partial uprooting of the people living in the Warna valley, the isolated remaining villagers have lost not only their lands but the relatives, Gaothans (Pandhari) and deities (Kuladaivatas). This is, so to say, an unaccounted for and unjust cost of the progress, which the affected residents of the area have had to pay. These isolated forgotten souls are not sure if and when justice will be done to them.

(11) Ecological Problems:

In the catchment area of the Warna dam most of the social and economic problems are imposed by the outsiders but some basic ecological problems have been created by the villagers themselves in the area. Throughout the rugged hill area of Sahyadri, the farmers have attempted to cultivate the land which is not useful for cultivation. This primitive tillage has developed ecological imbalance in the entire catchment area. The land resources like forest, water, minerals, soils and physical land forms in the catchment area have been deteriorated frequently due to excessive erosion, as a consequence of deforestation, overgrazing, overlopping, overfallowing, overploughing and neglect

of the conservation measures.

(12) Earthquake - Koyana-Warna:
A New High Risk Zone:

In addition to social and economic problems, people living in the catchment area are facing series of earthquakes since 30 September 1993, e.g., Latur-Usmanabad earthquake. According to seismological records, more than one thousand low to moderate intensity earthquakes are recorded during the period from September 1993 to March 1994 in the catchment area. The epicentre of the earthquakes has been located at Chandoli (Kd.), just 20 Kms away from the Warna dam site in the north-west. Geologists believe that the Koyana-Dhebewadi-Warna is a new high-risk zone in the western Maharashtra.

On 8 December 1993 a powerful tremor hit the area followed by a series of low to moderate intensity earthquakes which have not claimed any life but almost 95 per cent of the houses in the area have partially collapsed. The villagers are strongly demanding for their resettlement in the downstream command area of Warna dam before 1994 rainy season, because they fear that they might be burried under their weakened houses if another graveyard like Killari-Latur is in their store. Shri Laxman Peje, a leader of the village

Kulyachiwadi told us: "We strongly demand for the immediate resettlement, otherwise there is likely to be the 'Jag Budi' (the deluge)".

(II) Attitude Towards Resettlement:

The villagers living in the catchment area of Warna dam are facing several problems. A majority of them are strongly demanding for their resettlement and habitation as dam-affected, in the downstream command area of Warna dam. Because, firstly they are dam-affected people, then secondly sactuary-affected and recently hit by the earthquake. We measured the perceptions of the selected villagers in the selected villages about their resettlement and found that there is a strong neighbourhood effect in the choices suggested by the people. Their perceptions about the relocation have been dominated by the social, cultural, economic links which they have established before submergence through years. That is why a majority of the respondents have given priority for their resettlement in the talukas like Shirala, Shahuwadi, Walwa, Panhala, Hatkanangale where their relatives are settled, their original Gaothans (Pandhari) has been settled and their deities (Kuladaivatas) are located after the submergence. The villagers are quite sentimental about their traditional social, cultural, economic fabric. We found that they

are homogeneous and united on the resettlement issue.

The villages located in the catchment area of Warna dam have been isolated due to construction of Warna Irrigation Project. Such isolated villages are facing several socio-economic and ecological problems. Since 1986 as the area under the reservoir rose up, their means of livelihood were cut off due to the loss of terrain, their means of transportation, market, have gone under submergence. Besides these, they have been separated from their relatives, original Gaothans, deities (Kuladaivatas) due to resettlement of the direct submerging villages into downstream command area. Because of this social cross-cutting, rugged terrain, dense forest, heavy rainfall, poor accessibility, poor yield in agriculture on the one hand, and the Vasant Sagar Reservoir on the other, they stand separated apart physically, socially, economically, politically from the rest of the people, places and organizations. They have become victims of development as well as biodiversity conservation.

(II) Recommendations:

The recommendations are based on the present study and also on the earlier studies made in this field, and our individual experiences and observations made during our several visits to the affected villages



in the catchment area of Warna dam.

(1) Change in the Resettlement and Rehabilitation Policy:

There is a need to re-examine the concept of resettlement in India. At present in India there is no national policy to cope with the problem of displacement due to various developmental projects like dams, mines, industries, wildlife sanctuaries, roads, railways etc.. The direct affected people are considered for the resettlement but justice demands that the isolated people in the catchment area of the dam who are the real sufferers, must be considered in the process of resettlement and rehabilitation, especially in the hilly areas like Sahyadri where several isolated are forgotten in the process of resettlement.

(2) This is an interdisciplinary issue. It requires an interdisciplinary approach. A policy needs to be evolved in consultation with geographers, sociologists, economists, environmentalists and lawyers to change the hundred-year old British 'Land Acquisition Act' which was passed in 1894.

(3) Dams are generally constructed in the hilly areas while the benefits of irrigation, electricity go to the people living in the downstream command

areas. The people living in the catchment area of dam are divided into two groups. The direct submerging people are shifted and resettled in downstream command area but the indirect affected people become isolated. They lose their land, relatives, cultural and all other assets, economic links etc., due to extreme isolation. Especially, in the hilly areas like Sahyadri, several dams have been created **several isolated pockets.**

They are forgotten victims of the development. There is a need for a broad coalition. It cannot be the government alone that could cope with it. That is why the coalition of voluntary non-government organizations is a need of time.

4. Catchment Area Treatment:

To protect the catchment area of Warna dam from the geographical hazards, the following preventive measures are needed to be introduced in upper Warna valley:

- (a) The entire catchment area of Warna dam should be treated as a biodiversity conservation zone. A unique catchment area treatment plan must be introduced to protect the rich floral and faunal wealth in the upper Warna valley.
- (b) India has 410 sanctuaries and 69 national parks

of which nearly 72 per cent of the sanctuaries and 56 per cent of the national parks have people living within their boundaries. If the human population increases at this rate, there will be no forest cover left by the middle of the next century.² Considering this fact the isolated pockets like Chandoli Wildlife Sanctuary should be treated as a biodiversity conservation totally prohibited for human living. But while implementing this we must not ignore the rights of the people living in the catchment area of Warna dam. The affected people must be resettled and rehabilitated in the downstream command area of the Warna dam. This catchment area of Warna dam should be developed as a model of perfect balance between biodiversity conservation and ideal rehabilitation and resettlement of the isolated people. Otherwise, they will be victims of both dam and biodiversity conservation, cutting down the very roots of their subsistence.

- (5) The short term and long-term conservation measures are also needed to be implemented such as -
 - (a) Large-scale deforestation, overlapping and over-grazing should be checked.

- (b) Afforestation and fruit gardens should be encouraged on the valley sides and spurs.
- (c) Forest plantation should be encouraged on the barren land to check the gully formation and soil erosion.
- (d) Quarrying of bauxite and overblasting should be checked.

We would like to mention while concluding that the problem of isolated villages should be solved immediately. While doing so, priority should be given to balance between the rich land resources of the catchment area of Warna dam, like forest, wildlife, water, soils, minerals, and physical land forms on the one hand and poor, illiterate and ignored victims of the development and conservation on the other hand.

NOTES AND REFERENCES

- 1 Katiyar, Arun. "Refugees of Progress", p. 84,
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- 2 Krishnakumar, Asha - "Now or Never" p. 51,
Frontline, 11 Feb. 1994.