

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/242651226>

# ENVIRONMENTAL AND ECONOMIC IMPLICATIONS OF MULTIPURPOSE RIVER VALLEY PROJECTS : A CASE FOR THE MADIKHEDA DAM (INDIA)

Article in *Journal of Environmental Research And Development* · January 2008

CITATIONS

2

READS

2,389

1 author:



Vishwambhar Prasad Sati

Mizoram University

160 PUBLICATIONS 382 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Climate Change Implications on Agriculture and Food Security in Mountainous Regions of Sichuan Province, China [View project](#)



Call for Elsevier Book Chapter on Forest Resources Resilience and Conflicts: Way to Mitigation for Sustainable Livelihoods [View project](#)

## ENVIRONMENTAL AND ECONOMIC IMPLICATIONS OF MULTIPURPOSE RIVER VALLEY PROJECTS : A CASE FOR THE MADIKHEDA DAM (INDIA)

Vishwambhar Prasad Sati

Department of Geography Government Post Graduate College Shivpuri (INDIA)

E-mail : vishwambhars@yahoo.co.uk

*Received September 17, 2007*

*Accpeted March 14, 2008*

### ABSTRACT

This paper aims to discuss the impact of multipurpose river valley projects on economy and the environment of the areas affected by it. A case study of Madikheda Dam Project is carried out, which is constructed in the core region of Madhav National Park in Madhya Pradesh (INDIA). Impact analysis is done on the flora and fauna and as well as on economic and social development. It is concluded that though a large scale of depletion of forest and extinction of wild animals will be the consequences in due course of time after completion of its all phase's construction , its economic impact is tremendous. It will not only solve the energy crises but also generate the substantial amount of employment and will supply ample water for irrigation. The study is mainly based upon the collection of primarily and secondary data. The primary data were gathered through framing questionnaire, scheduled, and interview of the affected people of all thirteen villages, government officials, and old and experienced people. Secondary data were collected from different sources such as forest department, water resource department and statistical department.

**Key Words :** Multipurpose river valley project, Environmental impact, Economic impact, Madikheda Dam Project

### INTRODUCTION

The multipurpose river valley projects have diverse impact on economic development and environment. Tremendous development has been attended by the areas where these projects were commenced successfully, particularly in the field of agriculture and energy. At the same time, ecological implication, such as depletion of forests and extinction of wild animals, is enormous. Similarly, the problems of water logging and consequently various water born diseases manifested a way for health hazards in the affected areas. Rehabilitation of the oustees also remains a big impediment for the agencies

involving with this practice. The Madikheda Dam Project (MDP) is a multipurpose project of Government of Madhya Pradesh. The northwest part, where this project is commencing, is one of the poorest regions among the poor regions of the State. The economy is mainly based upon the cultivation of subsistence cereal crops, which economic viability is considerably low; even the populace of the region does not meet the two times food requirement. Agriculture is rain-fed. The crops are grown mostly during the three months of monsoon season. The production and productivity of the crops is adversely very low. Drinking water crises in the summer season is

considerably high as the people have to walk kilometers for water. The supply of energy, in a form of electricity, is just negligible even sometimes twenty four hours energy cut can be noticed. Construction of this dam and canals from it will definitely boost up the agricultural production and solve the energy crises as the main objective of this dam project is generation of electricity and ample supply of water for irrigation and drinking purposes. This paper aims to examine the present status of economic development and the future impact of MDP on economy, development, and environment. The main question raised during the study is, what are the major impacts of the MDP on economy, development, society, and environment and what measures can be framed and implemented for minimum loss of environment?

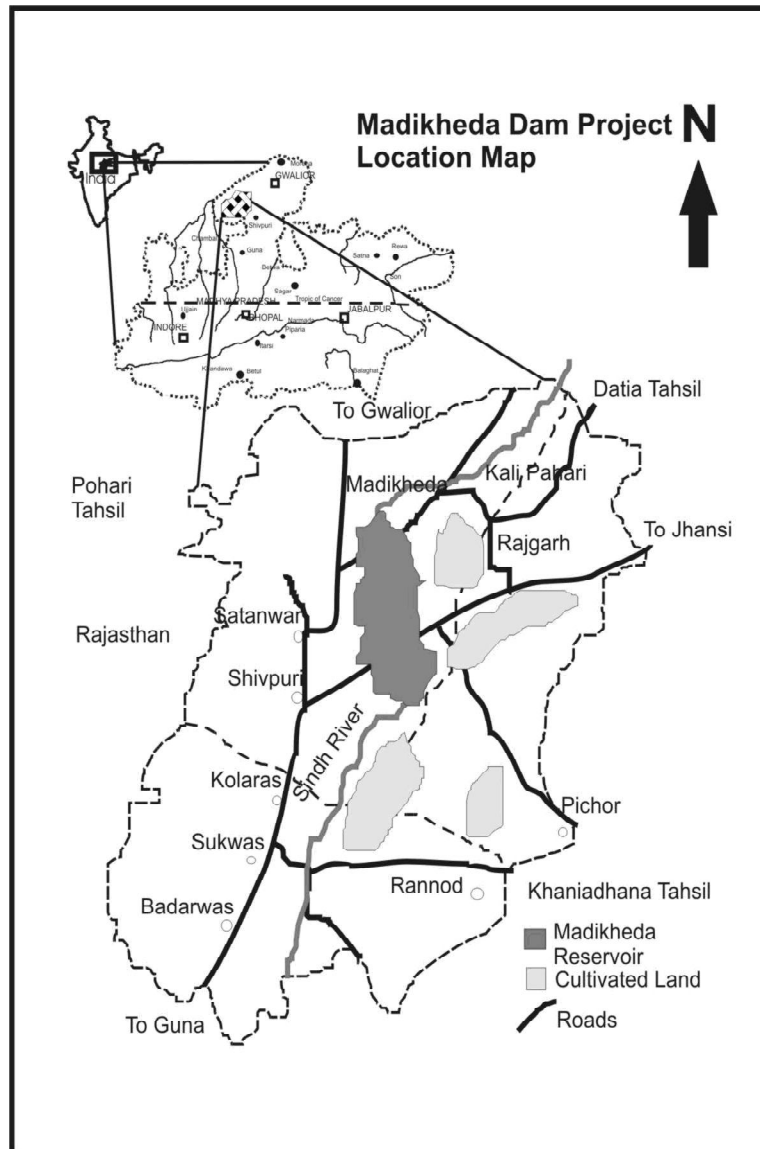
#### **Geo-environmental setting**

The MDP is being constructed in the Sindh River near Madikheda village, about 35 km away from Shivpuri town (district

headquarter) of MP state in India. The extension of MDP lies at latitude 25° 33' 20" N and longitude 77° 51' 10" E. The Sindh River is one of the sub-systems of Ganges, which confluences with Yamuna River near Etawa (Uttar Pradesh). It has 5540 sq. km watershed area. Mean monsoon rainfall is about 763.42 mm while mean annual rainfall is 923.29 mm. Maximum height of dam is 59 m. Gross storage capacity is 970.50 m cum and production capacity is 60 MW. The total submerged area of the dam is 5679.91 ha, which includes 3050 ha of forestland. There are thirteen villages in the submerged area with 7.9 per cent of total agricultural land, while its command area has a large proportion of rain-fed agricultural land. The irrigation facilities in the command areas of reservoir are just negligible. The beneficiary districts of MDP are Shivpuri, Datia, Bhind, and Gwalior in general and whole Madhya Pradesh State in particular. **Fig.1** shows the dam, which is under construction and **Fig. 2** shows the location map of MDP.



**Fig. 1** : Shows MDP site in Madikheda village in the Sindh River



**Fig. 2 :** Location map of MDP comprising its command area

## MATERIAL AND METHODS

The study is mainly based upon the collection of primary data, which were gathered through household level survey. There are 13 affected villages, out of which, nine are fully submerged and four are partially submerged. Household level survey was carried out of all the 13 villages based upon their socio-economic conditions. Similarly, the areas where the oustees are being rehabilitated were surveyed.

Survey of the areas of dense vegetal cover and habitat of wild life, which are under submerged were done simultaneously. For household survey, questionnaire and scheduled were framed and affected people and government employee were interviewed. Three main questions were raised during the study; (i) what is the existing level of socio-economic development, (ii) what would be the economic and environmental implications of

MDP, and (iii) How will the rehabilitation of the oustees including wildlife and forest area be solved. The sub-questions on land use pattern, cropping pattern, production and productivity of crops, major types of forests and wildlife, the impact of MDP on land use, irrigation, cropping pattern, forest, wildlife, and overall on the ecology of the command area were raised. Suggestions were made for proper and smooth rehabilitation of oustees.

## RESULTS AND DISCUSSION

### Environmental and economic implications

The multi-purpose river valley projects in worldwide have tremendously enhanced the entire development processes of the region and most of the countries having developed stage of their economy only after successfully completion of these projects. The hydropower projects finds appropriate place in the economy of the countries because most of the non renewable resources are in the stage of their vanishing. The ample water supply for agricultural fields, through the construction of canal from reservoir, enhances the production and per ha yields of crops and it has spontaneous consequences on the economic uplift of the populace of the region or area. Besides these positive impacts of river valleys projects, there are many negative impacts can be noticed. The rehabilitation of the oustees, displacements of flora and fauna, problem of water logging and consequently the water born diseases are the other face of these projects. The oustees of any type are always afraid about their placement that resembling with their own occupancies or not. Fortunately when the oustees get choices based establishment they are kind enough lucky. The implications of MDP on the environment and economy of submerged areas (fully and partially) and its affected areas are considerably high. On the one hand, it has direct impact on the socio-economic development of the people inhabited in the command area and on the other; it affects

the environment as a form of depletion of fauna and flora.

### Environmental Impact

**(a) Impact on Flora :** The major dams in India have been responsible for 12 percent of the forest land losses during the period 1951 to 1985 (Shah 1990a). Singh (1990a) reported that big river valley projects have swallowed 0.5 mha of forest land between 1951 and 1976-roughly one-tenth of the area, which has benefited from irrigation. The direct impact of construction activity for any water resource project is generally limited in the vicinity of the construction station only during the construction phase. The construction side includes the dam side, canal network, power station along with borrow areas and places where grouting needs to be carried out. The main impact of construction activity on flora is mainly indirect. In the MDP, a large population will migrate in this area and their activity could cause significant loss of flora from the adjoining areas of the construction sites. The exact nature of destruction and its quantification is not possible as it depends on several undefined factors. About 7, 000 workers including technical staff are congregated in the area during construction phase. It can be assumed that the technical staff will be of higher economic status and will live in a more urbanized habitat and will not use wood as fuel. However, workers residing in the area are likely to use fuel wood. There will be an increase in population by about 19000 of which about 90 per cent i.e., 17, 100 are likely to use fuel wood. This figure may appear large but is quite probable in view of the fact that apart from wood there is no organized source of fuel in this area. There are 1600 trees per ha. Hence, every year about 1.5 ha of forest, may be cleared on this account. In addition to the fuel requirements, trees may also be cut to meet the wood requirements for construction purposes, furniture, and household implements, etc. The exact quantity of such use cannot really be estimated at this stage.

At the operation phase of the dam construction there are heavy losses of forest, because, the reservoir submergence would entail loss of 3100.00 ha of forestland of which 1658.45 ha is a part of the Madhav National Park (MNP). Unlike Kanha National Park, MNP is the oldest national park of Madhya Pradesh. The park was set up in 1958 with a total area of 165.32 sq. km. In 1982, the total area of MNP was extended up to 346.6 sq. km. It is situated close to Shivpuri town. The area of MNP was part of the former Royal Shooting preserve of the Maharaja of Gwalior. The effect of the construction of dam, by and large, on flora of the MNP and other areas is highly intensive. The loss of fuel due to submergence is of the order of 19686.7 m<sup>3</sup> costing Rs10.84 million. A similar study for timber was carried out. The loss of Kardhai tree species was estimated as 581.22 m<sup>3</sup> with a value of the order of Rs 5.12 million at 1998 price level.

**(b) Impact on fauna :** During construction stage a large number of machinery and construction labour will have to be mobilized. This activity may have some disturbances to the wildlife population. However, the magnitude of impact is difficult to predict. Poaching may also increase during construction stage due to increased human interferences. New roads will be constructed or existing roads will be upgraded, workers will cut trees for fuel wood and other requirements. This will lead to further degradation of forests. Although, no major wildlife is observed in the area, but certainly some wildlife species are observed. The increase in pressure on existing forests is also likely to affect wildlife.

The ecological changes brought by a multi-purposes project adversely affect the riverine species fisheries. Consequent to dam construction and reservoir formation, substantial morpho- ecological changes occur in the original river both above and below the

dam site. These include conversion of the running water body of slow discharge characteristics and radical transformation of long established enter-relationship between organisms. Fluvial biocoenoses are replaced by new ones; some species shift to new spawning and migration range; anadromous fish tend to settle down; local stock of fish form, intra-specific biological differentiation of fish occurs and egg laying substrata change. Other changes also occur such as inundation of spawning grounds; fluctuation in water levels, alteration in the physio-chemical conditions of spawning area in the upper reaches; disappearance of marshland constituting the spawning and feeding ground of some important food fishes, complete change in turbidity and silting patterns which may result in the failure of spawning or ineffective spawning of many important fishes.

The construction of dam will create a reservoir with an area of 5679.91 ha and storage capacities of 901.81 mm<sup>3</sup> at FRL 346.25 m. This reservoir can be cultured include Catla (catla catla), Rohu, Mrigal. The total fish production from the reservoir could be of the order of 142 T/year, generating revenue of Rs. 8.52 million. About 150 fishermen families can also sustain their livelihood from reservoir fisheries.

The habitat condition at present in the MNP general seems to be degraded but even then there is a capacity of supporting a good wildlife population. However, the present status of such wild animal population appears to be very low. After discussions with some of villagers, it was learned that the wild animals' status was good fifteen years back. The area had even large number of tigers during the recent past. But due to poaching of animals, has led to alarming fall in the number of wildlife.

#### **Socio-Economic Impact**

**(a) Impact on Agriculture :** In impact of irrigation facilities can be noticed from the



**Fig. 3 :** Command area of Madikheda dam reservoir, dense vegetal cover in the back ground, and water logging started in the initial stage

fact that the net sown area increased from 118.8 mha (1950-51) to 141 mha (1992-93). Dhawan (1986) reported that with the advent of canal irrigation, crop yields rose substantially. Irrigation is the mainstay in increasing productivity as leads to increase in gross cropped area, gross irrigated area and flood grain production. It stabilizes production during drought years. Under the submerged area of the dam, the agricultural land is very less. Only 7.9 per cent land is cultivable. Hence, the impact on the agricultural land due to construction of dam in submerged area is just negligible. While the command area of dam

has the vast agricultural land, which is uncultivated due to lack of irrigation since the rainwater is not enough to cultivate the crops, therefore, most of time in the year, the land is remained fallow. Construction of canal, as they are already in operation, will supply ample water for irrigation purposes.

In the second phase of the dam project, 5 canals will help to four districts in terms of irrigation facilities for 162, 100 h a area.

**Table 1** reveals the districts, benefited villages and irrigated area in ha.

Government has proposed to make available about 83, 086 ha land from the 4

**Table 1 : District wise benefited villages and irrigation area (in ha)**

District	Benefited village	Irrigated area (in ha)
Shivpuri	157	65, 936.0
Datia	31	8, 487.0
Gwalior	193	62, 726.0
Bhind	72	24, 591.0
Total	453	1, 62, 100.0

Source of data : Collected by the author from primary and secondary sources

canals immediately. The details regarding the canals are as follows:

**(i) Doab canal system :** The canal is drawn from the Harsi Poshak Canal having 37.95 km length. In the first phase the work on 19.98 km length canal has been completed. Rest of 17.97 km length canal will likely to be completed, which will supply irrigation facilities to 65 villages of Shivpuri district along with 20, 680 ha land.

**(ii) Right bank canal system (Up to Mahuar River) :** This canal is started from Mohini pick-up wear having length about 32.76 km. It will supply irrigation water for 68 villages and 22, 968 ha land.

**(iii) Ukayala canal system :** The source of this canal is Ukayala Saidal Dam, which is having the distance about 42.30 km and provide water for 34 villages and 16, 693 ha area for irrigation purposes.

**(iv) Right bank canal system (after Mahuar River) :** Samoha pick up bear is completed, and ready to provide water for irrigation purposes to 58 villages and 27, 112 ha land of Shivpuri and Datia districts.

The problem of rehabilitation of the affected people in the MDP is not similar to those of the big dam projects of India as Tehri, Narmada, Tawa, Bergi, etc. In the said big dam

projects, the rehabilitation of the affected villages was the main issue that is still dominated in the construction of the two giant dam projects. Although, the rehabilitation work has been finished in the Tehri dam project and the oustees are resettled in the better location than to their original one and almost the affected people have been settled in a due course of time, yet, some of the people are still struggling for more compensation. This is truth that it is not easy to displace anywhere particularly to leave the original village because man is emotionally attached with his birthplace. The second important thing is the policies that implemented for the cause of resettlement. In Indian scenario where basic infra-structural facilities are not available in most of the areas and major part of the land is comprised by the villages and their environment, thus the rehabilitation problems have become more unrealistic. Individual interest is one of the giant problems for tackling the rehabilitation programs.

The construction stage will last for 8 years. The peak labour force skilled and unskilled labourers, required is estimated at about 7, 000. The total number of persons inhabiting the area including the service population will be about 19, 000 which is quite



**Table 2 : Details of the affected villages of MDP**

Name and nature of affected village	Location (in Taluks)	Land under submergence	Affected households	Land for resettlement and areas allotted
Madikheda (PS)	Shivpuri	63.68 Ha	58	132.93 ha (Raipur)
Sausa (FS)	Shivpuri	32.50 Ha	15	31.53 ha (Kali Pahari)
Binega (FS)	Shivpuri	19.16 ha	181	380.46 ha (Kali Pahari)
Bamanua (FS)	Shivpuri	26.17 ha	1	- (Kali Pahari)
Khajuri (FS)	Karera	72.02 ha	27	56.75ha(Rajgarh, Narwar)
Dehari (FS)	Karera	90.34 ha	5	10.51 ha(Rajgarh)
Urwaha (PS)	Karera	47.58 ha	--	--
Kanthi (FS)	Shivpuri	316.25 ha	88	184.98 ha (Sunaj,Kolaras)
Mitlony (FS)	Shivpuri	139.34 ha	59	124.02 ha (Sunaj,Kolaras)
Dangipura (FS)	Karera	302.64 ha	103	216.51 ha (Jagdora, Narwar)
Amola (FS)	Karera	338.01 ha	438	920.68 ha (Sirsod, Tila, Ramnagar (Karera)
Karmai (PS)	Pichhore	139.96 ha	117	245.93 ha (Shivraj, Pichore)
Rasoi (PS)	Pichhore	28.05 ha	144	151.34 ha (Hinotiya Pichore)
<b>Total 13 villages</b>	3 taluks	1615.70 ha	1164 families	2455.64 ha

large. Those would migrate to this area are likely to come from various parts of the state and the center. Such an admixture of population has its own advantages and disadvantages. The advantages include exchange of ideas and cultures between various groups of people, which would not have been possible otherwise.

Due to longer residence of this population in one place, a new culture and having a distinct socio-economic similarity would develop, which will have its own entity.

This MDP will provide irrigation facilities for about 83, 086 ha land and 215 villages of Shivpuri, Datia, and Gwalior districts. 1.4 billion

electricity unit production from the 60 MW hydro power capacity power house will be generated per year, which will help for peak power availability for the region. The revenue at the present rate would be Rs. 4.2 billion. The installed capacity of the dam is 2.40 MW and annual generation is 60 MW. The dam will help to electricity supply in Shivpuri and its surrounding districts. The total cost of the dam is proposed to 123.05 MW. The socio-economic conditions will also be boost up following the ample water supply in the drought prone command area.

**(b) Impact on tourism development:**

Reservoir storage affords opportunity for improved recreation facilities, e.g., Vrindavan Gardens in Karnataka and Mallampuzha garden in Kerala. They have developed in boosting country's tourism industry. River valley projects improve the elements of regional environment and prosperity through infra-structural facilities. Highways and extension of railway lines connect the area with other centers of trade.

The area where this dam is being constructed is already a tourist interest place. There are many places of tourist interest in Shivpuri district. MNP, Kuno-Palpur sanctuary, Karera Son Chirraiya bird sanctuary and the reservoir is being created due to construction of dam will definitely develop the tourism activities in the region. A tourist circuit can be developed for providing facilities to the tourists.

**CONCLUSION**

Since independence, over 2200 dams of height more than 15 meters have been constructed in India.<sup>9</sup> Consequently, a vast rain-fed area of the country has been converted into irrigated area and as result of this, the production and productivity of the crops seems to be high. Eulogizing the contribution of irrigation in Indian agricultural, Rangeley<sup>7</sup> stated that it was responsible for 55 per cent of increase in food grain production. Irrigation commission estimates that the ultimate irrigation

potential when the entire water resources are fully exploited will be 113 million ha. Thus nearly 45 per cent of our cropped area will remain un-irrigated for all time to come.<sup>11</sup> An analysis showed that in value terms, the aggregate crop output per sample household in Kal command area rose by nearly 183 percent with the advent of Kal irrigation project. Similarly, the successfully commencement of river valley projects rose the substantial numbers of employment. Silliman and Lenton<sup>10</sup> reviewing empirical evidences from 85 micro studies, 25 of them from India, found that with few exceptions they confirmed a positive relationship between irrigation and employment. Flood is one the major problems in India particularly during the monsoon season. One-third of the area of the country is subjected to recurrent floods and one of the surest methods to control floods is to store the excess water in the major dams.<sup>9</sup> River valleys projects, after construction of reservoir, controlled the flood problem in most of the areas.

Displacement of the oustees from their parental areas to relocated areas is a serious concern. One Navajo woman said in a movie 'Broken Rainbow' that there was no word for relocation in the Navajo Language- to relocate meant to disappear and never to be seen again, quotes Guiggenheim.<sup>4</sup> The past experiences of resettlement in river projects shell out that rehabilitation is never considered as a developmental project. Scudder<sup>8</sup> stated that since a previous way of life is destroyed by displacement, all resettlement projects must also be developmental projects. Millions are being displaced to make way for such projects, their lives uprooted to serve the greater good<sup>2,5,6</sup> noticed that 4 years after completion, 13 villages where people are to be resettled are still not ready for occupation. International Labour Organization Convention, adopted in 1857 as a 'Conservation concerning the protection and integration of Indigenous and

other Tribal and Semi-Tribal populations in Independent Countries', was the initial step taken in this regards. India was on the first countries to ratify ILO 107 on September 29, 1958.<sup>6</sup>

The other major economic and environmental problem is water logging and water born disease. Singh<sup>12</sup> stated that the related disasters of water logging and salinity might have caused ruin of the Babylonian Civilization in the valley of the Tigris-Euphrates. According to Chambers<sup>1</sup> millions of ha had been lost to cultivation or had their productivity seriously diminished by water logging, with or without salinity. Problems of salinization are becoming serious each year due to rise in water level.<sup>13</sup> Data available in the Central Water Commission indicated that the percentage of waterlogged area varied between 1.5 per cent and 10 per cent of the benefited area in various projects.<sup>9</sup> Singh<sup>11</sup> stated that a mean of 17.93 per cent of land was lost to agriculture by water logging and salinity from the actual irrigation potential utilized. Huge impoundment of water in dam reservoir has adverse impact on health of people. There are increased incidence of water-borne diseases like malaria and fluorosis. Shallow weed-infested edges of reservoirs act as breeding ground for disease carrying mosquitoes.<sup>2</sup>

The discussions and interpretations of the given data, on impact analysis, reveal the large-scale impact of construction of dams on environment and socio-economic conditions. On the one hand, the large part of the MNP is coming under the submerged area along with huge biodiversity in respect of fauna and flora diversity, which is extensively found in the area, is tremendously affected due to construction of dam and on the other hand the benefits of the dam construction will definitely enhance the economic status of the people inhabited in

the submergence and command area. The main focus should be on the post construction of dam, which could affect the health and other environmental entities. The economic aspect of the dam project is quite prominent because of electricity scarcity in MP State. This project will help to maintain the electric supply not only for the region where it is located but it will supply for the adjacent areas to certain extent. In terms of development in agriculture, the ample and proper water supply, following the construction of canals, will boost up the production and productivity of crops, which are still having poor productivity and production throughout the region.

The construction of dam will provide ample water for irrigational purpose. The generation of electricity will also be helpful to solve the energy crises. But at the same time, proper policy and planning is required to maintain the ecology of the region. Relocation of the dense vegetal cover area of MNP, which comes under the submerged area of MDP, should be given priority by the authority involving with this. The dam construction will also be helpful for employment generation as a form of skilled and non-skilled labours. The region is dacoit affected. It is mainly due to high rate of unemployment. The construction of dam will solve this problem up to certain extend. Similarly, there is a vast potential of tourism development. Water sports can be developed. It will also be a big centre for fishing.

#### **ACKNOWLEDGEMENT**

This paper is an out come of the UGC Major Research Project entitled, 'Environmental Impact Analysis and Socio-Economic Study of Madikheda Dam Project, Shivpuri (MP) India. I sincerely acknowledge UGC, Bahadur Shah Zafar Marg, New Delhi, for funding to commence this project.

**REFERENCES**

1. Chambers, Robert. managing canal irrigation. Oxford and IBH Publishing Co. Pvt. Ltd., India, (1988).
2. CSE, The state of India's environment 1984-85, *The Second Citizens Report*. Centre for Science and Development, 95 Nehru Palace, New Delhi, (1985).
3. Dhawan B.D., Output impact according to main irrigation sources: empirical evidence from four selected states. Paper to present Seminar on Water Management-The key to development of agriculture. *Indian National Science Academy, New Delhi, April, 28-3, (1986)*.
4. Guggenheim Scott, Development and the dynamics of displacement. *In a report on workshop on rehabilitation of persons displaced by development projects*, (ed.) Fornandez, A. P., Myrada, Bangalor, (1989).
5. IFAD, *Mid tern evaluation report: Bhima command area development projects*, India. International Fund for Agricultural Development, 107 via del serafico 00142, Rome, (1984).
6. Morse Bradford and Berger Thomas, Independent review mission on Sardar Sarovar. *Resources Futures Inter-national Ottawa, (1992)*.
7. Rangeley W. Robert., Irrigation and drainage in the world. *Paper for the International Conference on Food and Water*, Texas, May 26-30, A and M University Texas, (1985).
8. Scudder Thayer, The development potential of few lands settlement in the tropics and subtropics: A global state of the art-evaluation with special emphasis on policy implications. *Final report to the US Agency for International Development*, Washington D.C. (1981).
9. Shah R.B., Role of major dams in Indian economy. In B. D. Dhawan (ed.), *Big dams: claims, counter claims*. Commonwealth Publishers, New Delhi,. 105-125, (1990).
10. Silliman Jael and Lenton Roberto, Irrigation and the land-poor. *Paper for International Conference on Food and Water*. A and M University, College Station, Texas, May 27-30, (1985).
11. Singh R.P., Water management : A crucial factor for a sustainable agriculture. *Yojana, March 16-31, 6-18, (1990)*.
12. Singh R.P., Blending of traditional and modern water harvesting systems: a must for sustainable agriculture. *Yojana, 38 (11) 12-14, (1994)*.
13. Verghese B.G., *Winning the future: from Bhakra to Narmada, Tehri, Rajasthan Canal*. Konark Publishers, New Delhi. (1994).

**SAVE THE ENVIRONMENT**

- Good Environment is good health
- Air Pollution causes health hazards
- Recycle every drop of Water