

# **Evaluation Study on the Impact of Implementation of Western Ghats**

## **Development Programme (WGDP) in Karnataka**

### **Department of Rural Development and Panchayat Raj**

#### **Executive Summary**

Conservation and restoration of the Western Ghats (WG) are crucial to sustainable development. Several factors have led to the degradation of vegetation cover in the WGs, while the natural restoration processes are not able to replenish the loss of ecosystems. Keeping in view the importance of the WGs for the people and biodiversity, the Government of India has initiated Hill Area Development Programme (HADP) under the Special Central Assistance (SCA) programme since the Fifth Five Year Plan (1974-79), an initiative that has been exclusively aimed at the development of the WGs in our country. The Indian States sharing the WGs from the Western Coast of the country receives budgetary allocations with a special aim to preserving the fragile ecosystems besides ensuring the sustainable livelihood options of the various communities inhabiting the WGs. Henceforth, several programmes through other agencies too have been initiated for promoting conservation and development activities in the region. For example the constitution of the Nilgiris Biosphere Reserve under UNESCO MAB programme in September 1986 is one such programme being implemented in the region.

In India, the WG landscape spreads over five states viz., Maharashtra (36.48), Karnataka (27.67), Kerala (17.55), Tamilnadu (17.61) and Goa (0.67). Karnataka state holds the second largest portion of the WGs landscape within its boundaries (27.67%) after Maharashtra (36.48%). The total area of the WG regions in Karnataka constitutes about 44,300 square kilometers. Therefore, it is necessary that the state design focused programmes so as to ensure a sustainable development of the WG region. In Karnataka, the Department of Rural Development and Panchayat Raj (RDPR) is responsible for

developing, initiating, implementing and monitoring several programmes oriented towards the sustainable social and ecological development of the WG region. In these endeavours, RDPR receives the funds for implementation of various programmes in order to achieve several goals related to the biophysical development of the region. The RDPR is headed by the Principal Secretary who holds the sole responsibility for ensuring the development of Western Ghats Programmes in the state. The programmes initiated in the beginning of the Fifth Five Year Plan, have been continuing a the , the RDPR intending to evaluate the various schemes under the Western Ghats Development Programme (WGDP) to ensure that the objectives are met besides vii seeking suggestions for their improvement. As part of the WGDP guidelines, this study was sponsored by RDPR, Government of Karnataka, to evaluate the WGDP schemes of the state. In view of this, the present study was taken up across representative districts covering all stakeholders.

In Karnataka, WGDPs cover 22.81 % of the total geographical area of the state spread across 40 taluks in 11 districts. The six major sectors in the state viz., agriculture, forestry, social forestry, horticulture, animal husbandry and rural infrastructure come under WGDP schemes for the sustainable development of socio-ecological systems of the region. As per the guidelines of the RDPR, funds are allocated to the District Watershed Development Department (hereafter DWDD) and Engineering Department (ED) through respective Zilla Pachayats executing the developmental works at the ground level.

As per the records, the RDPR has received a sum of Rs. 3240 lakh for the year 2012-13. This grant is allocated to all the districts based on WG ecosystems in each district and their respective total population. The programs involve community participation while preparing the Annual Action Plan along with the Watershed Development Department officials. Accordingly, the RDPR submits APOs to the

Government of India (GoI) for approval and sanction of grants. Thus, grants are to be utilized for a given year for the developmental activities in the Western Ghat region. However, the RDPR has not been able to utilize the allocated funds fully for the last 5 - 6 years. We have noticed that for the year 2007-08 the initialization of funds only 60 per cent of the total allocated budget, while for the last five years from 2007-12, the expenditure accounts for about 63-88 per cent of the total budget.

In order to evaluate the schemes under WGDP in Karnataka, the region has been divided into three parts namely North Karnataka, South Karnataka and Coastal Karnataka based on their ecological characteristics (Table 1). Of the 11 districts, two viz., Belgaum and Dharwad representing North Karnataka share WG; Dakshina Kannada, Udupi and Uttara Kannada representing coastal Karnataka share WG; and Chickmagalore, Hassan, Kodagu, Chamarajnar, Mysore, and Shimoga representing South Karnataka, accounts for a fair share of of WG. The budgetary allocations, subject to certain specific norms, vary across districts. (For the current financial year, of the the total allocated funds (Rs.32.40 crore) Uttara Kannada district (Rs.568.04 lakh) followed by Belgaum (Rs.514.53 lakh), Shimoga (Rs.451.50 lakh) while the Dharwad districts accounts for the least share (Rs.73.92 lakh). viii The per square kilometre allocation has been found maximum for Udupi (Rs. 9134), followed by Uttara kannda (Rs.8329), Belgaum (Rs.7943), Hassan (Rs.7495) and Dakshina Kannada (Rs.7089). The allocation of funds is found less than Rs. 7000 for five districts viz., Shimoga (Rs.6799), Chamarajanagar (Rs.6744), Kodagu (Rs.6648), Chikmagalur (Rs. 6601, while the least per square kilometre allocation is found in Mysore (Rs.6591). However, per capita per year allocation of funds is higher for Dharwad (Rs. 69) followed by Uttara Kannada (Rs. 51), Chikamagalur (Rs. 50) and Kodagu (Rs. 49) and the least allocation of Rs. 28 and Rs.25 for Udupi and Belgaum respectively (Figure 8). The average per capita allocation for the Western Ghats districts of Karnataka is found to be

Rs. 37. Therefore, in respect of for per capita allocation of funds, these two districts account for below than the average.. Hassan and Dakshina Kannada are quite comparable to the average allocation (Rs. 37), while for the rest of the districts (Uttara Kannada, Mysore, Chamarajanagar, Kodagu, Chikmagalur, Dharwad) the per capita allocation of funds ranges from Rs. 40 – Rs. 69, which is higher than that of the average allocation (Rs. 37).

Over the last five years, North Karnataka has received Rs.2553 lakh out of which Rs.2220 lakh has been allocated to Belgaum and Rs.333 lakh to Dharwad. Similarly, South Karnataka (Chickmagalore, Hassan, Kodagu, Chamarajnagar, Mysore, and Shimoga) has received a total budget of Rs.6649.61 lakh out of which the highest allocation has been made to Shimoga and a minimum allocation to Chamrajnagar. This is because Shimaoga accounts for a higher share of WGs and also higher population as compared to other districts of south Karnataka. For the financial year 2007-08, of the total budget of Rs.1162.45 lakh for south Karnataka the maximum allocation is found to have been to Chickmagalore the least to Chamarajnagar. Among the districts of Coastal Karnataka viz., Dakshina Kannada, Udupi and Uttar Kannada over the allocated budget last five year accounts to about Rs.4463.71 lakh of which the maximum share has gone to Uttar Kannada and a minimum to Dakshinna Kannada.

Further, the allocation has been segregated for development works and management activities and of the total funds, allocated 60% is for developmental works and 40% for management activities. As mentioned before for the current financial year (2012-13), the state has received a sum of Rs.3240 lakh for the implementation of the total schemes and programmes. Of the total funds, about 7.1% is given to management component; 4.30% to Entry point activities, 3.35% to the institution and capacity building, 3.37% to watershed work phase, 36.89% to ix agriculture and soil conservation, 9.02 % to Forest sector, 5.38% to Agroforestry 9.31% to Horticulture,

14.26% to foot bridges, 3.3% to livelihood activities, 2.92% to Animal husbandry, 0.79% to Livestock management, 1.6% to production system, 0.95% to crop diversification, 1.74% to WGDP CELL. However, for the current financial year, there is no allocation made for preparatory phase, DPR and Spice board. The maximum share is accounted for agriculture and soil conservation; this is justifiable considering fact that agriculture. the main occupation of the people of the study area, is dependent on surrounding ecosystems for sustenance. Therefore, strengthening the agriculture sector for self-sustainability seems to be one of the objectives of WGDP in Karnataka. However, a minimum fund is allocated to Livestock management even though this sector needs to be strengthened and therefore, funds under this need to be increased. But as per the WGDP guidelines a major (60%) allocation is meant for developmental works while the rest for livelihood improvement. It is perhaps for this reason that livestock management accounts for a relatively less allocation share and the other reason is that it comes under livelihood improvement programmes.

The Department of Watershed, in association with the Executive Committee of each watershed prepares action plans for each district of WG in Karnataka for implementing watershed related activities for conservation of fragile ecosystems and also for developing biodiversity-rich areas of the local economy. For the current financial year (2012-13), through people's participation and Government interventions, the RDPR has plans to develop 25 vented dam cum foot bridges across the Western Ghat with a view to providing infrastructure facilities to people residing inside the forest area, particularly the high rainfall regions so as to enable them to be part of the mainstream development process. Vented dam cum foot bridges are important and in terms of facilitating risk-free movement of the people across the rivers and streams during rainy seasons. In Uttara Kannada, the work for 72 % of the total foot bridges in the WG is under implementation. We have observed the benefits of foot bridges in

Madikeri and Belgaum districts with local people expressing their positive opinion about the work taken up by the Engineering and Watershed department for developmental activities. Similarly, agriculture and soil conservation works are also being undertaken across all the 11 districts while giving a high priority to soil conservation programmes through carrying out watershed activities. From 2012-13, a total of 3064 hectares of contour bunding/trenches, 5967 mtr of nala revetment, 19203 Rmtr of diversion channels/feeder channels and other water and soil conservation activities across the Western x Ghat area have been undertaken under soil conservation programme. Besides agriculture and soil conservation programmes, forest and horticulture sectors are also given importance under the watershed programmes to improve the green cover of the ecosystems in addition to enabling people to improve their livelihoods through fruit free plantations. Moreover, the watershed department is forming Self Help Group (hereafter SHG) and User Groups (UG) for creating awareness through various training programmes on ecological restoration, soil and water conservation, crop cultivation, marketing and income generating activities across of the project areas. An equal importance is also given to aspects all the districts for the development of ecology and rural poor. Apart from the above mentioned to aspects related to development, the watershed department encourages people to take up locally based cottage industries and also to develop a fair degree of enterpreneurship for improving the household and local economy.

Watershed activities are one of the major development activities undertaken in the WGDP across all the districts. These works are undertaken on both the private and public lands with the help of local people even as the department tries to elicit the perceptions of local people's before implementing each scheme. This is much appreciated as people viewpoints are taken in to consideration for the developmental programmes and schemes. The department of watershed has formed an Executive

Committee (EC) for implementing and monitoring the work during and after implementation of WGDP schemes. We have personally observed the watershed activities during field visits while interacting with user groups and self help groups in Shimoga, Madikeri and Belgaum districts. Local people of these areas have a good opinion about such development models.

According to DWDD and others in the watershed department, there are instances local conflicts during the implementation of works. Conflicts arise mainly while delineating land boundaries and choosing the potential beneficiaries of WGDP. During our field study we have come across people expressing that the conflicts might get escalated when politicians try to intervene. However, people's opinion is that without politicians interfering the issues (if any) get quickly solved through mutual interactions and discussions. In this process, officials of the department and the heads of the committee always put in their efforts in solving the problems as and when they arise (if any). In the horticulture sector, the main issues are related to the distribution of seedlings and type horticultural crops. Sometimes officials fail to fulfil the demands of the local people and at other times it may so happen that the preferred species are not distributed among the beneficiaries. Similarly, problems arise in the animal husbandry sector during the distribution of sheep, goats and Giriraja birds in the villages. Whereas in the forestry sector fencing becomes a problem and also grazing animals damage forestry plantations. These issues are not so serious in nature and can be solved with the help of local people and the officials concerned.

The Watershed Department monitors the work during the entire implementation phase as also post completion. In addition, officials from Zilla Panchayat (ZP) such as Chief Planning Officer (Development) and his/her team visit the site for cross-checking of the work and its various components. The RDPR department encourages outside agencies like Non Government Organizations (NGOs) in terms of evaluating the

programmes. This is highly appreciated by the stakeholders. Once or twice in a year Directors and the team of WGDP in the RDPR department also make field visits to observe for themselves the functioning of all the developmental works being undertaken. A much appreciative aspect of the WGDP is that there is a vigilance wing in place to minimize illegal activities and damages and also to control the fund flow.

WGDP programme is popular and well received by a majority of the people, in that 90% of the people feel convinced that the programme is beneficial. Involving the local community in the development activities in the region is seen as an important factor for the success of this program. Likewise training programmes have also made a substantial impact. The watershed programmes has also aided in cultivating rice, paddy etc, unlike earlier which is highly appreciated. Based on our observations and discussions held with officials and the people, it can be said that there is a need for working on certain aspects of the program to enhance its effectiveness further. It is also considered important to increase the livestock coverage in terms of numbers so that more beneficiaries could be covered. With respect to forestry, there is a need for enhancing forestry related schemes to benefit the landless. Horticulture is another fairly sought out and appreciated program with the demand for fruit saplings being high , however, it would be useful to promote organic farming more intensely. Currently, there are several training programmes being organized, however, it would be useful to expand and focus on certain programmes keeping in view the current demand for services. It would also be useful to further enhance the level of skills besides linking them with market demands. NGOs may be used in this regard. Besides this, staff constraints need to be addressed while managing such vast programs as vacancies exist. Promoting Research and Development can lead to significant contributions and improvement in sustaining the initiatives taken with the beneficiaries involved. Streamlining management by way of establishing a monitoring authority would aid

further. The annual action plans should prioritize important works under the WGDP Programme. A greater attention should be given to averting political pressures during the construction phase by making the process more open and people-friendly. To make it convenient for the officials to function effectively and people to get equitable benefits, some processes need to be developed involving people, while choosing beneficiaries, distributing saplings, livestock etc.

Technically some interventions are to be made like adopting desiltation of tanks and promoting the utilization of its benefits. Specific trainings may also be provided to the beneficiaries regarding technical awareness and adaptation like ground water recharge, water usage etc. Due attention should be given to their requirements like adopting of the trenchcum-bunding on the of marginal farmers. A special attention should be given to improving rural infrastructure schemes like foot bridges, vented dams etc. Further, it would be more appropriate to promote micro watersheds than sub watersheds as also the use of modern techniques like GIS/remote sensing drainage maps while constructing check dams and infiltration tanks across all districts.

With respect to financial interventions, increasing the overall annual budget up to 30 percent across districts can help further strengthen the programme as specific allocations across the sectors could be further enhanced for additional coverage. Increasing the amount of Reward funds to each SHG (a minimum of Rs.50000-75000 per group) would be a positive initiative towards strengthening the SHGs besides initiating further income generating activities. Salaries of Temporary filed staff may be increased so as to avoid attrition. A timely release of funds would ensure initiation of activities as planned. Hence, an on time release of funds to E.C. committees should be ensured.

## Recommendations and Suggestions

### **Managerial Aspects**

**Strengthening Trainings Programs** – Trainings are important to improve the skills and quality of output. Currently, trainings are focused on improvement of livelihoods through income generation activities, entrepreneurship awareness and ecological restoration activities. The scope of trainings can be expanded to other livelihood support programs like tailoring, piggery etc. It would also be useful to further enhance the level of skills and specializations to make additional value added products and link them with markets. The people do prefer specific courses to enhance their skills as well. This could be made note of while designing of such programs. NGOs may be involved to provide specialized training programs to SHGs, UGs and Staff of the Department across various sectors.

**Recruiting Adequate Staff** – As evident from the department records and discussions with the officials, the vacancy status is high as 30 per cent of the total sanctioned posts. It is important that Human Resources are appropriately employed to manage varied programs and hence filling up of the vacancies is important. Scarcity of efficient and adequate staff is seen as one of the major constraints. The shortage of staff (30 per cent) has been reported pointed out across all study districts. It is important that the staff is recruited based on work load to ensure an efficient management of vast programs.

**Increasing Livestock Coverage** - Livestock coverage in terms of numbers should be increased so that more beneficiaries are brought under the purview of the programme. People prefer cows and buffaloes to sheep and goats. Besides, it is interesting to note that people willing to bear 50% of the capital cost required for buying livestock. It would be useful to increase the number of livestock health camps based on the field level requirements. Livestock care includes the provision of pastures, protection and veterinarian care which should be include in the programme.

**Improving Specific Forestry Schemes** - There is a need for enhancing Forestry plantation schemes. Special attention to social forestry is required as landless, marginal and small farmers will benefit besides meeting their fodder, and fuel wood requirements. Plantation of compatible and desirable species of wood perennials on farmlands results in an improvement in soil fertility. Inclusion of perennials with the annuals, in due course of time, would certainly aid improve the bio-physical components of the landscape, increase the carrying capacity of lands and maintain different temperature regimes. However, this need a long term scientific planning.

**Improving Horticulture Plantations** - There is need for promotion of horticulture plantations of specific varieties and locale specific (Mango, Cashew, Sapota) and seedling distribution in the Horticulture Sector. This is in response to a huge demand for horticulture and seedlings amongst the people. This is an important component as it improves the household economy. A special focus has to be given to promoting organic farming with appropriate training programs to popularize it.

**Streamlining Management** - The establishment of a monitoring authority with the completion of the program after a 5 year time period would be useful to further direct the programs appropriately. Monitoring the developed programs after completion of 5 years is important to ensure sustainability. Watershed guidelines are adhered to largely, but could be made further intense. The annual action plan is a crucial and important document of the WGDP programme. These Action plans should prioritize important works as they have are not focused in some of the taluks. Schemes across all the districts should be equitably allocated to ensure that all the districts are benefitted. For instance, some of the districts are not provided with the livelihood infrastructure schemes. It would be useful to have common formats for documentation across districts which make it easy to assess progress and ensures accountability. Political interference

in the construction of engineering works like foot bridges, hanging bridges should be avoided by making the process more open and people friendly.

**Avoiding Conflicts through Planned and Equitable distribution** – Currently, there is no provision of fencing for the forestry plantation and could be taken up. Officials have reported encountering problems while implementing the program on certain occasions. Conflicts generally arise while delineating land boundaries and choosing the beneficiaries of WGDP. Similar issues have been reported during the distribution of sheeps, goats and Giriraja birds under animal husbandry scheme among the people in villages. Demarcation of fencing, grazing animals trampling the forestry plantations are some of the vital issues under forestry sector. Thus it is necessary, to this has to be planning such schemes carefully so as to avoid conflicts.

**Promoting Research and Development** – Research and Development is making significant contributions and improvements in sustaining programs. It is important that of research activities are taken up to further enhance the program's quality and outreach. It would be useful to promote research to come up with some innovative approaches and ascertain possibilities of taking the programme to a higher level in terms of deriving long term and sustained benefits to the community.

### **Technical Aspects**

**Adopting Tank Desiltation Initiative** - Desiltation of Tanks may be taken up instead of designing new percolation ponds/infiltration tanks. The silt obtained from tanks could be used by farmers, on their lands for which a minimum amount could be collected from them per truck load of silt. Further, tank management may be taken up by way of involving local communities as this is a traditional system practised since a longtime.

**Trainings on Technical Aspects** – Organizing specialized trainings for farmers on technical aspects and potential benefits would be an important initiative that should be taken up. Farmers who have shown interest in the capacity building programs and demonstrated them in the field should be trained to be local leaders to create further impact of the initiatives. Simple awareness programmes could aid in knowledge and understanding and promote water conservation initiatives among the farmers.

**Avoid Trench cum Bunding** - Trench cum bunding scheme does not seem to be in favour of marginal farmers as it occupies more land space. This scheme does not suit the marginal farmers as it occupies more land space during the construction of bunds. Therefore, farmers opined across all the study districts were not keen to take up trench cum bunding.

**Improving Specific Infrastructure Schemes** – Special attention should be given to improving rural infrastructure schemes like construction of foot bridges, hanging bridges, vented dams etc. particularly in high rainfall areas. Flooding during rainy seasons is a major concern for women and school going children, hence, these bridges makes it safe and convenient for children to go to school while the parents can attend to their work at the fields.

**Promote Micro watersheds** - It would be more appropriate to promote micro watersheds rather than sub watersheds. The activities pertaining to micro watersheds are more effective compared to sub watersheds. The involvement of people and their participation is more intense in micro watersheds. Being a small area it is easy for people to involve and observe the activities. As observed, the implementation was more effective in achieving targets in the micro-watersheds.

## **Financial Aspects**

**Increase Budget Allocation** - Increasing the overall annual budget up to 20 to 30 percent across districts. This would aid in further strengthening the programme as specific allocations to the sectors could help expand the coverage of beneficiaries with potential impacts felt more intensely. Conservation is a crucial in development, therefore additional allocation is essential for sustainable development and management of natural resources.

**Increase Reward Funds to SHGs** - Increasing the amount of Reward funds to each SHG (a minimum of Rs.50000-75000 per group – officials view, Rs.100,000 to 150,000 per group – SHG's perception) would be a positive initiative towards strengthening the SHGs in terms of creating and initiate further income generating activities. The expectations of SHGs across all the study districts are by and large similar and also the enthusiasm of SHG members is more visible. An increase in funds may be provided based on the type of project and its outreach.

**Increase Salaries of Field Staff** - Currently the salaries given to the temporary staff are inappropriate and inadequate, and hence the attrition level is high. Salaries of the Temporary field staff may be increased (to minimum of Rs. 6000 to Rs.8000) particularly in view of the opinion expressed by the people concerned across all the districts.

**Timely Release of Funds and Approvals** - Timely release of funds would ensure the initiation of activities as planned. Hence, on time release of funds to E.C. committees is important. Besides the process of releasing funds may be reduced to avoid delays. Some of the WGDP programmes are season specific and hence the timely initiation will lead to effective implementation and development.