

Evaluation Study on the Impact of Implementation of Western Ghats Development Programme (WGDP) in Karnataka

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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

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 Uttar Kannada representing coastal Karnataka share WG; and Chickmagalore, Hassan, Kodagu, Chamarajnar, Mysore, and Shimoga representing South Karnataka, accounts for a fair share 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).

The per square kilometre allocation has been found maximum for Udupi (Rs. 9134), followed by Uttara kannada (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

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

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 entrepreneurship 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 prefer

species are not distributed among the beneficiaries. Similarly, problems arise in the animal husbandry sector during the distribution of sheeps, 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 trench-cum-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 field 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.

1.0 Introduction

Western Ghats (WG), the natural resource pools of the country, play a crucial role in shaping the topography, climate pattern and the environment system of the nation besides being the living laboratories of biodiversity. Several ecosystems in the Western Ghats landscapes play a major role of connecting ridge between Western Ghats and Eastern Ghats, the two important flora and fauna rich areas of the country. Thus, the Western Ghat landscapes are important not only for the people and biodiversity of these areas but also equally important for the social and ecological systems of the low lying areas as ecosystem services that flow from WG provide sustainability to the low landscapes of the entire peninsular India. Human beings derive many useful benefits from the existing biodiversity and so also large number of people directly or indirectly depend on forest resources for their livelihoods. Keeping in view the ever increasing population and an actual decrease in the forest areas, the Central Government has been allocating funds under Special Central Assistance (SCA) and the Hilly Areas Development Programmes for conserving and improving the present Western Ghats in Karnataka and other states. This programme, initially started during the Fifth Five Year Plan (1974-79), is still continuing. Across various plan periods, the focus of the program has varied. During the sixth plan, the watershed development programme was taken up keeping in view the significance of ecological restoration and conservation of biodiversity of the region. Later during the eighth five year plan, an integrated approach towards watershed development was initiated, while during the Ninth Five Year Plan a greater emphasis was given to awareness creation, maintenance, preservation and restoration of biological diversity. Further during the Tenth Five Year Plan, the emphasis was on the preservation of biodiversity and rejuvenation of the hill ecology with an equal emphasis was given towards economic activities and ensuring livelihood of the inhabitants under the parameter of environmental conservation.

WGDP covers 22.81 % of the state geographical area (11 districts and 40 taluks) and six major sectors in the State (Figure 1). The major sectors namely agriculture, forestry, social forestry, horticulture, animal husbandry and rural infrastructure are considered an integral part of for the conservation of Western Ghats and socioeconomic development of the people living in and the vicinity of the WG. The landscape Western Ghats falls under different agroclimatic zones namely the southern transition and dry zone, coastal, hilly, northern transition and dry zones of the Karnataka. Western Ghats are a major source of water with many east and west flowing rivers in Karnataka and other regions being fed by

runoffs from tropical forests in this region. Thus, In the Western Ghats, the west flowing rivers remain a powerhouse, while the east flowing rivers, the lifeline of the Deccan plateau (Bhaduri 2012). The IT Sector in Bangalore entirely depends on the rivers of Karnataka's Western Ghats which contribute to the power security of the Silicon Valley of India. Therefore, conservation of the existing ecological systems constitutes the most crucial component on the agenda of sustainable development of Karnataka. As per the 2011 census about 14.30% of the state population residing in the Western Ghats is dependent directly/indirectly for it's livelihood on this landscape. Hence, improving the household income and awareness regarding the ecological restoration is a challenging task for the Government. Accordingly, many have been devised under the WGDP for a sustainable socioecological development of the region.

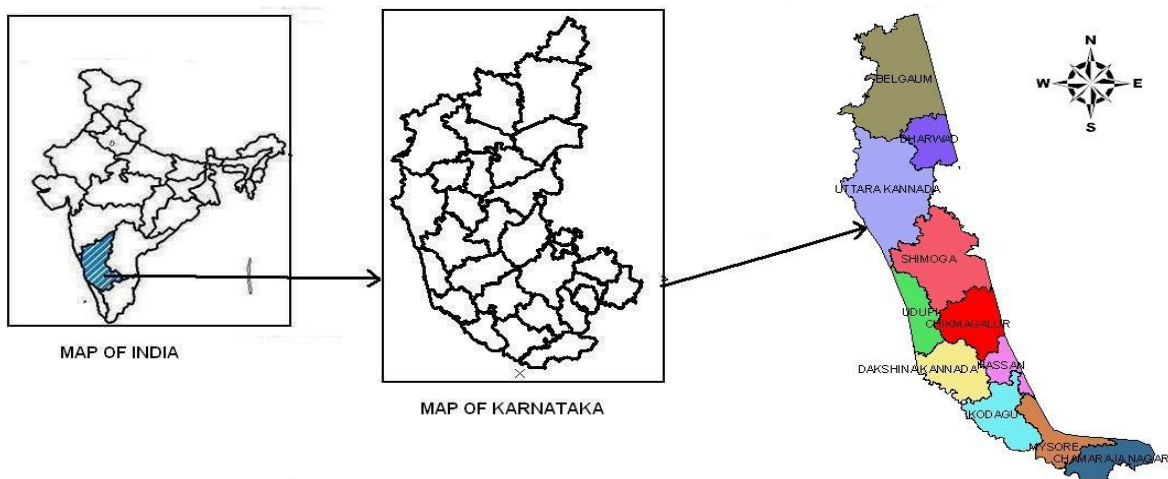


Figure 1: Location of Western Ghats in Karnataka

The schemes under WGDP in Karnataka mainly focus on the ecological restoration and livelihood improvement of the people in the region. Primarily, agriculture sector, soil and water conservation through land development activities such as leveling, bench terracing, amalgamation of paddy fields, reclamation, soil erosion controls, constructing farm ponds, bunds, nalas etc., are taken up under ecological restoration. As for the forestry sector programmes of WGDP, afforestation activities and nursery development programmes are prioritized and including the reclamation of degraded forests and management of fuel wood and fodder development activities for reducing the burden on natural forests and also ensuring a sustainable supply of services for fulfilling the demands of people for these

primary resources. The horticulture sector stands for serving the purpose of ecological restoration while converting wastelands into horticultural crops. Under the livelihood improvement activities, the focus is on animal husbandry in terms of to encouraging the people to rear good breeds of cattle and to take up poultry, piggery and rabbit farming. In addition, there are good incentives for landless people under WGDP. The landless people are given domestic cooking materials, carpentry kits besides, small animals and poultry so as to enable them to secure their livelihoods in the region.

The department of Rural Development and Panchayat Raj (RDPR), Government of Karnataka, has the sole responsibility of developing the WGDP programmes in the State. As per the guidelines, the RDPR allocates funds to the District Watershed Development Department (DWDO) and Engineering Department through respective Zilla Pachayats for executing developmental works at the ground level. As part of the WGDP guidelines, RDPR has to evaluate and monitor the schemes and programmes currently being implemented in the Western Ghats through an external agency. Accordingly, the Institute for Social and Economic Change (ISEC), Bangalore, was given the task of evaluating the programmes and providing a actionable strategies for the sustainable development of Western Ghats programme in Karnataka. Specific objectives of the study read as follows

1.1 Context

The State holds the second largest section of the Western Ghat landscapes within its boundaries (27.67%) after Maharashtra (36.48%). The total area spread of WG in Karnataka works out to about 44,300 square kilometers, while in Kerala, Tamilnadu and Goa to 28,100, 28,200 and 1,073 square kilometers respectively. Therefore, the state has undertaken a focused programme for the sustainable development of the WGs (Figure 2).

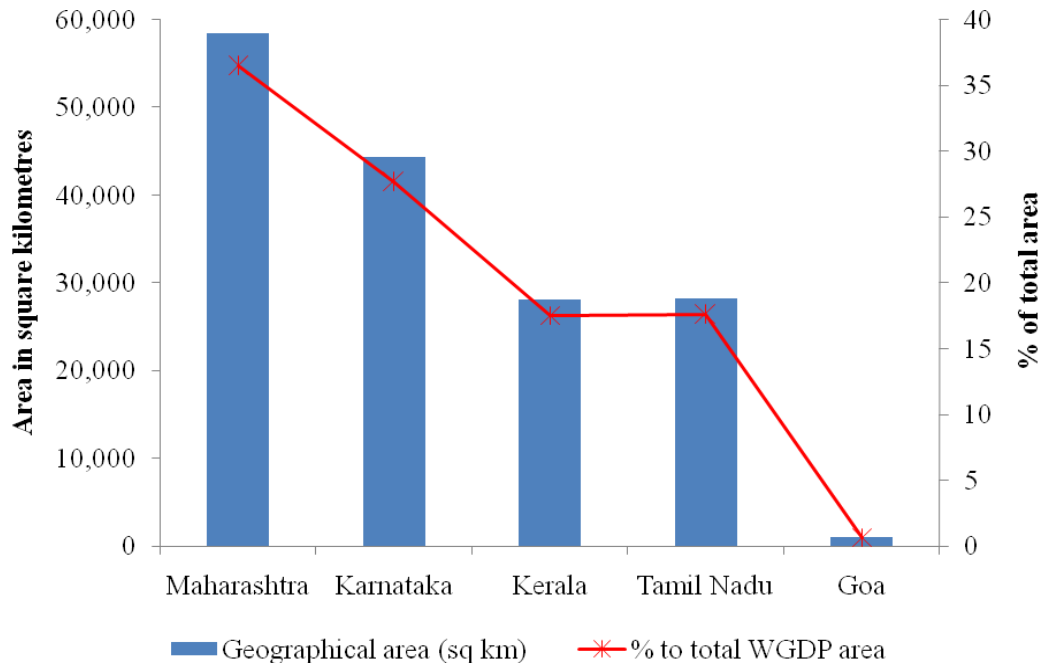


Figure 2: Total area covered by the Western Ghats and it's percentage share five Indian States

Western Ghats Development Programme is currently being implemented across 171 taluks covered by Western Ghats viz. Maharashtra (63 taluks), Karnataka (40 talukas), Kerala (32 taluks), Tamil Nadu (33 taluks) and Goa (3 taluks) with some of the original talukas sub-divided. In Karnataka WGDP has been implemented across all the 40 taluks coming under 11 districts of the state.

1.2 Objectives

- To understand the institutional structure and its functions in the state of Karnataka in respect of the Western Ghats Development Programme
- To examine and analyse the constitutional and functional framework of the various schemes and planning including the related status.
- To assess the impact of various government programmes and schemes on conservation of Western Ghats and development of the landscapes.
- To propose strategies, tools and techniques for the management of Western Ghats in a sustainable manner through different schemes with an eye on the replication of such techniques in various parts of the state.

1.3 Methodology

A methodology has been designed to carry out a systematic evaluation of the implementation and performance of the schemes under WGDP in Karnataka with regard to the above mentioned objectives. The procedure for the evaluation is based on the methodology prescribed by the Planning Commission of India for conducting evaluation studies by Programme Evaluation organizations. However, depending on the programme specific requirements under various objectives, the methodology has been revised with a methodological framework of the entire evaluation study depicted in Figure 3.

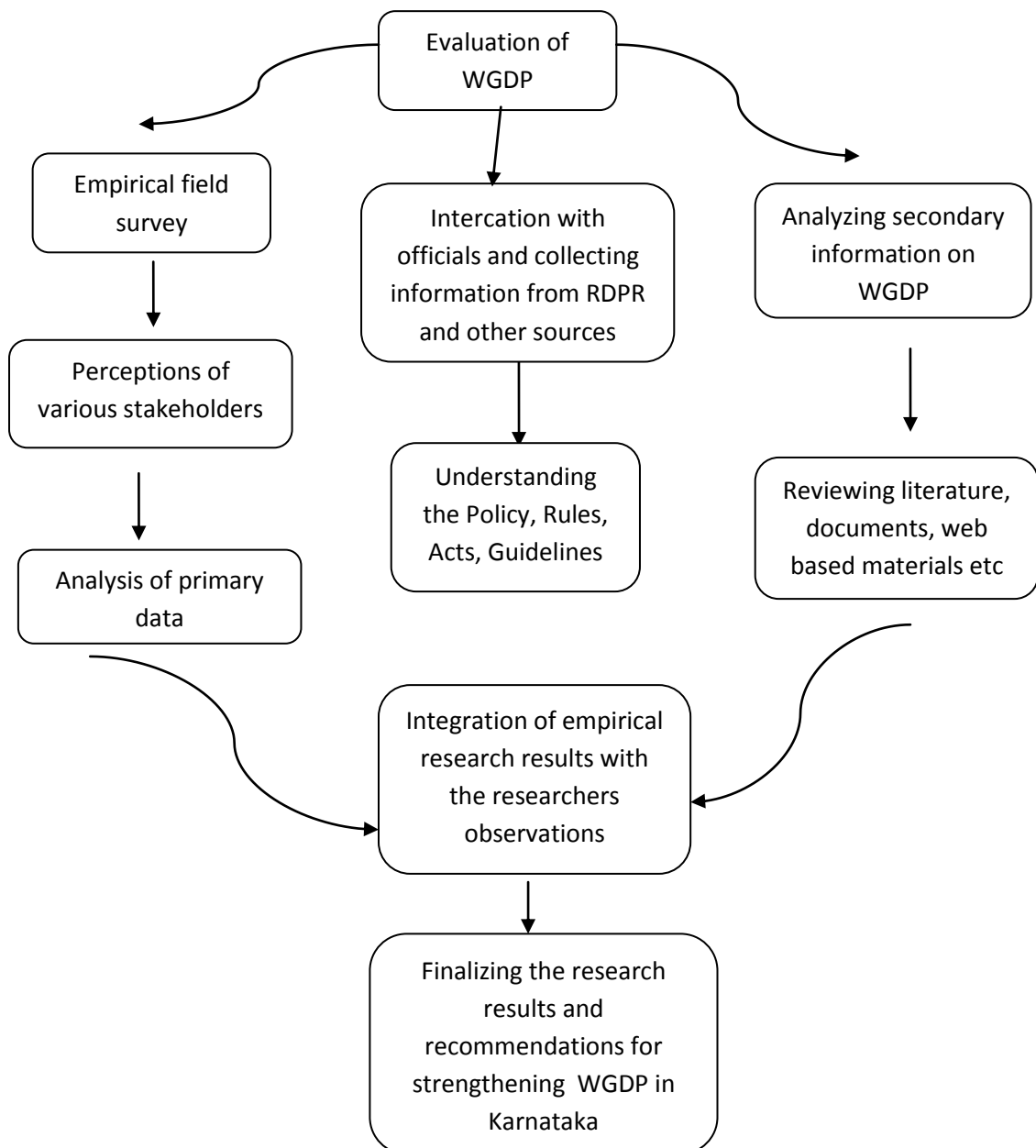


Figure 3: Methodology followed for evaluating the schemes and programmes under WGDP in Karnakata

1.4 Discussions with RDPR Officers

At the outset, we initiated interactive discussions with RDPR department officials headed by the Principal Secretary, Ms. Amita Prasad. This was followed by a meeting on 28th June, 2012 with WGDP officials from RDPR department at M S Building Bangalore, headed by Director of WGDP. Besides, several other meetings were conducted with the administrative and field level officers at the regional level to understand the organizational structure and functions of RDPR department with respect to WGDP implementation.

1.5 Secondary Data and Literature Review

Initial meetings and discussions were held with the knowledgeable officers of RDPR department for understanding the cycle of

- WGDP planning,
- Fund flow,
- Execution and Implementation,
- Monitoring and maintenance of schemes and programmes.

Further, data and information were collected from the authorities, website and available literature on the institutional structures in respect of the rural programme implementation concentrating on the

- Socioeconomic conditions
- Environmental and ecological status of the districts along with taluks
- Role of watershed development programmes and the execution of engineering works pertaining to all the 11 WGDP districts.

The information collected was analysed for a detailed understanding of the relation between local people, local government and other governments organizations in the WGDP areas of Karnataka. For more secondary literature, refer Annexure 1 & 2.

1.6 Empirical Field Survey

The research team further conducted several field visits across different parts of the Western Ghats in the state to evaluate the schemes and programmes being executed and implemented by the respective District Watershed Department and Engineering Department. The information and data on watershed activities - agriculture, forestry, horticulture and livelihood improvement activities – animal husbandry, rural industries and also the development of rural infrastructure like foot bridges, hanging bridges etc., were collected from different agroclimatic zones of the Western Ghats and analysed to identify the

difficulties involved in the execution and management of various schemes under WGDP. Participatory interactions were held with the local people and beneficiaries of the WGDP schemes to know their perceptions regarding various programmes of the departments and policy loopholes. Similarly, qualitative information was obtained from the beneficiaries and local people using a structured questionnaire. The respondents were asked to express their views on the promotion of ecological and socioeconomic development in view of the various programmes being implemented in the Western Ghats.

2.0 Organizational Structure and Functions of RDPR

The main aim of the Department of Rural Development and Panchayat Raj is to improve the provision of rural services such as the basic infrastructure, roads, drinking water, sanitation, electricity, livelihood improvement etc., for the rural society. The RDPR department is headed by the Principal Secretary with a different administrative wing for developing the rural areas. Among them, Rural Infrastructure – 2 is focussed on the improvement of Western Ghat Development Programme (WGDP) in Karnataka (Figure 4). The Rural Infrastructure – 2 is headed by Director, RDPR with the sole responsibility for ensuring the of functioning of various monitoring the WGDP schemes in Karnataka.

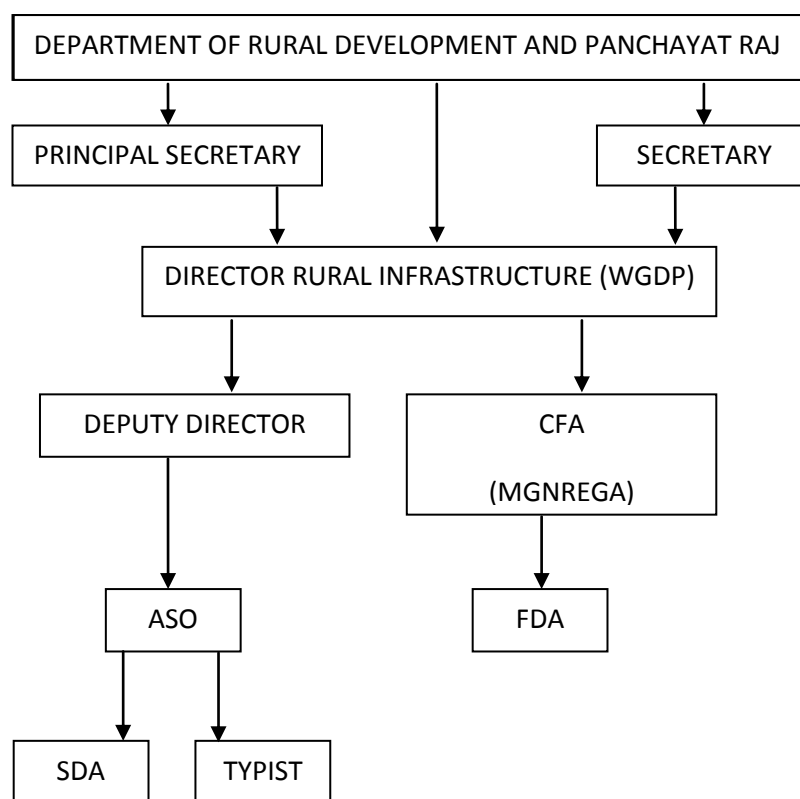


Figure 4: Organizational Chart of RDPR department, Government of Karnataka

Abbreviations: CFA (Chief Finance Authority), MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act), ASO (Assistant Statistical Officer), FDA (First Divisional Assistant), SDA (Second Divisional Assistant).

RDPR department is vested with the powers of release funds to the Zilla Panchayats (ZP) for implementing the schemes. The respective ZP headed by Chief Executive Officer (CEO) transfers the grants to the Engineering Department headed by an Executive Engineer (EE) and Watershed Department headed by a District Watershed Development Officer (DWDO) through Chief Planning Officer (CPO) to work on ecological restoration programmes as well as livelihood improvement programmes in the Western Ghats region of Karnataka (Figure 5).

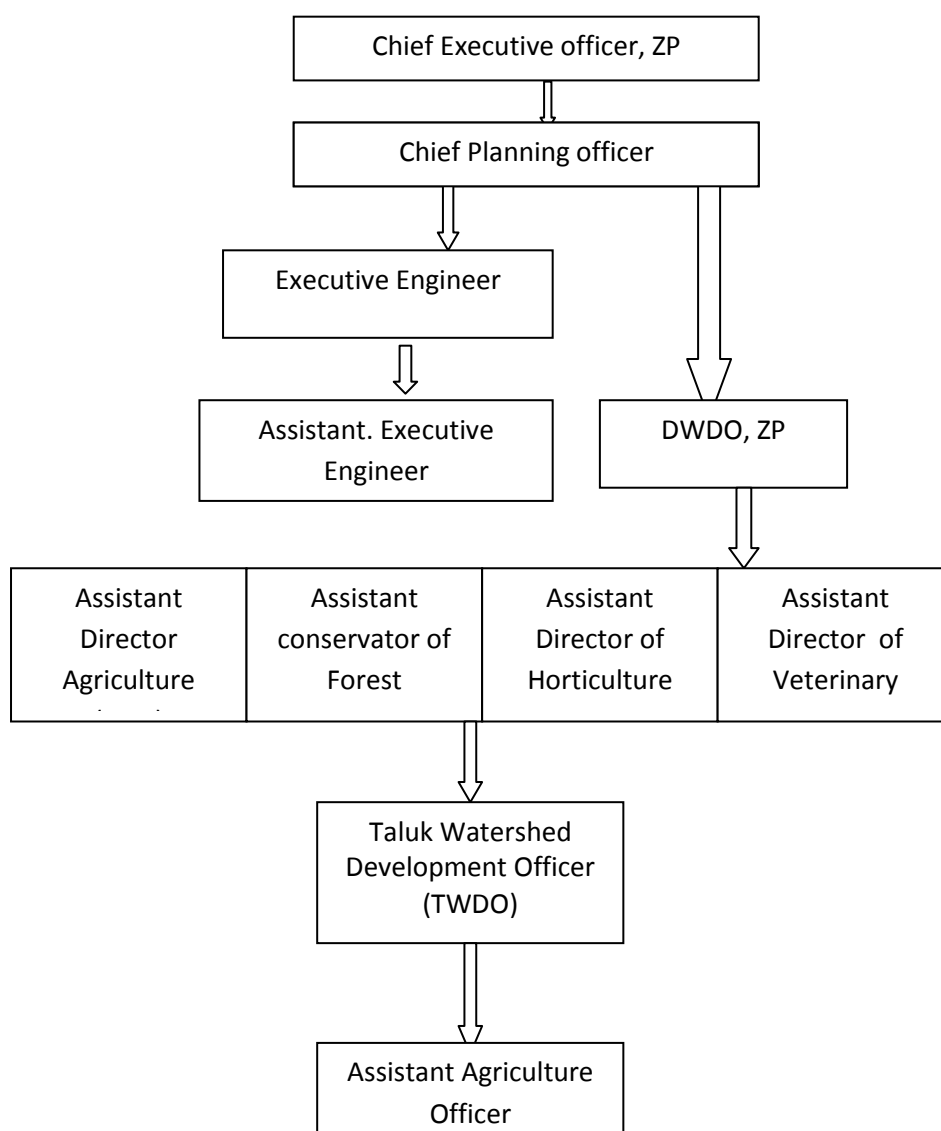


Figure 5: The district level Organizational Chart for executing WGDP programme

The Department of Watershed, under the guidance of DWDO, will form an Executive Committee (E.C.) by involving the local elected representative, self help groups and user group of the proposed watershed development area. The President of the GP will be the President of E.C. and with one watershed department official as the Secretary of the E.C. for the smooth functioning of the proposed watershed development activities for enhancing ecosystem services to the local people. This committee holds the sole responsibility of distributing WGDP benefits to the selected beneficiaries such as landless, again labourers, women groups, SC, ST communities, marginal farmers etc (Figure 6).

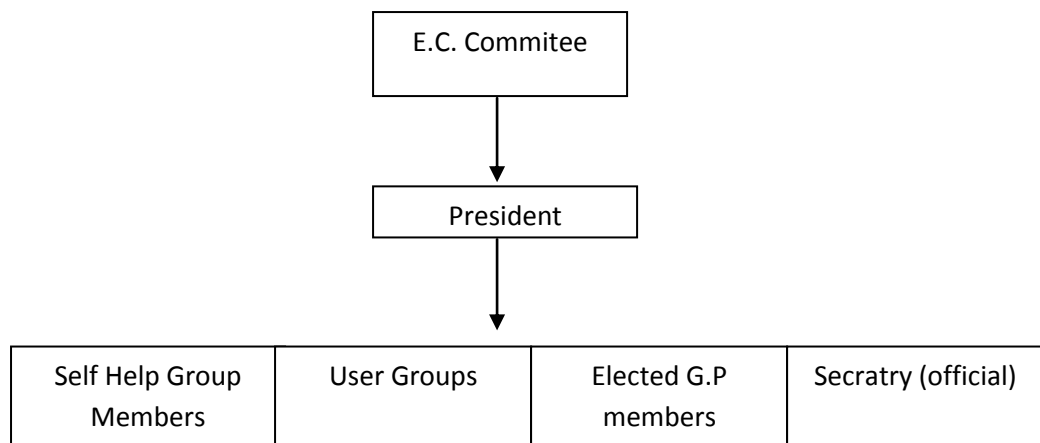


Figure 6: The ground level Organizational chart (Gram Panchayat) for the implementation of WGDP Schemes

3.0 Population Density of the Western Ghats Districts of Karnataka

The following figures depict the population density of the districts located in the Western Ghats in Karnataka. According to 2011 census, the population density of the districts of Western Ghats in Karnataka averages about 205 persons per square kilometer, much lower than the entire state average density i.e. 319 persons sq.km. This is also less than the average population density of the country (India - 382 persons per square kilometer). The average population density happens to be low as some of the rich and diverse forest ecosystems in the Western Ghats do not have any human settlements. In some forested areas human settlements are located in the matrix of the forests but the population is sparsely distributed. Seven districts of Karnataka viz., Dharwad, Shimoga, Kodagu, Chikamagalur, Mysore and Chamrajanagara share the least population in comparison to Belgaum in North Karnataka,

and Udupi, Dakshina Kannada and Hassan Districts of Central Karnataka. Belgaum and Udupi districts have a high population density i.e. >500 persons per square kilometre certainly higher than those of state of Karnataka (319) the Country as a whole (382). As can be seen from figure 7, Hassan districts in Western Ghats show a population density that is almost equal to the average population density of the state and the country. In Southern Karnataka districts such as Kodagu, Mysore and Chamrajanagara the population density is found to be less than the other districts of the Western Ghats. A similar population density is observed from other four districts coming under North Karnataka (Dharwad, Uttara Kannada) and the Central West region of Western Ghats (Shimoga, Chikamagalur). However, there is a high population pressure in some of the districts and therefore; the region requires a special attention towards the development not only of the ecosystems but also the people of the area. The forested landscapes of the Western Ghats of Karnataka are considered the carbon sinks of our country and these carbon sinks are the birth place of most of the spring fed rivers, the life line of the people living in the southern region of the country. The human and ecosystem interactions should be on a sustainable basis so that the quality and quantity of ecosystem services that flow from this region to low lands are maintained for ensuring a sustained development of the region. Therefore, focus on conservation and restoration of fragile ecosystem in the Western Ghats region is necessary for sustainable development.

POPULATION DENSITY MAP OF THE STUDY AREA

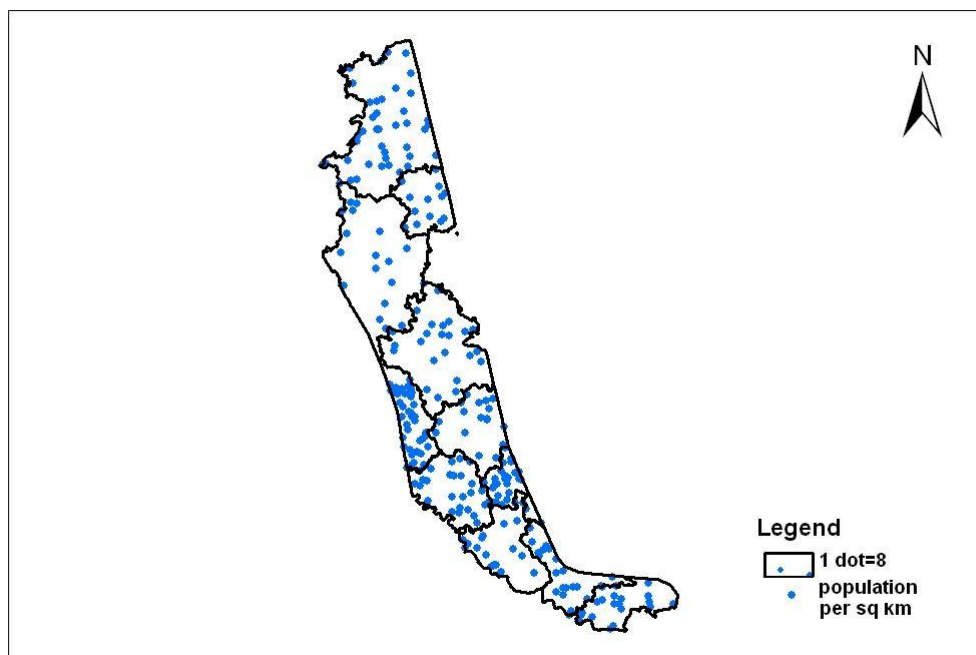


Figure 7a: Population Density Map of the Study Area

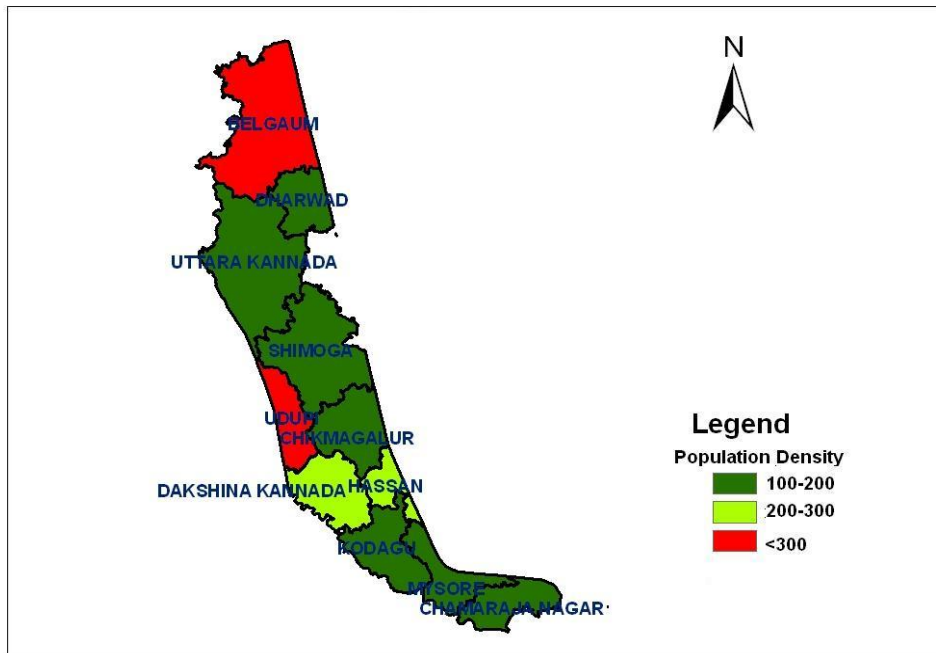


Figure 7b: Population Density Map of the Study Area (low medium and high)

4.0 Activities of the Watershed Department

4.1 Importance of Watershed Development Programmes and Implementation

As we know the soil is one of the important factors providing water and mineral nutrients for the growth of plants. Conservation of this topmost layer of the earth supporting many living organisms is the main objective of the watershed development programme. This topmost layer of the earth is getting degraded because natural disasters and harmful human activities. In order to prevent this layer from further degradation watershed development programmes are very much essential. A watershed is an area where water drains into a common point, making it an attractive unit to manage water and conserve soil for improving production and conservation. It is a land area that captures rainfall and conveys the overland runoff to an outlet in the main flow channel.

Basic principles of the watershed development programme include

- Agriculture and Soil Conservation
- Social forestry
- Animal husbandry

- Horticulture development programmes
- Fisheries
- Sericulture
- Livelihood activities for farmers
- Implementation and development of small scale industries for non farm sectors

Thus, the main aim of the watershed development programme is to ensure improvement of the livelihood option of the people coming under the purview of the project.

4.2 Purpose of the project includes the following

- To reduce poverty and improve the livelihood option of the people coming under watershed area
- To improve the living standards of farmers
- To increase the fertility of agricultural lands
- To improve the productive potential of agricultural fields
- To develop and strengthen the natural resource management
- To improve skills and create alternative livelihood options for the vulnerable families in the watershed area

4.3 Community based groups under the watershed development programmes

Under the watershed development project, community based organizations (groups) like Self Help Groups (SHG), User Group (UGs) and Executive Committees (EC) play an important role in implementing the watershed programmes. Each community based organization consists of 20 farmer members, who influence the direction and execution of land improvement projects in their region. Among these groups Executive Committees play an important role in enhancing land based programmes. For more details regarding SHG and UG formations and functions, refer Annexure 3.

4.4 Year wise implementation of various activities under the watershed development programme

The activities covered in the first year:

- 1) Initial investigation
- 2) Promoting villager awareness regarding the watershed development programme

- 3) Formation of watershed subgroups under Gram Panchayats
- 4) Formation of group's like
 - a) Self help groups
 - b) User groups
 - c) "Preparation of action plans according to P.R.A
 - d) Trainings:
 - e) Selection of nurseries for the development of horticultural lands in the second year.
 - f) Implementing of forestry activities, among the community groups.

For item no. 3 and 4 refer Annexure 3 & 4.

Activities covered under Forestry and horticulture components in the Second year

- 1) Completion of planting materials of forestry and horticultural crops in the command areas of watershed development on or before May-September month.
- 2) Designing and construction of upper strata channels and Planting of seedlings on both the sides of channels.
- 3) Protective cultivation of plant seedlings with regular intervals of irrigation and guarding.

Activities covered under agriculture component

- 1) Digging of nalabunds and rainwater harvesting across agriculture concentrated land.
- 2) Construction of bunds and check bunds across cultivatable land.

Activities under other components

- 1) Animal husbandry, sericulture and revolving funds.

Activities covered under horticulture and forestry components in the Third year

- 1) Replanting of damaged plants in the command watershed areas
- 2) Protective cultivation of plant seedlings with regular intervals of irrigation and guarding

Activities covered under agriculture unit

- 1) Implementation of bund construction
- 2) Formation of Krushihonda (Farm- ponds)
- 3) Rejuvenation of irrigation channels

Activities covered under horticulture and forestry unit in the Fourth year

1) Protective cultivation of planted seedlings with regular intervals of irrigation and guarding and planting seedlings along bunds.

Activities covered under agriculture unit

- 1) Continuation of bund implementation activities.
- 2) Treatment of middle and lower strata related watershed channels.

Agriculture activities covered in the fifth year

- 1) Completion of the remaining works and submission of reports

To understand the landscape, demography, rainfall and other ecological aspects of WGDP, one can refer the following section on the basic features of WGDP in Karnataka. This section also represents the socioeconomic and ecological scenario of the Western Ghats region in Karnataka in the developmental context

5.0 Basic features of WGDP area in Karnataka

The total Geographical area of Western Ghats across 11 districts and 40 taluks of Karnataka is about 44300 Square Kilometers. In the state the north Karnataka region, Belgaum and Dharwad districts which cover six taluks has account for the largest shares (7510 Sq.km) of WG. The Khanpur taluk in Belgaum district occupies the largest landscape of WGS, while the least spread of the WG falls under Hukkeri taluk.

In respect to South Karnataka 6 districts (Chickmangalore, Hassan, Kodugu, Chamrajnagar, Mysore and Shimoga) come under Western Ghats. There are a total of 19 taluks spread across all the 6 districts of south Karnataka covering 20007 Sq.km geographical area of WGS in Karnataka. Among all the taluks the maximum area falls under Chikmangalore taluk and minimum under Koppa taluk. The Western Ghats in Coastal Karnataka passes through 15 taluks of Dakshin Kannada, Udupi and Uttar Kannada districts, covers total of 13596 Sq.km geographical are., out of which the highest geographical area is covered by Udupi taluk while the least by Bhatakal taluk. Overall the highest geographical area is covered by coastal Karnataka (Table 1).

The total population in 11 districts and 40 taluks stands at 87.30 lakhs out of which North Karnataka, Belgaum and Dharwad districts (six taluks) account for 21.91 lakhs population

with the highest population recorded in Belgaum and lowest in Dharwad. South Karnataka, which includes Chickmangalore, Hassan, Kodugu, Chamrajnagar, Mysore and Shimoga districts (19 taluks) is home to 35.55 lakhs population with highest population recorded in Shimoga taluk and the lowest in Sringeri. Coastal Karnataka which includes Dakshina Kannada, Udupi and Uttar Kannada districts (15 taluks) account for 29.84 lakh population with the highest population recorded in Udupi and lowest in Yellapur taluk. Over all the highest population is recorded in South Karnataka, while the lowest in North Karnataka (Table 1).

Table 2 also represents the agroclimatic zones and average annual rainfall of 11 districts and 40 taluks for the year 2010-11. The total average rainfall of 11 district and 40 taluks amount to 2499mm out of which North Karnataka region belonging to Northern transition zone which includes two districts Belgaum and Dharwad, and six taluks receives total average rainfall of 1413 mm, highest rainfall recorded in Khanapur taluk and the lowest in Hukkeri taluk. Rainfall in south Karnataka region belonging to the southern transition zone and hilly zone, which includes Chickmangalore, Hassan, Kodugu, Chamrajnagar, Mysore and Shimoga districts, 19 taluks records an average rainfall of 2211 mm, with highest rainfall recorded in Sringeri taluk and the lowest in Gundlupet taluk. Coastal Karnataka belonging to the coastal zone and hilly zone area, which includes Dakshina Kannada, Udupi and Uttara Kannada districts and 15 taluks, registers an average rainfall of 3874 mm, with highest rainfall recorded in Bhatakall taluk and the lowest in Sirsi.

Table 1 : Basic features (geographical area, population, agroclimatic regions and rainfall) of the WGDP area in Karnataka

Region	Sl.No	District	Taluks	Geographical area in Sq. km	total population (2011 Census)	Agro-climatic zone	Rainfall in mm (2010-2011)
North Karnataka	1	Belgaum	Bailhongal	1122	356286	Northern transition zone	980
			Belgaum.	1037	815581	Northern transition zone	1532
			Khanapur	1748	243185	hillyzone	3002
			Hukkeri	991	357193	northern transition zone	881
			Soundathi	1580	311963	Northern dry zone	931
	2	Dharwad	Dharwad	1032	106722	Northern transition zone	1149
	Total			7510	2190930		
South Karnataka	3	Chikmagalur	Chikmagalur	1631	294445	hillyzone	871
			Mudigere	1155	124198	hillyzone	2318
			Koppa	572	87663	hillyzone	3063
			N.R.Pura	804	65624	hillyzone	1699
			Sringeri	443	36932	hillyzone	3864
	4	Hassan	Alur	432	79081	southern transition zone	1453
			Belur	845	170321		2218
			Hassan	942	315676	southern dry zone	1434
			Sakaleshpur	1034	124753	hillyzone	3261
	5	Kodagu	Madikeri	1492	146684	hillyzone	3670
			Somwarpet	1620	206640	hillyzone	2124
			Virrajpeta	990	201438	hillyzone	1947
	6	Chamarajanagar	Gundlupet	1406	222932	hillyzone	791
	7	Mysore	H.D.Kote		263794	southern transition zone	
	8	Shimoga	Sagar	1940	206112	hillyzone	2159
			Hosanagar	1423	118148	hillyzone	3149
			Thirthahalli	1254	141453	hillyzone	3042
			Shikaripura	910	241943	southern transition zone	1208

			Shimoga	1114	507083	southern transition zone	1527
	Total			20007	3554920		
Coastal Karnataka	9	Dakshina kannada	Puttur	1000	286589	coastal zone	3786
			Suliya	826	145022	coastal zone	3806
			Belthangady	1375	266718	coastal zone	4601
	10	Udupi	Karkala	3575	216101	coastal zone	3607
			Udupi		562966	coastal zone	3267
			Kundapura		398841	coastal zone	4027
	11	Uttara kannada	Karwar	732.1	155143	coastal zone	4340
			Ankola	918.7	107428	coastal zone	4664
			Bhatkal	348.9	161577	coastal zone	5230
			Honnavar	754.8	166390	coastal zone	4460
			Kumata	583.3	154515	coastal zone	4430
			Siddapura	859.2	97435	hillyzone	3181
			Sirsi	1322.33	187014	hillyzone	2604
			Joida			hillyzone	
			Yellapura	1301.1	78091	hillyzone	2228
				13596.43	2983830		3874
	Total	11 Districts	Taluks 40	41113.43	8729680		2499
	State	30 Districts	Taluks 176	191976	61130704		
	% to state	36.67	22.73	33.07	14.28		

Source: Statistical Abstracts

5.1 Classification of WGDP areas

Ranks of taluks and categories as presented in the table 2 are based on the values of CCDI index. (Referred Nanjundappa report pp no: 162- 165) The taluks whose (CCDI) values are equal to or above '1' are classified as 'Relatively Developed (RD) Taluks', and are ranked high, whereas the taluks whose CCDI values are less than '1' are classified as "Backward (BW) taluks' and with low ranks. Among the Backward taluks, whose index values range from 0.89 to 0.99 (less than '1') are classified as 'Backward taluks' whereas the taluks whose

index values are in the range of 0.80 to 0.88 are classified as 'More Backward (MBW) Taluks'.

In the table 3 contains 11 districts and 40 taluks with four most backward taluks- Soundatti in North Karnataka, Gundlupet and H.D Kote in South Karnataka and Bhatkal in Coastal Karnataka. And six backward taluks - Bailahongal and Hukkeri in North Karnataka, Belur and Shikaripura in South Karnataka and Ankola and Siddhapura in Coastal Karnataka while the remaining 30 taluks belong to relatively developed categories (Table 2).

Table 2: A Comprehensive Composite Development Index - Ranking of Taluks

Sl.No		District	Taluks	Index	Rank	Categories
1	North Karnataka	Belgaum	Bailhongal	0.95	75	BW
			Belgaum.	1.31	22	RD
			Khanapur	1	57	RD
			Hukkeri	0.89	96	BW
			Soudathi	0.86	112	MBW
2		Dharwad	Dharwad	1.75	45	RD
3	South Karnataka	Chikmagalur	Chikmagalur	1.55	8	RD
			Mudigere	1.49	12	RD
			Koppa	1.43	17	RD
			N.R.Pura	1.3	25	RD
			Sringeri	1.9	2	RD
4	South Karnataka	Hassan	Alur	1.15	36	RD
			Belur	0.94	78	BW
			Hassan	1.25	27	RD
			Sakaleshpur	1.48	13	RD
5	South Karnataka	Kodagu	Madikeri	1.96	1	RD
			Somwarpet	1.37	18	RD
			Virrajpet	1.62	5	RD
6		Chamarajanagar	Gundlupet	0.81	131	MBW
7		Mysore	H.D.Kote	0.72	156	MBW

8		Shimoga	Sagar	1.2	30	RD
			Hosanagar	1.07	47	RD
			Thirthahalli	1.31	23	RD
			Shikaripura	0.92	86	BW
			Shimoga	1.46	14	RD
9		Dakshina kannada	Puttur	1.46	15	RD
			Suliya	1.3	24	RD
			Belthangady	1.32	21	RD
10		Udupi	Karkala	1.55	9	RD
			Udupi	1.45	16	RD
			Kundapura	1.13	38	RD
11		Uttara kannada	Karwar	1.29	26	RD
			Ankola	0.98	65	BW
			Bhatkal	0.82	128	MBW
			Honnavar	1.07	48	RD
			Kumata	1.09	43	RD
			Siddapura	0.92	82	BW
			Sirsi	1.08	44	RD
			Joida(Supa)	0.87	106	RD
			Yellapura	1.1	42	RD
		RD=Relatively developed				
		BW=Backward				
		MBW=More backward				

Source: Najundappa report, 2001

A Comprehensive Composite Development Index (CCDI) used in table 2 for 11 districts and 40 taluks has been drawn on the Najundappa report (page no: 162 -165). A taluk wise CCDI index has been developed an empirical analysis methodology based on 35 indicators of the respective districts and taluks (indicators refers to the data available at the taluka (block) level covering 5 sectors like agriculture and allied, industry, trade and finance; infrastructure (economic), infrastructure (social) and population characteristics of 175 taluks and 27

districts and the weights representing the values computed in the respect of sector specific indicators on the basis of inverse standard deviation method and weights (Table 3).

Table 3: A taluk wise Index and Comprehensive Composite Development Index 2001

Region	Sl.No	District	Taluks	Agriculture and allied	Infrastructure (economy)	Infrastructure (social)	CCDI
			Weights	0.256	0.112	0.248	
North Karnataka	1	Belgaum	Bailhongal	0.92	1.02	0.86	0.95
			Belgaum.	1.08	1.36	1.08	1.31
			Khanapur	1.26	1.35	0.71	1
			Hukkeri	1.06	1.16	0.67	0.89
			Soundathi	0.99	0.93	0.74	0.86
	2	Dharwad	Dharwad	1.01	1.16	1.19	1.08
South Karnataka	3	Chikmagalur	Chikmagalur	2.06	1.07	1.04	1.55
			Mudigere	2.13	1.1	1.12	1.49
			Koppa	1.66	1.71	1.22	1.43
			N.R.Pura	1.68	0.72	1.65	1.3
			Sringeri	1.86	2.68	1.68	1.9
	4	Hassan	Alur	1.44	1	0.94	1.15
			Belur	1.31	1	0.84	0.94
			Hassan	1.38	1.35	0.52	1.25
			Sakaleshpur	1.72	1.51	1.2	1.48
	5	Kodagu	Madikeri	1.96	1.44	1.78	1.96
			Somwarpet	1.84	1.24	1.1	1.37
			Virrajpet	2.11	1.33	1.34	1.62
	6	Chamarajanagar	Gundlupet	0.86	0.91	0.92	0.81
	7	Mysore	H.D.Kote	0.66	0.76	0.91	0.72
	8	Shimoga	Sagar	1.32	1.2	1.07	1.2
			Hosanagar	1.42	0.96	0.95	1.07
			Thirthahalli	1.70	0.98	1.31	1.31
			Shikaripura	1.06	1	0.93	0.92
			Shimoga	1.61	1.24	1.42	1.46
	Coastal Karnataka	9	Dakshina Kannada	Puttur	1.60	0.95	1.47
Suliya				1.37	1.26	1.32	1.3
Belthangady				1.43	0.82	1.02	1.32
10		Udupi	Karkala	1.49	1.08	1.59	1.55
			Udupi	1.06	1.38	1.32	1.45
			Kundapura	1.30	1.01	1.23	1.17
11		Uttara Kannada	Karwar	0.75	1.64	1.6	1.29
			Ankola	0.86	1.05	1.17	0.98
			Bhatkal	0.76	1.12	0.81	0.82
			Honnavar	1.02	1.37	1.05	1.07
			Kumata	0.90	1.56	1.15	1.09

		Siddapura	0.75	1.61	1.1	0.92
		Sirsi	1.15	1.32	1.21	1.08
		Joida(Supa)	0.71	0.83	1.26	0.87
		Yellapura	1.29	1.74	1.08	1.1

Source: Najundappa report, 2001

To carry out designed activities of WGDP for restoring and to improving livelihood activities of the rural poor, the Government of India is allocates the necessary funds to the Department of RDPR, Government of Karnataka (details are furnished in the budgetary allocation section).

6.0 Budgetary Allocation for WGDP

Government of India (GoI) allocates the funds annually to improve and protect the hilly areas of the country under the Special Central Assistance programme. Accordingly, state governments have developed various ecological restoration and livelihood improvement schemes and programmes under the Western Ghat Development Programme (WGDP) in each state. Similarly GoI transfers grants for executing the designed works annually after the financial year. The department of RDPR, Government of Karnataka, has been receiving grants from the time of inception (1974-75) till today (Table 4). Table 4 presents the data for the period 2001-02 to 2012-13 due to the lack of availability of data for the previous years in the department. The allocated budget is increasing every year due to enhancement with material cost and expansion of more areas under development. However, the department has not been able to achieve the targets except the year during 2004-05. Thus, more focus led attention on the effective implementation is necessary. The budget allocation for the present year, 2012-13 amounts to rupees 32.40 corers.

Table 4: Annual budget allocation and expenditure under WGDP, Karnataka (Rupees in crores)

Year	Allocation	Expenditure	% age of Ach
2001-02	16.79	14.98	90
2002-03	15.57	14.30	92
2003-04	15.57	13.64	88
2004-05	15.57	15.57	100
2005-06	15.57	14.51	93
2006-07	24.18	14.13	91
2007-08	24.18	15.14	63
2008-09	29.24	18.43	76
2009-10	29.24	25.64	88
2010-11	29.24	20.40	70
2011-12	32.30	19.81	68
2012-13	32.40	-	-

Source: RDPR, Bangalore

As can be seen from Figure 8, the allocated grants for developmental activities are have not been utilized to their full extent over the last few years excepting 2004-05. The lowest 63 per cent achievement is recorded for the year 2007-08 while for most of the years, the utilization of funds amounts to 70-80 percent. Therefore, a further focus on effective planning and implementation of WGDP programme is necessary.

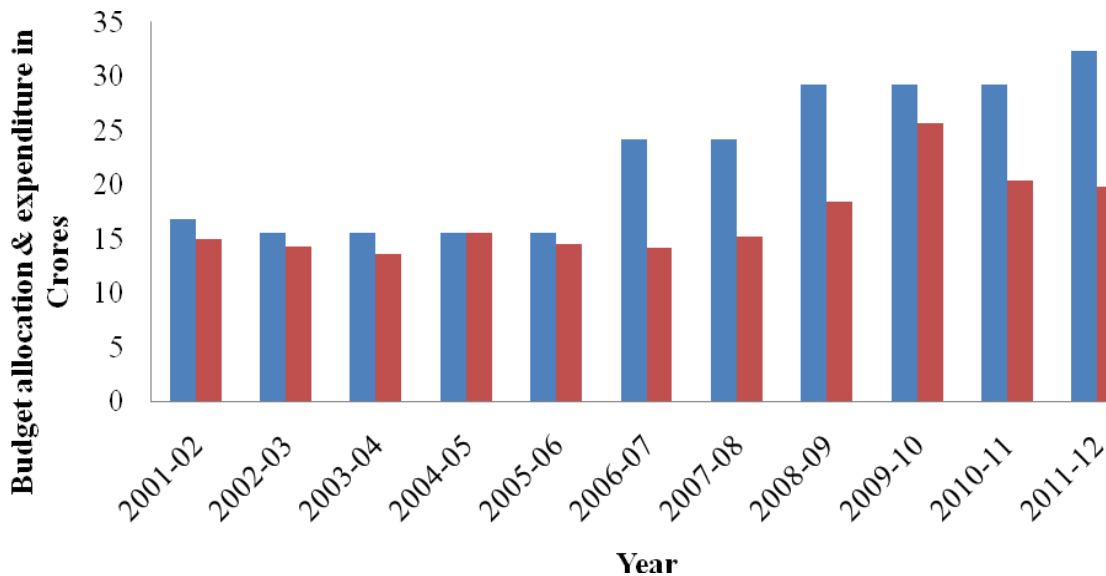


Figure 8: WGDP budget allocation and actual expenditure for the period 2001 to 2013 rupees in Crores

6.1 District wise Budget Allocation for WGDP (financial)

Table 5 shows the total budgetary allocation for WGDP budget for five years (2007-12) across districts and regions. WGDP is categorized into three regions - North Karnataka, South Karnataka and Coastal Karnataka (Table 5). The allocation of funds mainly depends on the area and population of Western Ghat areas enclosed (Table 1). Over the last five years North Karnataka has received a budget of Rs.2553 lakh out of which Rs.2220 lakhs has been allocated to Belgaum and Rs.333 lacs to Dharwad. Similarly, South Karnataka (Chickmagalore, Hassan, Kodagu, Chamarajnaragar, Mysore, and Shimoga) has received a total budgetary allocation of Rs.6649.61 lakh out of which the highest allocation has been shared by Shimoga and the minimum by Chamrajnagar as Shimoga district encompasses a larger area and population than other districts. Whereas, for the year 2007-08 of the total allocation of Rs.1162.4 lakhs the portion has gone to Chickmagalore in south Karnataka and minimum to Chamarajnaragar. Apart from the districts, Dakshin Kannada, Udupi and Uttar Kannada under Coastal Karnataka have accounted for Rs.4463.71 lakh over the last five years out of which highest allocation goes to Uttar Kannada and the lowest to Dakshin Kannada.

Table 5: District wise budget allocation for WGDP activities (Rupees in lakhs)

Region	Sl.No	District	2007-08	2008-09	2009-10	2010-11	2011-12	Total allocation over last 5 years	HDI (2005)
North Karnataka	1	Belgaum	299	473	467	467	514	2220	9
	2	Dharwad	59	67	67	67	73	333	10
	Total		358	540	534	534	587	2553	
South Karnataka	3	Chikmagalur	299	276	276	276	303	1430	7
	4	Hassan	256	221	221	221	243	1162	16
	5	Kodagu	219.35	247.9	247.9	247.9	272.69	1235.74	3
	6	Chamarajanagar	59	86.2	86.2	86.2	94.82	412.42	24
	7	Mysore	40	96.95	96.95	96.95	106.65	437.5	14
	8	Shimoga	289.1	410.45	410.45	410.45	451.5	1971.95	5
	Total		1162.45	1338.5	1338.5	1338.5	1471.66	6649.61	
Coastal Karnataka	9	Dakshina Kannada	180	206	206	206	226	1024	1
	10	Udupi	180	296	296	296	326	1394	2
	11	Uttara Kannada	444.87	516.4	516.4	516.40	568.04	2045.71	6
Total		804.87	1018.4	1018.4	502	1120.04	4463.71		
Total		11 Districts	2325.32	2896.9	2890.9	2374.5	3178.7	13666.32	

Source: RDPR, Bangalore

6.2 The budget allocation for 2012-2013 in relation to per capita and per square kilometre

Analysis has been carried out to understand a comparative allocation of funds in relation to per person per year and per square kilometre in the Western Ghats districts of Karnataka for the current financial year (2012-2013). Table 6 depicts the district-wise per capita and per square kilometre allocation of funds. The allocated funds for 2012-13 amount rupees 32.40 crores of which the maximum is allocated to the Uttara Kannada district (Rs 568.04 lakh) followed by Belgaum (Rs 514.53 lakh), Shimoga Rs (451.50 lakh) and the least grant is given to the development of Dharwad districts Rs (73.92 lakh).

Table 6: The budget allocation for 2012-2013 and in relation to per capita and per square kilometer

Sl.No.	District	Geographical area in Square Kilometer	Total population (2011 Census)	Population Density per Sq.Km	Finacial Allocation for the year 2012-13 Rs in Lakhs	Budget allocation per person for the 2012-13 in Rs.	Budget allocation per Sq.Km for the year 2012-13 in Rs.
1	Belgaum	6478	2084208	321.74	514.53	25	7943
2	Dharwad	1032	106722	103.41	73.92	69	7163
3	Chikmagalur	4605	608862	132.22	303.99	50	6601
4	Hassan	3253	689831	212.06	243.82	35	7495
5	Kodagu	4102	554762	135.24	272.69	49	6648
6	Chamarajanagar	1406	222932	158.56	94.82	43	6744
7	Mysore	1618	263794	163.04	106.65	40	6591
8	Shimoga	6641	1214739	182.92	451.50	37	6799
9	Dakshina Kannada	3201	698329	218.16	226.93	32	7089
10	Udupi	3575	1177908	329.48	326.54	28	9134
11	Uttara Kannada	6820	1107593	162.39	568.04	51	8329
	Total		8729680	204.29	3240.00	37	7582

Source: Statistical Abstract

However, per capita per year allocation of funds is higher for Dharwad (Rs. 69) followed by Uttara Kannada (Rs. 51), Chikmagalur (Rs. 50) and Kodagu (Rs. 49) and least allocation, Rs. 28 and 25 for Udupi and Belgaum districts respectively (Figure9), The average per capita allocation for the Western Ghats districts of Karnataka amounts Rs.37. Therefore, in respect

of per capita allocation, these two districts account for below than the average allocation. Hassan and Dakshina Kannada are quite comparable with an average allocation of (Rs. 37) and while the rest of the districts (Uttara Kannada, Mysore, Chamarajanagar, Kodagu, Chikmagalur, Dharwad) are found to have received a per capita allocation ranging from Rs. 40 – Rs. 69 which is higher than the average allocation (Rs. 37).

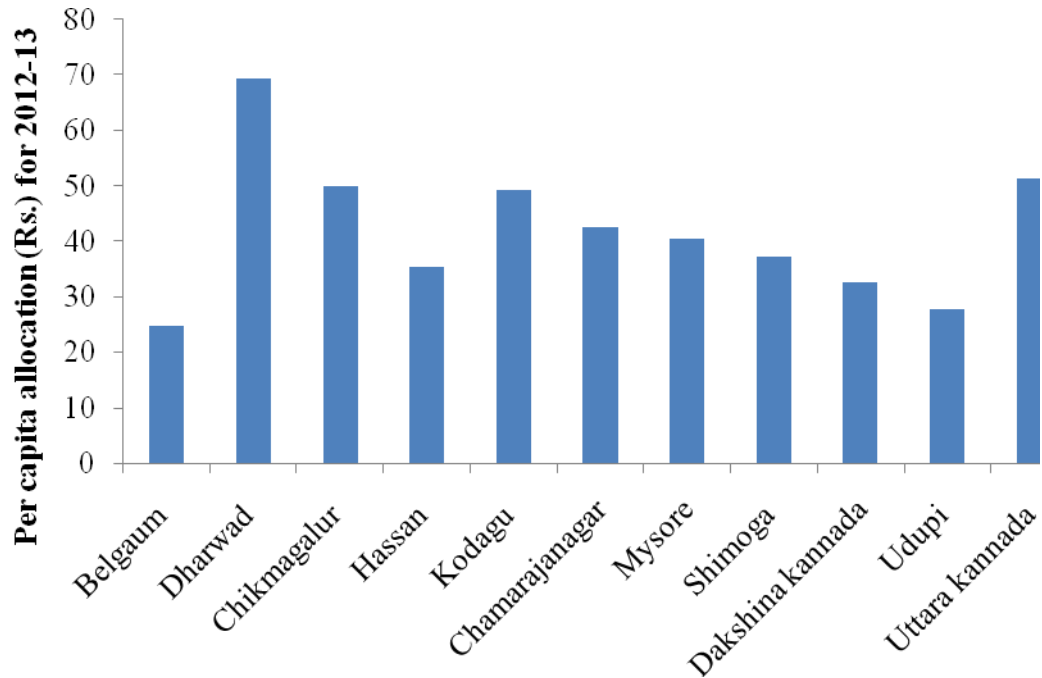


Figure 9: Per capita allocation of funds to the Western Ghats districts of Karnataka

The per square kilometre allocation is reported maximum for Udupi (Rs.9134), followed by Uttara Kannada (8329), Belgaum (7943), Hassan (7495) and Dakshin Kannada (7089). The funds allocation is found less than Rs. 7000 for five districts viz., Shimoga (6799), Chamarajanagar (6744), Kodagu (6648), Chikmagalur (Rs. 6601) and least per square kilometre allocation in the case of Mysore (6591). The rest of the districts have been allocated more than Rs. 7000 per square kilometre (Figure 10)

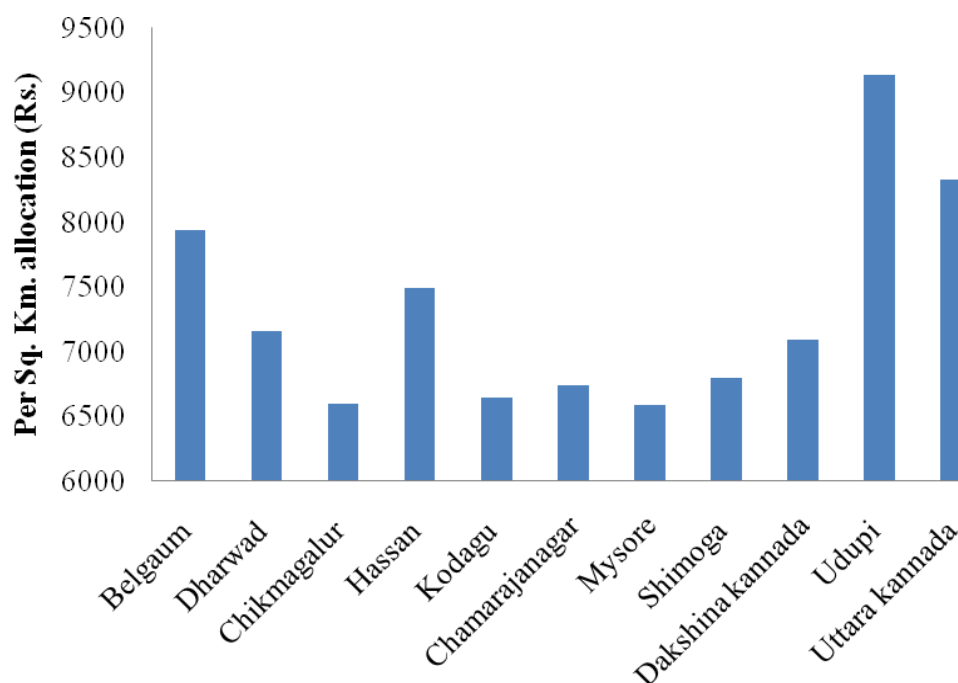


Figure 10: Funds allocation per square kilometer in respect of the Western Ghats districts of Karnataka

6.3 Sector wise Budget Allocation under WGDP

The allocation of funds shows an increasing trend since 2008-09. Income generating activities introduced since the last two years, share an increasing allocation from the last year, highest allocation made towards agriculture and soil conservation across all years followed by forestry and agro forestry. However, the allocation of funds towards crop diversification, crop demonstration, Nutrition management/Organic fertiliser etc. has declined significantly, an indication that it needs to be given more importance. The allocation of funds towards Foot bridges/Hanging Bridges/vented dam cum foot bridges/PRED has shown an increasing trend, and indicating increased investments in infrastructure development. However allocation of fund towards entry point activities has not been consistent, While allocation towards institution and capacity building shows a significantly decreasing trend since 2009-10, Where as the allocation to DPR has been found nil for the last year. The allocation towards Spice Board is significantly less and nil for the last year which needs to be reconsidered given the demand for spices and the scope for existing developing this sector. Similarly, not much has been allocated to animal husbandry and livestock management which calls for attention as this supports one of the main livelihood activities, of

the local people. Efforts are being made to allocate some funds towards micro enterprises which is a welcome initiative in this regard.

Table 7: Sector wise allocation funds budget under WGDP Rupees in lakhs

Sl. No.	Name of the Sector/Scheme under WGDP	2012-13	2011-12	2010-11	2009-10
	A. Management Component				
1	Administrative cost	206.59	249.43	137.561	243.950
2	Monitoring	5.15	22.53	4.097	6.503
	Income generating activities	7.65	2.25		
	Evaluation	10.79	5.38		4.053
	B. Preparatory phase	0			
3	Entry point activities	139.5	114.38	73.876	230.883
4	Institutional & capacity building (Training)/Community organisation	108.815	131.6	99.264	259.359
5	DPR	0	34.88	32.123	34.100
	C. Watershed works phase	109.43	315.02		
6	Agriculture & Soil Conservation works	1195.509	681.99	1267.623	1070.580
7	Forest	292.52	135.27	176.655	276.289
8	Agro forestry/Social Forestry	174.606	180.96	105.910	216.055
9	Spice Board	0	7.9	12.810	19.821
10	Horticulture	301.735	256.48	154.010	170.110
11	Foot bridges/Hanging Bridges/vented dam cum foot bridges/PRED	462.07	635.26	579.610	68.000
	Livelihood activities for asset less persons	108.075	93.1		
12	Animal husbandry, Supply of Giriraja birds/calves/Development of small animals, Supply of Sewing machines/ Masonry, Fodder, Carpentry kits/Kitchen garden Animal health camp/ Fodder development	94.665	131.53	95.338	124.952
13	Livestock management including Goatry, Piggery., etc	25.725	39.33	48.993	38.580
	Production system & micro enterprises	52.32	92.8		130.75
14	Crop diversification, crop démonstration, Nutrition management/Organic fertiliser etc.	31.075	53.36	106.140	
15	WGDP CELL @ State level	56.57	46.57	30.000	30.000
	TOTAL	3240	3230	2924.000	2924.000

Source: RDPR, Bangalore

Table 8: Schemes under Western Ghat Development Programme

Watershed works phase		
1	Agriculture & Soil Conservation works	The main objective of this scheme relates to soil conservation measures in watershed areas, and the activities covered under this schemes, include land development activities like leveling, bench terracing, land reshaping, amalgamation of paddy fields, land reclamation and contour bunding: To increase fertility and the productive potential agriculture fields. Water harvesting and erosion structure like check dams, vented dams, nala bunding, boulder bunds and gully checks, , diversion channels, filter strips are undertaken regulate the flow and disposal of excess water.
2	Forestry	This schemes focuses on conservation, preservation and development of ecological biodiversities in the watershed area:, activities carried under this scheme include development of forest nurseries, conversion of grazing land into forested areas Plantation of tree species on either side of roads, Mangroves cultivation, Plantation of tree species like (bamboo, azardecta indica etc) on bunds n farmer land, Protection of forest areas, Plantation of tree species which provide green manure and afforestation, activities are undertaken.
3	Agro forestry/Social Forestry	This scheme aims raising plantations in the beneficiaries land coming under the watershed programme, so as to meet the growing demand for timber, fuel, wood fodder etc, thereby reducing the pressure on the forest area. Planting of nurseries along roadside, rivers and canal banks and on the village common lands are undertaken
4	Spice Board	This scheme includes the distribution of I.P sets, sprinklers sets, construction of farm ponds and gravity irrigation in the beneficiaries lands coming under the watershed area.
5	Horticulture	The scheme serves the purpose of converting the waste land into horticultural plots and adoption of rain fed crops on dry lands, taking up inter and mixed cropping activities .
6	Foot bridges/Hanging Bridges/vented dam cum foot bridges/PRED	The objective of this scheme is to provide rural connectivity to small habitations of Western Ghats. Under this scheme roads and foot bridges are provided for the people residing in the steep hilly terrains, areas of the Western Ghats region.
D) Livelihood activities for asset less persons		
7	Animal husbandry, Supply of Giriraja, birds/calves/Development of small animals, Supply of Sewing machines/Masonry, Fodder, Carpentry kits/Kitchen garden Animal health camp/ Fodder development	This scheme includes Development programmes for landless farmers coming under the watershed programme like artificial insemination for upgrading cattle, fodder cultivation on plots or farm, lands supply of carpentry kits and many other household kits for landless farmers, conducting animal health camps and supplying of birds for the beneficiaries.
8	Livestock management including Goatry, Piggery.	Income generating activities for landless farmers - development of piggery and Goatry for meat and fibre.
E) Production system & micro enterprises		
9	Crop diversification, crop démonstration, Nutrition management/Organic fertiliser etc.	Demonstration regarding crop diversification is given to the beneficiaries in their own land. Demonstration classes are conducted for generating awareness regarding benefits associated with n using organic fertilizers than synthetic fertilizers.
10	WGDP CELL @ State level	State monitoring body of the Western Ghats Development Programme.

Source: WGDP Report

6.4 Sector wise Allocation and Expenditure under WGDP

6.4.1 Agriculture Sector – Agriculture and Soil Conservation Programmes

Agriculture and soil conservation programmes are the prime areas of development in the watershed are under WGDP. This work is executed by an Executive Committee under the guidance of District Watershed Development Officer (DWDO) across districts. This Sector focuses mainly on (i) nala revetment; (ii) contour bunding; (iii) trench terracing; (iv) check dams; and (v) other soil conservation programmes. Soil conservation activities are undertaken on both private and public lands to arrest the rain water run-off and top soil erosion through the construction of check dams across streams, nalas and rivers. It is one of the finest ways of conserving and improving the quality of soli systems and enhancing ground water recharge. To carry out these activities, RDPR department, in consultation with the local community, forms user groups at the field level. According to 2008 guidelines both the watershed department and E.C committees are responsible for initiating developmental works. Every year WGDP allots 60 per cent of the total financial targets to agriculture and soil conservation works. For the year 2010-11, 2012-13 the allocation amount to as high as Rs 1267.6 lakh and 1195.5 lakh respectively while comparatively low for the year 2011-12 i.e Rs 682.0 lakh only. The coastal districts have comparatively received the highest allocation of funds over the last three years. However, for 2010-11, North Karnataka account for a higher allocation share i.e 351.7 lakh and South Karnataka account for with 458.1 lakh for the year 2011-12.

Table 9: Year wise financial allocation to agriculture and soil conservation works under Western Ghats development programme

Year	North Karnataka			South Karnataka							Coastal Karnataka				Grand Total
	Belgaum	Dharwad	Total	C.R.Nagar	C.magalur	Hassan	Kodagu	Mysore	Shimoga	Total	D.Kannada	U.Kannada	Udupi	Total	
2010 - 2011	314.2	37.4	351.7	46.8	42.0		68.5	50.3	37.3	244.9	105.6	398.8	166.7	671.1	1267.6
2011 - 2012	0.0	26.6	26.6	81.6	18.5	62.7	97.0	51.6	146.7	458.1		125.2	72.0	197.2	682.0
2012 - 2013	182.3	23.5	205.8	57.8	111.9		86.8	47.6	74.0	378.1	148.1	319.8	143.8	611.7	1195.5

Source: RDPR Bangalore

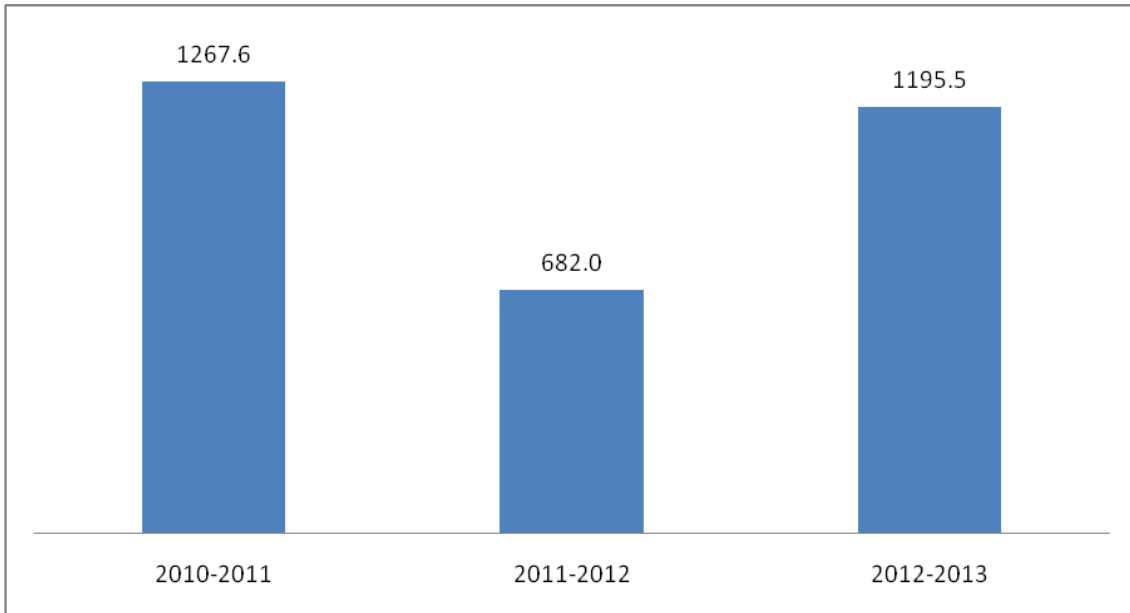


Figure 11: Financial allocation for agriculture sector in the WGDP (in lakhs)

6.4.2 Physical Achievements under Agriculture and Soil Conservation Programmes under WGDP

The various components of the agriculture and soil conservation sector under the Western Development Programme include a) Contour bunding b) Bench terracing c) Check dams d) Farm pond e) Percolation ponds f) Gully checks g) Nala reventment h) Mini Percolation Tansk i) Nala bunds j) Retention walls k) Diversion channels l) Application of lime in acids m) Nala bund stabilisation n) Organic farming o) Crop diversification P) Nala distilting Q) RSS R) NRVT (for adetailed explanation, see Annexure 4).

Physical targets for the year 2012 -2013 under Agriculture & Soil Conservation works are found concentrated mostly in Shimoga district across large hectares of land as compared to the rest of the districts.

Development works - Contour bunding: In the year 2012-13 total area covered under developmental works like contour bunding comes to 3064 Ha, out of which south Karnataka accounts for 1230.72 Ha, while north Karnataka 1833.00 Ha. The maximum numbers of contour bunding works targeted relate to Belgaum, while the minimum number of works to Kodagu. For the year 2011 -12, the maximum works under this sector is observed in , respect of Shimoga district covering 21160 Ha and, the least for Dharwad district covering only 58

Ha. Contour bunding is planned taking into consideration suggestions made by the local people as well as remote sensing data. Most (80-90 per cent) of the villagers and beneficiaries appreciate this scheme. For the year 2010-11 Maximum works under this sector are observed in respect of Mysore covering 930 Ha and the least for Kodogu district covering only 84 Ha. Across the three years development works under contour bunding are found targeted more in respect of South Karnataka and North Karnataka but works under this sector have not been allotted to Coastal Karnataka. Development works over all the three years are continuously increasing in North Karnataka districts as compared to South Karnataka districts. However development works Contour bunding are not given due priority in Coastal Karnataka region. Similarly reasons for the decreasing number of contour works in South Karnataka should be verified before initiating appropriate measures to develop this activity more intensely.

Focus on Foot bridges and vented dam: For the year 2012-13 the focus on engineering works like foot bridges and vented dams is more in favour of Dakshin Kannada district (i.e; 32 works). For the year 2011-12, maximum works have been covered in Coastal Karnataka (i.e; 214) and 191 bridges highest built in Udupi district compared to other districts. In the year 2010-11 the development work are Maximum focused in Coastal Karnataka with a total 341 foot bridges and vented dams constructed. Across all the three years development works under Foot bridges and vented dam mainly concentrated in Coastal Karnataka which is justifiable as it is more relevant and a necessity for the people residing in steep hilly terrains and areas of coastal regions coming under the Western Ghats region.

Bench terracing: For the years 2012-13, 2011-12 2010-11 the development works under Bench terracing are found targeted to a maximum extent in North Karnataka districts having covering 247 Ha, 34 Ha , 407Ha respectively while the focus on such works is insignificant in other districts. Over the three years there is also consistent decrease is observed in the number of physical targets achieved under this sector.

Check dams: The total numbers of check dams developed in all the three years are found maximum in Coastal Karnataka as compared to South and North Karnataka. The total number of construction works is also consistently decreasing every year

Farm ponds: In the year 2012- 13, a maximum of 657 ponds have been developed in Coastal Karnataka as compared to South Karnataka while a minimum of 32 are planned in North Karnataka. Maximum numbers of farm ponds have been developed in Uttar Kannada and the least number of ponds in Dharwad. For the year 2011-12, targets achieved are more visible in Coastal Karnataka with 119 ponds developed as compared to South Karnataka and North Karnataka. For the year 2010-11, maximum of 196 farm ponds are found developed in South Karnataka as compared to Coastal Karnataka and North Karnataka. Overall, across all the three years the maximum targets under Farm Pond development are have been achieved in Coastal Karnataka with 657 in 2012-13, 119.0 in 2011-12 and 56 in 2010-11, constructed and the total number of farm ponds has increased which is a positive sign towards ensuring recharge and conservation., of groundwater aquifers

Percolation ponds: In the year 2012-13, percolation is only one in C.R nagar. For the year 2011-12 and 2010-11 a of 13 and 5 ponds are found constructed maximum in Dakshin Kannada district while the progress in this regard in respect of other districts is nil or minimum . Overall, from 2010 to 2013 there has been an increase observed in the total number of Percolation Ponds development which is a good sign of conservation.

Gully/rebels/bolder checks: The total checks is constructed in in 2012-13 number 73 only in the case of Dharwad while the progress in this respect is found nil in the rest of the districts. For the year 2011-12 maximum number of 16 'checks' are found built in Mysore district of South Karnataka and only one in Dakshin Kannada of Coastal Karnataka. For the year 2010-11 a maximum of 65 'checks' are observed to have been developed in Dharwad, while only four checks in Mysore and nil in Coastal Karnataka districts. Overall, for the years 2012-13 and 2010-11 maximum targets under Gully/rebels/bolder checks have been realized in North Karnataka having total 73 and 65 checks developed while the developments in this respect is nil in Coastal Karnataka for the year 2012 and 2010 In toto, the total number of 'Checks' developed shows a decreasing trend over the past two years.

Nala reventment: For the year 2012-13 maximum number of development works are found concentrated focused in Uttar Kannada with 45570 nala mtr and the least in C.R Nagar with only 610, mtr of South Karnataka districts. For the year 2011-12 the maximum work under nala revent is found targeted in Uttar Kannada with 5815.0 mtr and the least in

respect of Hassan with only eight nala revent the progress is nil in North Karnataka districts. For the year 2010-11, the present targets are found achieved only in Coastal Karnataka district, with a total 490 mtr nala revent, where as, the work progress is observed is nil in respect of other districts. Overall across all the three years developmental works achieved under nala revent are found maximum in Coastal Karnataka, least in South Karnataka districts and nil in North Karnataka districts. The highest target under this sector achieved for the year 2011-12 comes to 34808.0 mtr of nala revent as compared to 2010-11 with having only 490 mtr and 5967.0 mtr of nala revent for the year 2012-13.

Nala bunds: Development works under this in the year 2012-13 is found more targeted in Coastal Karnataka in Udupi district with 26 nala bunds, nil in South Karnataka and the least in North Karnataka. For the year 2011-12 Construction of bunds is found only in Coastal Karnataka districts with a total of 616 bunds constructed while progress is observed focus is nil in respect of other districts and for the year 2010-11 maximum development works under this sector is observed for North Karnataka districts with a total four bunds ,as against other districts. Over all, for the year 2012-13 and 2011-12, a maximum of nalabunds i.e 26 and 616 are found constructed in Coastal Karnataka with the maximum number of targets under this scheme achieved for the year 2011-12

Diversion/feeder channels/water ways:For the years 2012-13 and 2011-12 the highest development work under diversion water ways has been achieved with 16232.0 mtr and 27266.0 mtr waterways respectively in Coastal Karnataka while for the year 2010-11 the maximum target achievements is observed for Shimoga district with 2900 mtr of waterways Over all ,the total development works under diversion /channels/ water ways show an increasing trend across years.

Nala bund stabilization: Under this scheme stabilization works for the years 2012-13, 2012-11 and 2011-10 covering 1025.0 mtr, 345.0 mtr and 5035 mtr are observed targeted only in Coastal Karnataka districts whereas, stabilization works in other districts remain unplanned. Overall, the maximum works under Nala bund stabilization have been achieved for the year 2012-2013 with a total of 1025.0 mtr water ways as compared to 2011-12 and 2010-11. The development works under this scheme are found was average for the year 2011-12 covering only 345.0 mtr, water ways

Nala desilting and NRVT: These development works have been achieved only for the year 2012-13 in Udupi district with 24.0 nala desilting and 58150 NRVT completed, while work plan is nil in respect of other districts.

Application of lime in acid soils / Land reclamation: Application of lime to acid soils is found carried out only for the year 2010-11 in Dakshinna Kannada, while the work progress is nil in other districts.

Retention wall/ Guide wall/Protection wall: Focus under this scheme is made for the year 2012-13 and 2010-11 while unplanned for the year 2011-12 and for both the years, development remains focused in South Karnataka with a total of only seven mtr for 2012-13 in C.R Nagar and total 150 mtr in south Karnataka districts for 2010-11 while it is not so prominent in other districts. Overall, with respect to major targets under agriculture and soil conservation sector in comparison to other sectors, Shimoga district has undertaken more activities followed by Belgaum district, while the least number of activities are found undertaken in Dharwad district (Dharwad has only one taluk under WGDP programme) Overall major development works observed under contour bunding are relatively few, with attention given to percolation ponds in the region Across all the years, attention to organic farming and crop diversification is nil. Application of lime to acids and land reclamation works remain focused only for the year 2011-12. Minimum attention has been given for promoting organic farming and it should be considered as a major component for ensuring a reduction in the release of Green House Gases in view of the use of synthetic fertilizers. The farmers should be motivated to practice organic farming through awareness creation programmes and training programmes. This would result in improving the soil quality and reducingt alkalinity and salinity of soil.

Table 10: Physical achievements of agriculture and soil conservation works for the year 2012-13 under the Western Ghats development programme

Name of the Sector/Scheme under WGD	UNIT	North Karnataka			South Karnataka							Coastal Karnataka			GRAND TOTAL	
		Belgaum	Dharwad	Total	C.R Nagar	Chikka magalur	Hassan	Kodagu	Mysore	Shimoga	Total	Dakshina Kannada	Uttara Kannada	Udupi		Total
Agriculture & Soil Conservation works	Ha.			0.0						65.0	65.0				0.0	65.0
	Nos.			0.0						11.0	11.0				0.0	11.0
	Rmtr.			0.0						48387.0	48387.0				0.0	48387.0
a. Contour Bunding/ Contour Trenches/land reclamation	Ha	1533.0	300.0	1833.0	323.0	168.3		119.4	620.0		1230.7				0.0	3064.0
b. Bench Terracing	Ha	199.0	48.0	247.0							0.0				0.0	247.0
c. Check Dam/Vented Dam cum foot bridge	Nos		5.0	5.0	8.0	2.0		2.0			12.0	32.0			32.0	49.0

d. Farm Pond/Shallow Well/Ring well/ Gokatte/recharge pits/rubbles checks	Nos	30.0	2.0	32.0	28.0	73.0		82.0	33.0		216.0	44.0	530.0	83.0	657.0	905.0
e. Percolation pond/De-silting tanks	Nos			0.0	1.0						1.0				0.0	1.0
f. Gully Checks/ Boulder/Rubble checks	Nos		73.0	73.0							0.0				0.0	73.0
g. Nala revetment	mtr			0.0	610.0	800.0					1410.0		4557.0		4557.0	5967.0
h. Mini percolation tank	Nos			0.0							0.0				0.0	0.0
i. Nala bunds	Nos	2.0	1.0	3.0							0.0			26.0	26.0	29.0
j. Retention wall/ Guide wall/Protection wall	mtr			0.0	7.0						7.0				0.0	7.0
k. Diversion channel / feeder channel/water ways	Rmtr		400.0	400.0	1.0	500.0		2070.0			2571.0		12000.0	4232.0	16232.0	19203.0
l. Application of lime in acid soils / Land reclamation	Ha			0.0							0.0				0.0	0.0
m. Nala bund stabilisation/Nala pitching	mtr			0.0							0.0	1025.0			1025.0	1025.0
n. Organic farming	Nos			0.0							0.0				0.0	
o. Crop diversification	Ha	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
p.Nala desilting	Nos.			0.0							0.0			24.0	24.0	24.0
q.NRVT	Nos.			0.0							0.0			5815.0	5815.0	5815.0
RRS	Nos.		5.0	5.0							0.0				0.0	5.0

Source: RDPR Bangalore

Table 11 : Physical achievements of agriculture and soil conservation works for the year 2011-12 under the Western Ghats development programme

Name of the sector/scheme under W/GDP	UNIT	North Karnataka			South Karnataka							Coastal Karnataka			GRAND TOTAL	
		Belgaum	Dharwad	Total	C.R. Nagar	Chickmagalur	Hassan	Kodagu	Mysore	Shimoga	Total	D.Kannada	U.Kannada	Udupi		Total
Agriculture & Soil Conservation works	Ha.			0.0							0.0				0.0	0.0
a. Contour Bunding/ Contour Trenches/land reclamation	Ha	2547.0	58.0	2605.0	925.0		86.0	256.2	643.2	2116.0	4026.4				0.0	6631.4
b. Bench Terracing	Ha		34.0	34.0	28.0						28.0		7.0		7.0	69.0
c. Check Dam/Vented Dam cum foot bridge	Nos		10.0	10.0			13.0				13.0	40.0	72.0	79.0	191.0	214.0
d. Farm Pond/Shallow Well/Ring well/ Gokatte/recharge pits/rubbles checks	Nos	98.0		98.0				70.0		41.0	111.0	14.0	18.0	87.0	119.0	328.0
e. Percolation pond/De-silting tanks	Nos			0.0							0.0		13.0		13.0	13.0
f. Gully Checks/ Boulder/Rubble checks	Nos		12.0	12.0					16.0		16.0		1.0		1.0	29.0
g. Nala revetment	mtr			0.0	150.0	157.0	8.0			30350.0	30665.0		4143.0		4143.0	34808.0
h. Mini percolation tank	Nos			0.0							0.0		2.0		2.0	2.0
i. Nala bunds	Nos			0.0							0.0	600.0		16.0	616.0	616.0
j. Retention wall/ Guide wall/Protection wall	mtr			0.0							0.0				0.0	0.0

k. Diversion channel / feeder channel/water ways	Rmtr	1851.0	119.0	1970.0		179.0					179.0		27266.0		27266.0	29415.0
l. Application of lime i to acid soils / Land reclamation	Ha			0.0							0.0				0.0	0.0
m. Nala bund stabilisation/Nala pitching	mtr			0.0							0.0		345.0		345.0	345.0
n. Organic farming	Nos			0.0							0.0				0.0	0.0
o. Crop diversification	Ha			0.0							0.0				0.0	0.0
p. Nala desilting	Nos.			0.0							0.0				0.0	0.0
q. NRVT	Nos.			0.0							0.0				0.0	0.0

Source: RDPR Bangalore

Table 12: Physical achievements of agriculture and soil conservation works for the year 2010-11 under the Western Ghats development programme

Name of the Sector/Scheme under WGDGP	UNIT	North Karnataka			South Karnataka							Coastal Karnataka			GRAND TOTAL	
		Belgaum	Dharwad	Total	C.R.Nagar	Chikamagalore	Hassan	Kodagu	Mysore	Shimoga	Total	Dakshinna Kannada	Uattar Kannada	Udupi		Total
Agriculture & Soil Conservation works				0							0				0	0
a. Contour Bunding/ Contour Trenches	Ha	835	200	1035	720			84	930		1734				0	2768.5
b. Bench Terracing	Ha	351	56	407							0				0	406.5
c. Check Dam/Vented Dam cum foot bridge	Nos	38	10	48	3			2		9	14	18	189	72	279	341
d. Farm Pond/Shallow Well/Gokatte/recharge pits	Nos	59	5	64	25	45		108	8	10	196	40	16		56	316
e. Percolation pond/De-silting tanks	Nos	0		0	2					3	5	5			5	10
f. Gully Checks/ Boulder/Rubble checks	Nos	0	65	65					4	40	44				0	109
g. Nala revetment	mtr	0		0							0	200		290	490	490
h. Mini percolation tank	Nos	0		0							0				0	0

i. Nala bunds	Nos	3	1	4	3						3				0	7
j. Retention wall/ Guide wall/Protection wall	mtr	0		0	30					120	150				0	150
k. Diversion channe / feeder channel/water ways	mtr	1007		1007						2900	2900		2165		2165	6072
l. Application of lime in acid soils / Land reclamation	Ha			0							0	26			26	26
m. Nala bund stabilisation/Nala pitching	mtr			0							0	900	4135		5035	5035
n. Organic farming	Nos			0							0				0	0
o. Crop diversification	Ha			0							0				0	0

Source: RDPR Bangalore

6.5 Horticulture Sector

Farmers are impressed and consider Horticulture sector highly beneficial as it provides additional income besides improving the household economy. Assistant Horticulture officer (AHO) is responsible for monitoring the activities and develops plantation activities in a chosen watershed area under the guidance of District Watershed Development Officer (DWDO). Under this programme, the department supplies seeds to the farmers free of cost to be grown in their kitchen gardens, homestead lands and farm lands. Our observations indicate that farmers prefer to plant seeds on bunds and corners of their farm land to avoid the shadow of trees on the major crops and also for strengthening bunds. Growing trees on bunds and corner will help recharge ground water besides holding the moisture content of the soil system for a long time. Our interactions with people across various watershed areas, reveal that people are highly enthusiastic about planting trees and conservation activities. However, they do feel that the department should supply more plants/seeds as the current supply is not sufficient. Farmers, particularly marginal and small expect continued benefits under this programme. Therefore, a sustained development of horticulture schemes essential for the development of the watershed area.

Horticulture sector receives 20 per cent of the WGDP funds for raising plantations and nurseries. Keeping in view the farmer's expectations regarding the programme, the department is increased funds from Rs.154.01 lakh for the year 2010-11 to Rs.301.7 lakh for the year 2012-13 nearly a 51 per cent has increase over the last three years (Graph 11). The districts under South Karnataka and Coastal Karnataka have, earmarked a larger areas for horticulture activities, spending a sufficient amount of grants (Table13). In addition, the department should promote high yielding varieties suitable for the local conditions and increase the provision of more seedlings simultaneously under this programme.

Table 13: Annual Budget allocation (Rs in lakhs) for the Horticulture sector under WGDP

Year	North Karnataka			South Karnataka							Coastal Karnataka				Grand Total
	Belgaum	Dharwad	Total	C.R.Nagar	Chikamagalore	Hassan	Kodagu	Mysore	Shimoga	Total	D.Kannada	U.Kannada	Udupi	Total	
2010-11		3	3	5.6			22.1	10.5	45.5	83.71	18.3	29	20	67.3	154
2011-12	34.1	3.0	37.1	2.0	7.7	7.3	11.3	10.5	74.5	113.2		70.2	36.0	106.2	256.5
2012-13	38.6	3.0	41.6	11.6	33.7		7.5	10.5	115.0	178.2	21.9	9.0	51.0	81.9	301.7

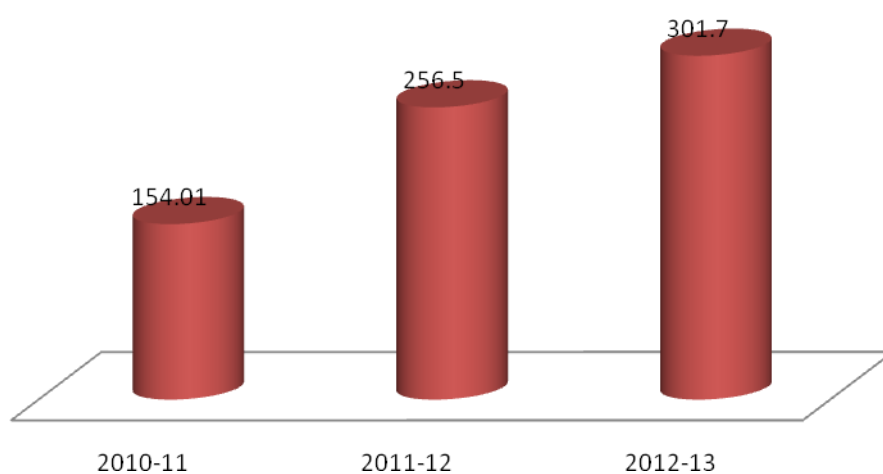


Figure 12: Financial allocation for the horticulture sector under WGDP (Rs in lakhs) Physical targets and achievements under horticulture sector under WGDP from 2010-11 to 2012-13 in Karnataka.

Horticulture sector mainly focuses on developing plantations like Coconut and fruit trees (Sapota and Mango) besides Spices like Pepper and cashew. The focus of these plantations is to enrich the local vegetation and soil conservation besides strengthening the livelihood of the local people. Saplings are given to farmers and landless people to grow them in their kitchen gardens. The department also provides vegetable seeds and Polyethylene bags with seeds for the beneficiaries across all the watershed areas. These are the major developmental projects

initiated under the horticulture sector. Farmers/beneficiaries interviewed during the field visits to Shimoga, Kodagu and Belgaum districts have reported satisfaction with respect to horticulture plantations. Officials seek people's opinion before distributing plants and seedlings to beneficiaries which is considered a welcome. Development as a matter of priority, the department has sent about developing dry land horticulture plantations for the year 2012-13 by way of planting 48835 plants a sort of developing a green area. This initiative taken up in Udupi district is directed towards developing dry lands into green cultivable lands. Considering the current land use and land cover changes and climate change implications, additional plantations would be ideal for adapting to the changing scenario. There is an increase observed every year, in the number of horticulture plantations excepting the year 2012-13 which has witnessed average target achievement with only 1334 Ha of plantations particularly Mango, Sapota, Cashew and other Orchards developed. In addition, the department also distributes vegetable mini kits for improving the nutrition levels of the local people. These kits contain the vegetable seeds to be planted in kitchen gardens with view to improving their household economy. However, it observed that the quantities or numbers kits/saplings that the department provides are inadequate and hence should be increased based on the landholding size and household income.

Table 14: Annual physical targets and achievements of horticulture sector under the Western Ghats Development Programme

YEAR	Name of the Sector/Scheme under WGDP	UNIT	North Karnataka			South Karnataka							Coastal Karnataka				GRAND TOTAL
			Belgaum	Dharwad	Total	C.R.Nagara	Chikmagalur	Hassan	Kodagu	Mysore	Shimoga	Total	D.Kannada	U.Kannada	Udupi	Total	
2010-11	Horticulture	Ha			0							0				0	0
	a. Orchard horticulture - Coconut, Mango, Sapota, Pepper, Cashew.	Ha	230	50	280	92			270	74	506	942.4	116	203	223	542	1764
2011-12	Horticulture	Ha.			0							0				0	0
	a. Orchard horticulture – Coconut, Mango, Sapota, Pepper, Cashew.	Ha.	211	31	242	108		70	135		518	830.7	200	632	222.8	1054.8	2128
	B Raising of seedlings	Nos.			0				1200			1200	29800		650	30450	31650
2012-13	Horticulture	Ha.		30	30							0				0	30
	a. Orchard horticulture - Coconut, Mango, Sapota, Pepper, Cashew.	Ha.	456		456	96	312		90	180		678.3	200			200	1334
	b) Dry land horticulture	Nos.			0		825					825			48010	48010	48835
	c) Vegetable mini kits/nutrition kitchen garden	Nos.			0						185	185			3410	3410	3595
	d) Construction of farm pond/well	Nos.			0							0				0	0
	e) Horticulture plantation	Nos.			0						1150	1150			8324	8324	9474
		Hect.			0						1.2	1.2			83.2	83.2	84

Source: RDPR Bangalore

6.6 Spices Cultivation

Spices cultivation is another important scheme under WGDP in Karnataka as the ecological conditions of the Western Ghats are ideal for growing spices. Therefore, to conserve the existing plantations and a further implementation of spice plantations in the region, the Government has planned this programme under WGDP. Under this programme, the department provides Irrigation Pumpsets (IP) sets, and Sprinkler sets to farmers in addition to constructing ponds for storage of water and also for infiltration. Total targets achieved for the year 2012-13 under this sector amount to nil due non allocation of grants. For the year 2011-12 only IP sets are found provided to Coastal Karnataka, while the distribution of IP sets is observed nil in other districts. For the year 2010-11 of the targets given to the beneficiaries under this sector the maximum number of the , targets are found achieved in respect of South and Coastal Karnataka districts, while the target achievement is observed nil with respect to North Karnataka districts. Since the allocation of funds has decreased over the years, the achievements under this sector consistently going down. The allocation of fund by RDPR for this sector is very minimum. For the year 2012-13, the Government has not consider this scheme for development, whereas, for the years 2010-11 and 2011-12 the total allocation Rs.12.8 and Rs.7.9 lakh a considerable decrease that is hampering the progress of this sector. The allocation towards Spices sector should be enhanced to three times the present budget allocation (minimum 5 % of the total allocation is required). As the development of spice garden is an important programme under WGDP.

Table 15: Annual budget allocation for Spice Board under the Western Ghats development programme (Rupees in Lakhs)

Year	North Karnataka			South Karnataka							Coastal Karnataka			Grand Total	
	Belgaum	Dharwad	Total	C.R.Nagar	Chikamagalore	Hassan	Kodagu	Mysore	Shimoga	Total	Dakshinna	Uttar Kannada	Udupi		Total
2010-11			0.0			3.5	3.3		3.3	10.2		2.7		2.7	12.8
2011-12	0.0		0.0		5.3					5.3		2.7		2.7	7.9
2012-13	0.0		0.0							0.0				0.0	0.0

Source: RDPR, Bangalore

Table 16: Annual physical target and achievements of the spice board under WGDP

YEAR	Name of the Sector/Scheme under WGDP	UNIT	North Karnataka			South Karnataka						Coastal Karnataka			GRAND TOTAL			
			Belgaum	Dharwad	Total	C.R.Nagar	Chikamagalore	Hassan	Kodagu	Mysore	Shimoga	Total	DakshinnaKanna	Uttar.Kannada		Udupi	Total	
2010-11	Spice Board				0							0				0	0	
	a. I.P sets	Nos			0			18	8			29	55		24		24	79
	b. Sprinkler sets	Nos			0			2	4			1	7				0	7
	c. Farm ponds/well	Nos			0			25	25			15	65		13		13	78
	d.Gravity Irrigation	Nos			0				11				11				0	11
2011-12	Spice Board				0							0					0	0
	a. I.P sets	Nos			0			2	11			13					0	13
	b. Sprinkler sets	Nos			0							0					0	0
	c. Farm ponds/well	Nos			0							0					0	0
	d.Gravity Irrigation	Nos			0							0					0	0
2012-13	Spice Board				0							0					0	0
	a. I.P sets	Nos			0							0					0	0
	b. Sprinkler sets	Nos			0							0					0	0
	c. Farm ponds/well	Nos			0							0					0	0
	d.Gravity Irrigation	Nos			0							0					0	0

Source: RDPR, Bangalore

6.7 Forest Sector

The implementation of forest schemes such as agroforestry, social forestry and other forest activities is the second largest and important scheme under WGDP in Karnataka. The department of watershed in each district concerned executes and monitor forestry works. Assistant Conservator of Forests (ACF) is the implementing officer in the Watershed Department who works under the guidance of District Watershed Development Officer (DWDO). Under this programme, the department raises plantations in the designed watershed areas and distributes seedlings to the farmers to be planted in their farmyards and homestead lands. The department raise saplings which are suitable for the local environment and plant the same accordingly for the prescribed year. Under this scheme, the department considers both public and private lands and supplies seedling/plants to beneficiaries free of cost. The benefits accruing from the plantations during the harvest period are shared by the farmers concerned. Views of the villagers/beneficiaries are taken into consideration by the department officials prior to planting in the watershed areas and public lands which is mainly done on bunds and banks of streams and rivers for arresting rain water and also for avoiding runoff. Forestry activities are the main characteristics of ecological restoration besides being development and an important and popular scheme under WGDP in Karnataka.

The government allots 20 per cent of the WGDP budget for promoting forest activities in the Western Ghats. As can be seen from Table 15 the allocation for the recent years under forestry sector is consistently decreasing while some of the districts coming under WGDP are not spending the grants under forestry schemes. The districts of Chikmagalur and Hassan to be given more focus attention with respect to forestry activities even as it is observed that while some of the districts are not so keen on utilizing considering 20 per cent of the forest budget (work) for the implementation of forestry schemes.

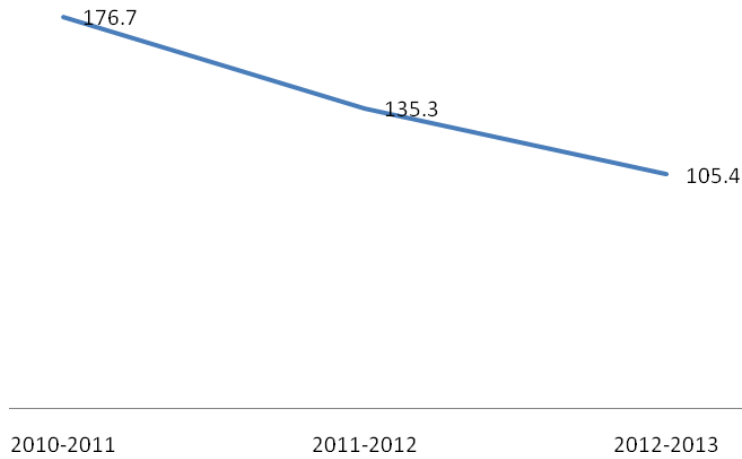


Figure 13: Financial allocation for the forestry sector under WGDP (Rupees in lakhs)

Table 17: Annual district wise budget allocation for the forestry sector under WGDP (Rupees in lakhs)

Year	North Karnataka			South Karnataka							Coastal Karnataka				Grand Total
	Belgaum	Dharwad	Total	C.R.Nagar	Chikamagalo	Hassan	Kodagu	Mysore	Shimoga	Total	D.Kannada	U. Kannada	Udupi	Total	
2010-2011		3.1	3.1	6			22.1	10.5		38.2	38.2	68	29.1	135	176.7
2011-2012	0	4.4	4.4	2			11.3		48.5	61.3		34	36	69.6	135.3
2012-2013	0	4.4	4.4	12			7.5			19.1	20.5	11	51	82	105.4

Source: RDPR, Bangalore

Physical targets of the forestry sector mainly on farm lands and more particularly on bunds of farmyards are taken up for restoring soil quality and enriching moisture holding capacity. Plantations are also taken up in the forest areas, especially, in the scattered vegetation for improving the green cover of the natural forests. Apart from plantation, the department grows saplings in the nurseries for distributing seedlings to farmers to be planted on their lands.

Table 18 shows the physical works undertaken as well as the area and the number of plants raised in the WGDP area. The years 2010-11 and 2011-12 witnessed a fair development in

the number of plantations, raising of seedlings and advance pitting works under the WGD region, Maintenance of PB Seedlings are largely provided for the years 2012 -13 which needs to be appreciated in terms of their ecological impacts. Progress under forestry plantation increased in the year 2010-11 and 2011-12 from 1950.5 Ha to 4759.9 Ha but the area under plantations for the year 2012-13 has decreased to 2896.5 Ha. Achievements in terms of raising seedlings are consistently increasing with 6000 seedlings for 2010-11, 183671 seedlings for 2011-12 and 171115 seedlings raised year 2012-13. However, maintenance of a total of 1500 Polyethylene seedlings is achieved only for the year 2012-13; besides, there is an increase in the advance pitting works every year. Forestry plantation is one of the best approaches towards developing green areas irrespective of planting on private land (farm). The farmers also opine that plantations are a preferred option. Most of the forestry plants are Teak (*Tectona grandis*), Silver Oak (*Grevillea robusta*), Bamboo (*Bambuseae*) and many other location specific plants which are useful as these plantations are of commercial importance in the long run supporting long term security.

Table 18: Annual physical targets and achievements of forestry sector under the Western Ghats development programme

Year	Name of the Sector/Scheme under WGDP	UNIT	North Karnataka			South Karnataka							Coastal Karnataka				GRAND TOTAL		
			Belgaum	Dharwad	Total	C.R.Nagar	Chikmagalur	Hassan	Kodagu	Mysore	Shimoga	Total	D.Kannada	Udupi	Total				
2010-11	a. Bank/Bund/Farmers land planting/Agro forestry	Ha		70	70	71				270	167			508.5	333	455	584	1372	1950.5
	b. Maintenance of PB seedlings	Nos			0									0				0	0
	c. Raising of PBs seedlings	Nos		6000	6000									0				0	6000
	d. Advance pitting work	Ha			0									0	40			40	40
2011-12	a. Bank/Bund/Farmers land planting/Agro forestry/block plantation	Ha		25	25	110			131	135	65.4	3217	3658.4	227.5	264	585	1076.5	4759.9	
	b. Maintenance of PB seedlings	Nos			0								0				0	0	
	c. Raising of PBs seedlings	Nos			0		16000						16000	109671		58000	167671	183671	
	d. Advance pitting work	Ha			0								0				0	0	

2012-13	a. Bank/Bund/Farmers land planting/Agro forestry/block plantation/Trenches	Ha	515	16	531		660		180		840			1526	1525.5	2896.5
	b. Maintenance of PB seedlings	Nos			0					1500	1500				0	1500
	c. Raising of PBs seedlings	Nos			0		66000				66000			10115	105115	171115
	d. Advance pitting work/WDD	Ha		112	112						0			265.5	265.5	377.5

Source: RDPR Bangalore

6.8 Agroforestry

Agroforestry is a farmer friendly scheme under the forest activities and its implementation will enrich ecological systems. Under this scheme farmers plant seedlings on farmyards for protecting soil systems from extreme runoffs and also for facilitating infiltration of rain water. Plantation of seedlings on the bunds facilitate holding soil moisture content for long. The major physical targets of the agro forestry schemes include farm land plantations and social forestry. Under this scheme, the development of nurseries and distribution of saplings to farmers to be planted on their open spaces/farm lands are the focus. In addition, the department also plants seedlings in the public places and monitor them for five years in the selected watershed regions. Table (19) below shows the budget allocation for agroforestry under WGDP; the budget allocation has enhanced from Rs.105.9 lakh in 2010-11 to 174.6 lakh in 2012-13 over a span of three years. It's a good sign of development in the recent years and it should continue for the coming years with an additional focus on conserving our fragile environment in the Western Ghats region of Karnataka.

Table 19: Annual allocation budget for the Agroforestry under the WGDP (Rs in lakhs)

YEAR	North Karnataka			South Karnataka							Coastal Karnataka			Grand Total	
	Belgaum	Dharwad	Total	C.R.Nagar	Chikamagalore	Hassan	Kodagu	Mysore	Shimoga	Total	D.Kannada	U.Kannada	Udupi		Total
2010-11		4.6	4.6			30.0			45.5	75.5			25.9	25.9	105.9
2011-12	37.4	2.9	40.3		6.0	40.0		10.5	57.6	114.1			26.5	26.5	181.0
2012-13	38.6	2.9	41.5		16.5	25.3		10.5	54.3	106.6			26.5	26.5	174.6

Source: RDPR, Bangalore

Table 20: Annual Physical Targets and achievements of agroforestry schemes under WGDP in Karnataka

YEAR	Name of the Sector/Scheme under WGDP	UNIT	North Karnataka			South Karnataka							Coastal Karnataka			GRAND TOTAL	
			Belgaum	Dharwad	Total	C.R.Nagar	Chikamagalore	Hassan	Kodagu	Mysore	Shimoga	Total	Dakshnna.Kannada	Uttar.Kannada	Udupi		Total
2010-11	Agro forestry/Social Forestry				0											0	0
	a. Maintenance of PB seedlings	Nos		7000	7000							0			310000	310000	317000
	b. Transportation of seedlings to beneficiaries	Nos			0							0				0	0
	c. Farmers land planting/Agro forestry	Ha		5	5			59				59			31	31	95
	d. Advance pitting work	Ha		5	5							0				0	5
	e. Rising of PBs	Nos		25000	25000						415000	415000				0	440000
	f. Maintenance of Plantations	Ha		6	6			135				135			96	96	237
	g. Road side plantation	Mtr			0							0			5000	5000	5000
2011-12	Agro forestry/Social Forestry	Ha.			0							0				0	0
	a. Maintenance of PB	Nos			0				66600			66600				0	66600

	seedlings																
	b. Transportation of seedlings to beneficiaries	Nos		0						0				0	0		
	c. Farmers land planting/Agro forestry	Ha	446	446.4						0				0	446.4		
	d. Advance pitting work	Ha		0						0				0	0		
	e. Raising of PBs	Nos		0						0				0	0		
	f. Maintenance of Plantations	Ha		0						0				0	0		
	g. Road side plantation			0						0				0	0		
	h. Raising of demonstration plots	mtr		0						0				0	0		
2012-13	Agro forestry/Social Forestry	Nos.	38300	38300			28		269	297				0	38597		
	a. Maintenance of PB seedlings	Nos		0						0		51480	113398	164878	164878		
		Hect.			0						0		72		72	72	
	b. Transportation of seedlings to beneficiaries	Nos		0						0				0	0		
	c. Farm lands planting/Agro forestry	Ha		0	193			84			276.7			50	50	327	

d. Advance pitting works	Ha			0							0				0	0
e. Raising of PBs	Nos			0							0				0	0
f. Maintenance of Plantations	Ha			0							0				0	0
g. Road side plantation				0							0				0	0
h. Raising of demonstration plots	mtr			0							0				0	0

Source:RDPR Bngalore

Physical targets and achievements for the years 2010-11, 2011-12 and 2012-13 under the WGDP areas are as follows – (i) progress under maintenance of PB seedlings has been increasing consistently over last three years from 317000 seedlings in the year 2010-11 to 164878 seedlings in 2012-13, showing good sign of work done besides benefiting farmers in getting better quality seedlings; (ii) progress made under raising of Polyethylene Bag (PB) seedlings amount to 440000 for the year 2010-11 and focus is nil in rest of the year; (iii) Work progress under farm land plantations has consistently increased over the three years from 95 Ha in 2010-11 to 327 Ha in 2012-13, a good sign with regard to soil conservation activities; (iv) Work progress under advance pitting and road side plantations has been observed only 2010-11 while progress is found nil for the remaining two years, which shows that more attention should be given to both the sectors.

6.9 Livelihood

Livelihood activities for asset less persons under WGDP includes development programmes for landless farmers coming under watershed programmes like (i) artificial insemination for upgrading cattle; (ii) fodder development on farmers farmlands; (iii) supply of carpentry kits; (iv) household kits for landless farmers (v) conducting animal health camp (vi) supply of birds for the beneficiaries; (vii) development of animal husbandry (pigs and goats) for meat and fibre. The department of watershed executes and monitors livelihood activities. The veterinary officials are responsible for the distribution of small animals, conducting animal health camps and monitoring developmental activities.

Livelihood sector receives 15% of WGDP funding for animal husbandry and livestock management. The allocation of grants towards animal husbandry and supply of birds for the year 2011-12 amounts to Rs.131.5 lakh, which is high as compared to the earlier two years. Development of livelihood activities was initiated in the year 2011-12 with an allocation of Rs. 93.1 lakh and Rs.108.1 lakh for the year 2012-13, while the allocation towards livestock management for the year 2010-11 came to Rs.49 lakh which was much better as compared to the allocation of Rs.39 lakh for the year 2011-12, but decreased to Rs.25.7 lakh for the year 2012-13.

Table 21: Annual allocation of financial budget for Livelihood Activities/schemes under WGDP (in lakhs)

Year	Name of the Sector/Scheme under WGDP	North Karnataka			South Karnataka						Coastal Karnataka				Grand Total	
		Belgaum	Dharwad	Total	C.R.Nagar	Cikkamagalur	Hassan	Kodagu	Mysore	Shimoga	Total	D.Kannada	U.Kannada	Udupi		Total
2010-11	Livelihood activities for asset less persons															
	Animal husbandry, Supply of Giriraja birds/calves / Developmt of small animals,Supply of Sewing machines/ Masonary,Fodder,Carpentry kits/ Kichen garden Animal health camp /Fodder development	6.9	2	8.8	1				3	61	65.4	15		6	21.2	95.3
	Livestock management including Goatry,Piggery,.etc	45.6		45.6					3		3.4				0	49
2011-12	Livelihood activities for asset less persons	0		0					9		9		84.1		84.1	93.1
	Animal husbandry, Supply of Giriraja birds/calves / Development of small animals,Supply of Sewing machines/ Masonary,Fodder,Carpentry kits/ Kitchen garden/ Animal health camp /Fodder development	51.5	2	53.5						23	22.6		43.5	12	55.5	131.5
	Livestock management including Goatry,Piggery., etc	39.3		39.3							0				0	39.3
2012-13	Livelihood activities for asset less persons	20.6		20.6					3	60	63	4.5	20		24.5	108.1
	Animal husbandry, Supply	28.1	2	30.1	1			0.	3	30	34.5	9.2	11.8	9.2	30.1	94.7

of Giriraja birds/calves / Development of small animals,Supply of Sewing machines/ Masonry,Fodder,Carpent ry kits/ Kitchen garden/ Animal health camp /Fodder development							5								
Livestock management including Goatry,Piggery, etc.,	25.7		25.7							0				0	25.7

Source: RDPR Bangalore

Table 22: Annual Physical Targets and achievements of Livelihood Activities/schemes under WGDP in Karnataka

Year	Name of the Sector/Scheme under WGDP	UN IT	North Karnataka			South Karnataka							Coastal Karnataka			GRAND TOTAL		
			Belgaum	Dharwad	Total	C.R. Nagar	ur	Hassan	Kodagu	Mysore	Shimoga	Total	D.Kannada	U.Kannada	Udupi		Total	
2010-11	Livelihood activities for asset less persons				0												0	0
	Supply of Giriraja birds/calves	Nos		100	100					680	3200	3880				1960	5850	
	Fodder development	Ha			0	8					50	58	23		40	63	121	
	Supply of Sewing machines/Fodder kits	Nos		100	1000						100	100	45			45	1145	
	Livestock management including Goatry,Piggery, etc	Nos	470		470					150	250	400				0	870	
	Animal health camp	Nos	23		23						50	50			40	40	113	

2011-12	Livelihood activities for asset less persons/Non land based activities				0											0	0
	a.Sewing machines/Carpentry kits	Nos			0								1372			1372	1372
	Supply of Giriraja birds/calves	Nos			0				15	36	51	2600				2600	2651
	Fodder development	Ha			0						0			11	11	11	11
	Supply of Sewing machines/Fodder kits	Nos			0						0					0	0
	Livestock management including Goatry,Piggery, etc	Nos	241	500	741						927	927		45	45	1713	1713
	Animal health camp	Nos		1	1						0					0	1
2012-13	Livelihood activities for asset less persons/Non	Nos			0				90		90					0	90

land based activities																
a.Sewing machines/Carpentary kits	Nos			0					72	72		196		196	268	
Supply of Giriraja birds/calves	Nos			0					1199	1199	12200			1220	2419	
Fodder development	Ha	675		675						0			3	3	678	
Supply of Sewing machines/Fodder kits	Nos		500	500						0		227		227	727	
Livestock management including Goatry,Piggery, etc	Nos															
		514		514				3		3			794	794	1311	
Animal health camp	Nos	25	2	27	4			2	90		96		46	7	53	176

Source: RDPR Bangalore

Livelihood activities for landless beneficiaries are a major source of income for their daily life. The watershed department supplies household kits for the beneficiaries. The targets achieved for the past three years under this sector can be observed from the table. The supply of total number of birds has been decreasing since 2011- 12. The supply of birds is found maximum for South Karnataka districts as compared to other districts. Our interactions with the beneficiaries reveal that they are expecting the supply of cattle rather than birds and sheeps because they are willing to bear 50 per cent of the additional cost incurred while purchasing livestock. The total area covered under fodder development, the scheme has increased for the year 2012-13, which is a good sign of development. The supply of carpentry kits introduced from the year 2011-12 is decreasing every year. Livestock management and animal health camps show an increasing trend over the year which is a good sign of achievement.

6.10 Rural Infrastructure

The objective of this scheme is to provide rural connectivity to small habitants of Western Ghats. Under this scheme, the construction or renovation of old roads and foot bridges is undertaken for the convenience of people residing in steep hilly terrains and areas of the Western Ghats region. This sector is also part of the livelihood activities. Footbridges receive 15 % of WGDP funds as part of rural infrastructure, development allocation for this scheme has increased from Rs.579.6 lakh for the year 2010-11 to Rs.635.3 lakh in for 2011-12, but decreased to Rs.462.1 lakh for the year 2012-13. Chikkamagalur district accounts for the highest share of allocation for in all the three years, while fund allocation is insignificant in respect of Coastal Karnataka districts across all the three years. The Department should allocate sufficient funds to the Coastal Karnataka districts considering that as these areas are exposed to suffer from natural disasters frequently.

**Table 23: Annual allocation of financial budget for Foot bridges under the WGDP
(Rs.in lakhs)**

Year	North Karnataka			South Karnataka							Coastal Karnataka				Grand Total
	Belgaum	Dharwad	Total	C.R.Nagar	Chikamagalore	Hassan	Kodagu	Mysore	Shimoga	Total	DakshinnaKannada	uttar.Kannada	Udupi	Total	
2010-11		14.3	14.3	25.0	232.6	188.1	119.6			565.3				0.0	579.6
2011-12	93.3	14.0	107.3	9.7	244.4	133.8	140.0			527.9				0.0	635.3
2012-13	0.0	14.0	14.0	9.7	123.8	162.6	152.0			448.1				0.0	462.1

Source: RDPR, Bangalore

Physical targets achieved under this sector show an increasing trend only for south Karnataka districts (progress is nil or very less in respect of other districts), with the highest number of foot bridges (157) developed for the year 2010-11; however, despite a fair spite of good allocation of funds the total targets achieved for the years 2011-12 and 2012-13 number only three and 86, which is very insignificant. Since foot bridges are very essential for transportation, it becomes important to give attention towards this sector as natural disasters such as floods, heavy rains, and monsoons are adversely affect rural people living in steep hilly areas of Western Ghats in terms of their daily commuting and routine activities.

Table 24: Annual Physical Targets and achievements with respect to Rural Infrastructure under WGDP in Karnataka

Year	Name of the Sector/Scheme under WGDP	UNIT	North Karnataka			South Karnataka						Coastal Karnataka			GRAND TOTAL		
			Belgaum	Dharwad	Total	C.R.Nagar	Chikamagalore	Hassan	Kodagu	Mysore	Shimoga	Total	Dakshinna.Kannada	UttarKannada		Udupi	Total
2010-11	Foot bridges/Hanging Bridges/	No			0							0				0	0
				3	3	8	69	48	29			154				0	157
2011-12	Foot bridges/Hanging Bridges/check dam/VCD	No s.			0	3						3				0	3
2012-13	Foot bridges/Hanging Bridges/check dam/VCD	No s.			0		12	38	36			86				0	86

Source: RDPR Bangalore.

Box 1: Case study: Savalangkere Watershed, Shimoga Taluk, Shimoga District

Savalangkere watershed is located about 16 KM off from the district head quarters, Shimoga taluk, Shimoga. Savalangkere is a sub watershed with 4204.8 Ha area under development, covering 10 villages and is categorized as hilly area under southern transition agro-climatic zone. This sub watershed is a cluster of 10 micro watersheds. Prior to the watershed development, this area was under the cultivation of mono crop during monsoon with only rainfall as its main water source. The annual rainfall in this watershed region averages about 889 mm. . During monsoons, people cultivate rainfed crops like Hy. Maize, Hy. Jowar, Ragi, Hy. Cotton, Tur, Cowpea, Sunflower and other minor millets. Hy. Maize (44 %) and Jowar (10.74 %) are the major crops that support their livelihoods. A majority of the people belong to SC and ST categories.

In the year 2010-11, the Department of Watershed, Shimoga took up this area for development under the WGDP to be continued for five years i.e., 2014-15. The project aims at increasing soil potentiality, controlling runoffs, and minimizing top soil erosion. The total cost of the project comes to Rs.630.72 lakh for five years. The programme has been initiated by way of involving the local community focusing on agriculture sector followed by horticulture and forestry under both public and private lands in the region. The major activities undertaken include the construction of farm ponds, diversion channels, contour bunding, seepage channels, check dams, providing training for improvement of livelihood and restoration of fragile ecosystems. As a livelihood improvement programme, the department provides efficient training programmes for the local people, SHGs and UGs regarding the scientific cultivations of crops, marketing, sheep rearing, Bee keeping, mushroom cultivation, restoration of ecosystem and other income generating activities.

Benefits - The impacts have been remarkable and the local people are satisfied with the training being provided to them. As of now, 1031 people have been selected as beneficiaries of which 18 % are SCs, 5 % STs, 33 % women and 44 % other communities. Based on the people's experiences, crop yield has increased by 10-15 %, while the water level in bore wells has increased by 10 %. Farmers appreciate the soil conservation and water retention techniques carried out on their fields as it has resulted in increased incomes and good yield levels. Besides, these benefits, the landless have received machinery kits which are useful for their daily activities and are satisfied as it has provided employment opportunities and supported livelihoods. In total, the programme is running effectively with a majority of the people being benefited; besides, it has motivated the SHGs, by requesting for the reward funds to begin some entrepreneurship activities like tailoring services, provision stores etc.

People's Perceptions: People's perceptions regarding the programme have been captured across the study districts

Table 25 : Sector wise People's Perceptions regarding WGDP in Karnataka

Sectors	Focus	Shimoga	Belgaum	Kodogu
	Satisfaction regarding programme	✓	✓	✓
Finance	Increase in reward fund for SHG	✓	✓	✓
	Increase in subsidies from bank loans	✓	✓	✓
	More subsidies to purchase tailoring machines		✓	✓
Social aspect	More number of women groups		✓	✓
Livestock	Distribution of cows/Buffaloes rather than sheep	✓	✓	✓
	Entertain piggery, poultry			✓
Awareness programme	Increase in number of study tours	✓	✓	✓
Agriculture and soil conservation	Trenches requirement			✓
	Increase in height of bunds	✓		
	Bigger farm ponds			✓
Horticulture	Increase the distribution of Coconut, Mango, Sapota saplings	✓		
	Increase the distribution of Khazoo, Mango, Sapota,		✓	
	Increase the number of distribution of Mango, Sapota, Lemon saplings			✓
Forestry	Increase the distribution numbers of forestry, ornamental and fruit bearing plants	✓	✓	✓
	Increase social forestry plantations	✓	✓	✓
Livelihood	Increase the number of vegetable kits	✓	✓	✓
	Providing good quality of seeds	✓	✓	✓
	Tailoring training for Women			✓
	Trainings on organic farming, vermiculture and beautician course			✓
	Larger watershed development programmes over a short period of time, including more marginal farmers	✓	✓	✓
Rural infrastructure	More number of foot bridges			✓

Finance sector: It is interesting to note that across all the three districts 80-90% people are found satisfied with the WGDP programme. However, they expect the reward fund increased to Rs.1-2 lakh for each SHG as the members feel the need for using it for other income generation activities like opening of provision shops, tailoring shops etc. They also prefer more subsidies on bank loans so that rural industries and micro level industries could be initiated. They also expect more subsidies on the purchase of tailoring machines and other equipments to work at home.

Social aspects: More number of women groups expect to be considered as beneficiaries under the watershed area. With respect to the livestock sector, people want more numbers of cows/buffalows to be distributed rather than sheep, goats etc for which people are willing to bear 50 per cent of the additional cost incurred while purchasing the livestock. They also feel the need for more number of study tours as they get to learn a lot during interactions and exposures.

Agriculture sector: In Kodagu, people prefer increased number of trenches across the coffee estates. More number of foot bridges and bigger farm pods are also requested for in Kodagu District. In Shimoga, they prefer increasing the height of bunds and coverage of larger areas.

Horticulture: People request for an increase in the numbers of Coconut, Mango and Sapota saplings distributed in Shimoga district, while in Belgaum, an increase the number of Khazoo, Mango, Sapota seedlings distributed is preferred.

Forestry: In all the three districts, people expect number of forestry, ornamental, fruit bearing plants and social forestry plantations.

Livelihood: Across the three districts, people demand an increase in the number of vegetable kits distributed and also good quality seeds. Besides, people request for trainings in tailoring, vermiculture and beautician courses.

Box 2: Case study 2: Ganibail Watershed, Khanapur Taluk, Belgaum District

Ganibail watershed is located 5 km off from Taluk head quarters, Khanapur and 25 km away from the district head quarters, Belgaum. This watershed was notified in the year 2008-09 for watershed developmental activities such as soil conservation, forestry plantation, horticulture plantation and also converting dry lands into agricultural purposes. Ganibail watershed covers an area of about 465 Ha and is designed under micro watershed. The officials of the watershed department observe that micro watersheds are better than sub watersheds. The total cost for carrying out activities in this watershed amounts to about Rs.42.36 lakh for five years (refer Table 4). This watershed has been selected based on information collected from Remote Sensing maps and by involving the local people with their opinions taken into consideration. Before initiating the activities, officials of the watershed department conducted the Gram Sabha by involving the local people and elected representatives of this area to discuss the developmental activities. The participants fully supported the proposal as it would aid in overall development of the region. This area is hilly and dry and unfit for agriculture. The only crop cultivation taken up is horse gram during the monsoon season.

Benefits - Currently this land has been leveled and groomed well for agricultural activities and farmers are cultivating Paddy, Jowar and sugarcane and have also constructed farm ponds for water storage. Our observations at the field indicate that the developmental activities conducted are effective and good. It is interesting to note that erosion of top soil is well controlled and collection of rain water in farm ponds noticeable. The area under this watershed is completely privately owned and the watershed department has distributed horticulture seedlings like Khazoo, Mango and Sapota to be planted on farm lands. Sapota plants are already bearing fruits while paddy is cultivated on fields. The moisture holding capacity of the soil systems and water retention of crops have increased. Thus, the developmental activities have helped conserve the fragile ecosystems of the Western Ghats.

Apart from soil conservation, forestry and horticulture activities, the watershed department provided training to SHGs and ECs for improving their skills required for income generation activities. In addition it conducts study tours for a few selected members of the group to exchange knowledge and ideas about the conservation and management practices in the Western Ghats. Over, discussions with women members SHGs reveal that they are appreciative of appreciated the initiatives being undertaken and that they are keen to be involved in more skilled trainings and other livelihood improvement opportunities. Furthermore, they express the need for an increase in the reward fund Rs.1-2 lakh per SHG to start rural industries. Besides, they also request for loans and a minimum 50 percent subsidies on material purchasing for the household industries. In brief, the programme designed has been effective and should be continued in the future considering their requests as 90 % of the women are enthusiastic towards taking up developmental activities. Another technical aspect that needs consideration is avoiding trench cum-bunding-scheme as marginal/small farmers lose a large area during their construction.

7.0 Recommendations and Suggestions

7.1. 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.

7.2 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.

7.3. 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.

8.0 Discussion with Officials of RDPR Department, M S Building, Bangalore

Purpose of visit

The annual action plans constitute a crucial component of the WGDP programme. These action plans are submitted by the Chief Executive Officer (CEO) of the Zilla Panchayat (ZP) of each district which and are devised prepared with the assistance of Executive Officers and other departmental officers such agriculture, animal husbandry, watershed, horticulture etc.

8.1 Fund flow system (Central – State – Districts) of WGDP

After the submission of consolidated annual action plans by the State Government to the Central Government (Planning Commission) on regular basis in the month of April of every year, the central govt. releases funds to the State Government (Finance department) in two instalments; first instalment to the extent of 75 per cent in July-August and the second, to the extent of 25 per cent in the month of January (after the submission of performance reports). The programme, WGDP, is also co-funded by the State Government (10%) and the Central Government, and the Planning Commission (90%). After the approval by the State Government they are forwarded to WGDP Cell, RDPR for further processing and following which RDPR will release funds to ZPs for taking up supplementary steps. Subsequently, CEOs of ZPs will conduct meetings with the official (formed by the Govt.) and unofficial (formed at the grass roots level) committee including the locally elected persons before allocating the funds to execute works at the village or block level. The allocation of funds mainly depends on the total population and the area of Western Ghats covered. The budget for 2012-13 amounts Rs.32.30 crore, of which only about Rs.50-60 lakh goes towards the salaries of employees.

8.2 Implementation of WGDP

WGDP has been a routine process from inception (5th five year plan – 1974-79). This scheme largely focuses on watershed activities such as constructing check dams, infiltration tanks, contour bunds, channelizing silted channels etc., with the least focus on other works such as the implementation of ecological issues, building foot bridges, farm roads, distributing livelihood materials etc. As per the directions of the CEO, all EOs of the departments concerned will execute works with the assistance of village people and officials from the respective units (like watershed, horticulture, animal husbandry etc.). In addition, they will

check the maintenance works of previous years. After the initiation and completion of each work they submit reports to the CEOs, concerned who intern forward them to the State Cell for further actions. According to Mr. Gupta, there is no change effected so far in the plans/schemes, nor any obstacles, recorded regarding development/damage and not even a single conflict between people and officials.

Further, this scheme has been split into short term and long term plans for effective implementation at the ground level. Short term plans are very few, say, constructing contour bunds and designing of discharge channels, where as, long term plans are many such as the construction of vented dams, foot bridges, afforestation, plating orchids, trainings etc. This scheme comes under the non-plan budget of the state.

8.3 Monitoring mechanism

ZPs as well as the WGDP Cell at the state level will closely monitor the works carried out at the ground level regularly and submit a report regarding the progress made to the central govt. Each department adheres to the annual action plans though they may encounter minor cases of deviation from the actions plans and in such cases there is a possibility of funds being reallocated wherein towards emergency works.

8.4 Indicators of success stories

We may take the following for an evaluation as success indicators.

- 1 Employment status (self employment)
- 2 Per capita income of targeted population
- 3 Budget utilization
- 4 Accountability and transparency of responsible organizations
- 5 Physical target and achievements balance

Continuation of long term projects under separate budgets and spill over budget utilization

- 1 Livestock census comparison
- 2 Forest area comparison
- 3 Water resources and efficiency in water use agricultural purposes
- 4 Overall HD and living standard
- 5 Maintenance of structures and continuation of activities

8.5 Gaps Identified so far

- 1 Budget allocation for each year from the beginning (WGDT)
- 2 Budget allocation for each district (Time series)
- 3 Budget allocation for each department (Time series)
- 4 Plan expenditures (Time series)
- 5 Non plan expenditures (Time series)

9.0 Field Visits

Visits by ISEC Research Team to Various Regions under the WGDP in the State

For conducting the study, a team of researchers from ISEC made several visits to the WGDP (Western Ghat Development Programme) area in the State to observe and to interpret the execution and the functioning of WGDP schemes in the State. Visits were made independently to the watershed and Engineering departments of the districts concerned for obtaining people's perceptions regarding development and implementation of the WGDP schemes. Interactions were carried out with officials, beneficiaries like Self Help Groups (SHGs), User Groups (UGs) and other non beneficiaries. The group consists of WGDP chairman, elected representatives, members, farmers, landless poor, women, etc.

9.1 Shimoga

Discussions with officials of the District Watershed Department, Shimoga

We visited the Shimoga Watershed department for interacting with officials such as District Watershed Development Officer (DWDO), Assistant Director of Agriculture (ADA), Assistant Director of Horticulture (AHO), Assistant Conservator of Forest (ACF), Veterinary Doctor (VD), Taluk Watershed Development Officer (TWDO), ground level officers etc, regarding the functioning of watershed activities connected with the WGDP programme. For the year 2012-13 a sum of Rs.451.5 lakh has been allotted to the development of WGDP programmes covering an area of 6641 Sq.km (Rs.6799 per sq. km). The department mainly focuses on the sub -watershed activities in the district. In addition, foot bridges, check dams and vented dams are taken up wherever necessary. According to the DWDO, the WGDP programmes are performing well in the district with the suggestions of the local people being taken into consideration for a better execution of the programme. Moreover, the watershed department makes use of Remote Sensing and Geographical Information System (GIS) maps for identifying the micro watershed and sub watershed areas in the district. After the

preparation of maps, officials discuss the implementation of the programme with the people concerned. If the local people agree they form an Executive Committee (EC) consisting of 9-13 people for developing and monitoring the programme. Apart from the EC, officials constitute groups which include women members from Self Help Group (SHG), (consisting of 20 people) for providing livelihood and income generation training programmes. They also form User Group (UG) consisting of all landholders, who receive the maximum benefits besides participating in the programme, whereas in respect of the SHGs, different communities like landless, BPL families, marginal landholders etc., will participate. According to the DWDO and other officials of the watershed department, the designed programmes under the WGDP are functioning better. The department officials are mostly dependant on 2008 guidelines for the improvement of various schemes. According to records, Shimoga district has taken up five sub watershed development areas each of 3000-5000 Ha in five different taluks. As per the norms, they have constituted five EC committees ensure the effective implementation of the schemes. As per the guidelines, the local people prepare an Annual Plan of Operation (APO) with the help of officials of the watershed department which they have to submit to the government for further processing. These activities are undertaken on both private and public lands with each watershed activity planned for about five years.

Apart from developmental works, the department provides training programmes for EC, SHG and UG groups regarding the improvement of livelihoods, income generation activities, entrepreneurship awareness and ecological restoration activities. We have interacted with many ECs, SHGs and UGs, in the watershed area for understanding the functioning and implementation of the programmes. Most of them are interested in the initiation of watershed activities and training they are obtaining from the WGDP.

In the district, people largely rely on sectors for their livelihoods such as agriculture, horticulture, forestry and animal husbandry. Of the total allocation of funds for the district, 60 per cent is diverted to the programme and 40 per cent to other administrative expenses like salary, maintenance of buildings, monitoring etc (refer Table 1). Of the 60 per cent of programme allotment, a major share (60 per cent) goes to agriculture and 20 per cent each to horticulture and forestry programmes. Other schemes such as livestock distribution (Goats, Sheeps, Hens etc) and trainings are considered under the other budget for administrative purposes. According to DWDO, funds are not released on time, but they execute the

programme schemes on time because some of the programmes are season specific like afforestation, horticulture etc., Once funds are released to DWDO, it initiates the programme according to APO approved for the specific year. Criteria for WGDP allocation depends mainly on the area, population, BPL families, labour potentiality and the requirements of soil and water conservation.

Table 26: Financial allocation (in Rs. lakhs) for the WGDP programmes in Shimoga district for the year 2012-13

Sl No	Name of the Talukas	Shimoga	Thirtha halli	Hosanagara	Sagara	Shikaripura	Total
	Name of the Watershed	SAVALANGAK ERE	SHIRA BYLU	GUDAGOD U	KUMBA RAGOLI	HUNASEKA TTE	
	Area of the Watershed (Ha)	3215.00	3000.00	2700.00	3800.00	2300.00	15015.00
A	Management component						
1	Administrative cost	9.40	8.16	8.83	11.93	6.69	45.00
B	Preparatory phase						
2	Community mobilization and Training	5.22	4.53	4.90	6.63	3.71	25.00
C	Watershed works phase						
I	Agriculture & Soil Conservation works	3.84	16.65	18.00	24.33	11.20	74.02
2	Forest						
a	Nursery	10.00	4.00	8.67	8.47	2.00	33.14
b	Agro forestry	19.90	8.64	5.00	10.00	10.80	54.34
3	Horticulture :	24.02	20.86	22.55	30.48	17.09	115.00
II	Livelihood activities for assetless persons	12.53	10.88	11.77	15.90	8.92	60.00
	Animal husbandry						
a	Supply of Giriraja Birds, Calves/Development of Small animals, supply of sewing machines,/Masonory , Fodder, Carpentry kits/Kitchen garden, animal health camps, Fodder development	6.27	5.44	5.88	7.95	4.46	30.00
III	Production system and Micro Enterprises						
1	Crop diversification, Crop Demonstration, Fodder Development, Nutrition and Management, Organic Menure,	3.13	2.72	2.94	3.98	2.23	15.00
GRAND TOTAL		94.31	81.89	88.55	119.65	67.09	451.50

Source: Department of Watershed, Shimoga.

9.2 Major physical targets set for in the district

In the year 2012-2013 Shimoga district watershed department has undertaken works such as contour bunding, farm ponds, diversion of channels, rebel checks, distribution of livestock and training on income generation, awareness regarding entrepreneurship besides construction of foot bridges, vented dam etc.

9.3 Difficulties encountered during the implementation of works

According to DWDO and others in the watershed department, local conflicts arise during the implementation of the programme. Schemes Conflicts mainly arise while delineating land boundaries and choosing the potential beneficiaries of WGDP. Conflicts may get compounded due to the interference of politicians. . However, officials of the department and the heads of the committee generally resolve issues as and when they arise. In the horticulture sector, issues arise during the distribution of and the type of seedlings. Many a time officials fail to fulfill the demands of the local people similarly, the problem arise in the animal husbandry sector during the distribution of sheeps, goats and Giriraja birds among the people in villages, whereas in the case of forestry sector, demarcation of fencing is a vital issue and also grazing animals tend to trample the forestry plantations. However, such issues are not so grave and resolved with the help of local people and the official's concered.

9.4 Monitoring method

During and after the completion of design work, the officials of the watershed department monitor the ongoing activities at the workplace. In addition, officials from the Zilla Panchayat (ZP) concerned, such as Chief Planning Officer (Development) and his team visit the site and cross check the activities. Apart from them, Non Government Organizations (NGOs) also visit and evaluate the programmes. During the programme implementation stage, Director and his team of WGDP in the RDPR department also visit and monitor the developmental activities. . Moreover there is a vigilance wing in place to minimize the damages and control the flow of funds

9.5 Suggestions from the Officials

- Increase the reward fund for the SHGs, from Rs.75000-100000 per SHG
- Increase the labour wages/payments as per the NREGA norms (Rs.156 per day)

- Provide the fencing provision for forestry plantations under WGDP programme
- Increase the salary of watershed assistants from Rs.6000-8000 per month per person
- Restrict interference of politicians in the implementation of programmes
- Funds have to increase by 5-20 percent in relation to the present allocation because SSR rates are increasing and it will be difficult to bring larger areas under development at a minimum cost
- NGO involvement is a must particularly during the awareness generation programmes, income generation activities and training programmes.
- In each taluk, at least the support of one NGO is required.
- Fill up the vacancy positions in the watershed department for smooth functioning of the programme and on time performance. Currently there is a 30 percent shortage in the field staff.
- The organizational setup is sound in the watershed department and should be continued.
- WGDP is the best possible model because it is associated with the local people and should be continued for a long period.
- Funds allotted for the maintenance of completed works should be increased.
- Trench –cum-bunding scheme should not be entertained further because marginal landholders lose large portion of their lands during the implementation stage
- Construct more foot bridges because during the rainy season they would be useful particularly to children and women.

9.6 Perception of the people

We have had interactions with beneficiary groups such as SHGs (13 people), UGs (7 people) and ECs (2) of Kunchenally watershed area and their suggestions recorded.

A WGDP evaluation team of ISEC conducted interviews with beneficiaries like SHGs, UGs and ECs at the household level for obtaining data regarding the initiation and development of WGDP schemes in the region. Around 80-90- percent of the interviewed people are satisfied with the WGDP development schemes being implemented. The department officials take into consideration the views of the local people before initiating the activities in the region and providing informative training to all the groups related to livelihood improvement and income generation processes. They also distribute seedlings under forestry and horticulture plantations programme. The landless people have obtained skilled training and visited many other areas under study tour programmes. The department has taken most of the members of the groups to other developed areas under study tour programmes. The people have made some more suggestions for the further development of present programme; they include

- Increase the reward fund between Rs.1-2 lakh for each SHG as it can help members utilize for other income generation activities like opening provision shops, tailoring shops etc..
- Distribution of cows/buffalows are better than distributing sheeps, goats etc. People are willing to bear 50 per cent of the additional cost incurred while purchasing livestock.
- More subsidies are needed on bank loans for starting rural industries and micro level industries
- More number of study tours are required because coordination and interaction with the knowledgeable people can add to their understanding besides exposure.
- Increase the height of bunds and cover larger areas than at present
- Distribute more number of forestry plants, ornament plants and also fruit bearing plants
- Increase the distribution in of Coconut, Mango, Sapota, seedlings as they can support the household incomes
- Increase the vegetable kits to reduce the burden on kitchen materials

- Make available good and quality seeds for kitchen gardens as one way of reducing additional expenditure
- Increase the number of social forestry plantations so as reduces additional pressures on natural forests.
- Large areas for watershed development are essential within a minimum time frame and also include a number of marginal farmers as potential beneficiaries under WGDP

10.0 Belgaum

10.1 Discussion with the officials of District Watershed Department, Belgaum

We conducted a visit to Belgaum district with a view to interacting with the officials and beneficiaries of the WGDP to understand the functioning of the WGDP and also to elicit people's perceptions regarding WGDP implementation. Belgaum has covered a larger area of about 6478 Sq. Km (15 % of total WGDP) coming under Western Ghats with a financial allocation of Rs.514.53 lakh (16 % of total WGDP) for the year 2012-13 for the development of WGDP schemes. Western Ghat spread across five taluks of Belgaum district viz. Belgaum, Khanapur, Bailahongal, Saundatti and Hukkeri is separated by two agroclimatic regions- northern and hilly zone. The fund allocation pattern for the district is given in (Table 26).

Table 27: Fund allocation pattern under WGDP programme for Belgaum district in per cent

Percentage of fund allocation	Activities
4 %	Entry Point Activities
5 %	Capacity building
1 %	Detailed Project Report (DPR) preparation
2 %	Monitoring and Evaluation
15 %	Livelihood activities and production function system
3 %	Consolidation
60 %	Works (agriculture, forestry, horticulture)

Source: Watershed Department, Belgaum

The watershed department has designed 23 micro watersheds (about 500 ha) and formed 23 EC committees for the implementation of WGDP schemes (refer Annexure 10). As per 2008 guidelines, the department has constituted committees and allotted required funds and also sanctioned grants in different instalments. This district has planned micro watersheds as it is not suitable for the development of sub watersheds as officials think experienced that sub watersheds are difficult to execute. According to the DWDO, the WGDP programmes are

performing well in the district because these programmes are associated with the local people and most of the work is carried out according to the suggestions made by the local people. The WGDP model is better compared to other schemes the watershed department according to the department officials, local people and other beneficiaries of the WGDP. WGDP schemes are implemented independently in separate areas based on the suggestions of the remote sensing agency as well as the local people. These schemes are not merged with other schemes of the watershed department.

For the year 2012-13, the watershed department has allotted 10.8 % of the budget to the Special Component Plan (SCP) and 13.4 % to Tribal Sub Plan (TSP) for uplifting the minor and scheduled caste communities under WGDP program. Sometimes the allotted budget has not been spent properly in certain places where there is the presence of the scheduled caste community. Moreover, Belgaum district has not used funds properly allotted across several years as shown in the table 27. . It is suggested that funds be used appropriately for the developmental activities in the district.

Table 28: Allocation and expenditure under WGDP programme in Belgaum district
Rupees in lakhs

Year/Districts	Belgaum	
	Allocation	Expenditure
2005-06	237.400	164.414
2006-07	293.500	195.219
2007-08	259.846	258.890
2008-09	477.224	360.756
2009-10	467.750	410.772
2010-11	467.750	428.869
2011-12	514.530	546.561

Source: Watershed Department, Belgaum

The watershed department has raised nurseries and distributed teak, silver oak saplings under the forestry programme. Mango, Khazoo and Sapota seedlings have been distributed and

planted under the horticulture sector in the district. Although people appreciate the distribution they are not satisfied with the number of seedlings distributed and as such they expect more number of seedlings to be distributed as these seedlings can support the household income besides minimizing additional expenditures.

10.2 Physical targets in the district

For the year 2012-13, Belgaum district has undertaken major programmes such as agriculture and soil conservation, bench terracing, entry point activities, capacity building, agroforestry/social forestry, livelihood activities and livestock assets. In addition, contour bunding, farm ponds, diversion channel, rebel checks, distribution of livestock and training on income generation, awareness on entrepreneurship and also construction of foot bridges, vented dams etc have also been undertaken.

10.3 Suggestions from the Officials

- Increase the reward fund for the SHGs, to about Rs.1-1.5 lakh per SHG
- Increase the labour wages/payments as per the NREGA norms which is Rs.156 per day.
- Increase the salary of watershed assistants from Rs.6000-8000 per month per person
- Although the allocated funds have proved sufficient for last 2-3 years, they need to be increased by 15-20 percent for the area under development.
- NGOs have not proved so useful and hence better organizations like MYRADA are important for skill development programmes.
- Fill up the vacancy positions in the watershed department to smoothen the functioning of works and on time performance.
- WGDP model setup is well established and should be continued
- Funds allotted for the maintenance of completed works should be increased
- Trench- cum- bunding should not be continued because marginal landholders lose large tracts during trenching and bunding process.
- Build number foot bridges as they will be useful to children and women in particular during the rainy season.

10.4 People's Perceptions

We have had interactions with the beneficiary groups such as SHGs (6 people), UGs (14 people) and ECs (2) of Ganibailu watershed in Khanapur taluk and Gudadur watershed in Bailahongal taluk with their suggestions recorded.

A research team from ISEC visited the Ganibail watershed and Gudadur watershed site/villages and conducted interviews with beneficiaries like SHGs, UGs and ECs at the household level for obtaining information about the initiation and development of WGDP schemes in the region. Based on the perception and the reactions of the people about these developmental activities, it can be said that around 80 percent of the interviewed people are satisfied with the WGDP schemes as the demands made by them have largely been fulfilled. The local people are provided with skilled training so as to improve their livelihoods and incomes. They are also being provided with seedlings under forestry and horticulture plantations programme. And visited many other areas under study tour programmes. The farmer community has appreciated the watershed activities because Ganibail watershed area was once a dry land and it was unfit for agriculture and children used to play cricket converting it into a cricket ground. Earlier they used to cultivate only horse gram during the monsoon. Currently, the land has been leveled with bunding, farm ponds constructed. As a result the water level has increased and soil erosion has been reduced with the farm ponds being used for storing water and also for agricultural purposes. Presently, farmers are cultivating, paddy, sugarcane, maize etc in the Ganibail watershed. Likewise developmental works undertaken in the Gudadu watershed also include many ornamental, and fruit bearing plantations in the area. Both watersheds fall under private lands. In Gudadur watershed area, people have noticed the increase of groundwater level and also an improvement in the yield levels of principal crops like Hy. Maize, Hy. Jowar and sugarcane. Moreover, women's groups and landless people have benefited through livelihood asset kits such as Papad making kits, carpentry kits, etc while domestic livestock such as Sheep's, Goats etc support household incomes. The local people have some more suggestions for further development of the present WGDP schemes.

- Increase the reward fund upto Rs.1-2 lakhs for each SHG as members can use it for other income generation activities like opening provision shops, tailoring shops etc.
- Consider more number of women groups as beneficiaries

- It would be better if non beneficiaries of the villages are included for skilled training programmes and other useful benefits.
- Distribution of cows/buffalows is better than distributing sheeps, goats etc. People are willing bear 50 per cent of the additional cost incurred while purchasing livestock.
- More subsidies are necessary for purchase the tailoring machines and other equipments to work at home
- More subsidies are to be given on bank loans starting rural industries and micro level industries
- More number of study tours are required as coordination and interactions with knowledgeable people will add to their understanding besides exposure.
- Distribute more number of forestry plants, ornamental plants and also fruit bearing plants
- Increase the distribution (in terms of numbers) of Khazoo, Mango, Sapota,seedlings etc as they can support the household expenditure
- Increase the vegetable kits to reduce the burden on kitchen materials
- Provide quality seeds for the kitchen gardens to grow vegetables as a way reducing additional expenditures
- Increase the number of social forestry plantations to reduce additional pressure on natural forest
- Larger area for watershed development is required within a minimum time period for the benefit of the local people especially marginal farmers.

Source: Watershed Department Belgaum

Table 29: The physical and financial activities of Ganibail watershed, Khanapur Taluk, Belgaum District

Sl.no	Activities	Cost/unit	Year-1		Year-2		Year-3		Year-4		Year-5		Total	
			Phy	Financial	Phy	Financial	Phy	Financial	Phy	Financial	Phy	Financial	Phy	Financial
1	Community organization	Nos		0.85		1.800		1.100						3.750
2	S.H.G	Nos		0.000		0.500		0.200						0.700
3	U.G	Nos				0.200		0.200						0.400
4	Was	Nos		0.275		0.500								0.775
5	Vegetative barriers	Nos	4	0.22									4	0.220
6	Bench Terracing	Ha	5.00	0.650	9.00	2.400	1.00	0.150	9.00	1.854	10.00	1.536	34.00	6.590
7	Farm ponds/Shallow wells	Nos	6.00	0.705	0	0.000			2	0.500			8	1.205
8	Vented dams	Nos	1	2.250	2	6.000					1	2.200	4	10.450
9	Private agriculture land (bund planting)	Ha	15.00	1.500	0.00	0.000	₹ 6.00	1.000	10.00	1.500			31.00	4.000
10	Community land(block planting)		5.00	0.300	0.00	0.000	5.00	0.500	6.00	0.500			16	1.300
11	Private agriculture land	Ha			15.00	0.300	5.00	0.630					20.00	0.930
12	Animal health camps	Nos			1.00	0.300								
13	Private agriculture lands		22.00	1.350	0.00	0.000	10.00	1.000	13.00	1.500	0.000	0.000	45	3.85
14	Admn.overhead(10%)			0.900		1.500		0.590	0.500		0.500			3.990
	Subtotal			0.900		1.500		0.590	0.500		0.500			3.990
15	Household production system	Nos			25	1.000								1.000
16	Livestock management including goatry,piggry etc				28	1.400								1.400
17	Forest nursery	Nos			3700	0.500								0.500
18	Crop diversification					0.500								0.500
19	Crop demonstration					0.800								0.800
	Grand total			9.000		17.700		5.370	6.354		4.236			42.360

Source: Watershed Department Belgaum

11.0 Kodagu

11.1 Discussion with the officials of District Watershed Department, Kodagu

We visited Kodagu district for interactions with officials at the district watershed department and also beneficiaries under the WGDP to understand the functioning of the WGDP and also to obtain people's perceptions regarding WGDP implementation schemes. Kodagu spreads over an area of about 4102 Sq. Km which is 9.2 % of the total WGDP of the Western ghat region with an allocation of about Rs.272.69 lakh (8.41 % of the total WGDP) for the year 2012-13 for the development of WGDP programmes. Western Ghat falls under three taluks of Kodagu district viz. Madikeri, Virajpet and Somavarpet. The entire Kodagu district falls under the hilly agroclimatic regions. In respect of Kodagu district, WGDP has been divided into two departments- Engineering and Watershed departments. This pattern is being followed since the inception of the programme in this district. For the year 2012-13, the fund allocation amounts to Rs.120.69 lakh (44.25 %) for the Watershed Department while Rs.152 lakh (55.74 %) for the Engineering department. The watershed Department carries out all the watershed activities in the district while the engineering department looks after the rural infrastructure sector such as the construction of foot bridges, hanging bridges, vented dams etc in the district.

The watershed department is concerned with the development of farm ponds, trenches in the coffee estates, road side plantations, private land plantations, raising nurseries, distribution of seedlings, providing livelihood enhancement training programmes. It has formed E.C committees, UGs and SHGs in the respective watershed regions. For the year 2012-13 a major allotment of about 72% has been made to the agriculture sector followed by horticulture and forestry for which the allocation amounts to about 6.21 % each. Around 5 % of allocation is provided for livelihood enhancement training programmes (refer Table 29).

Table 30: Sector wise allocation of funds for Kodagu district under Watershed department for the year 2012-13(Rupees in lakhs)

Sl. No.	Name of taluk	Extent of area (in Ha)	Administration cost	Agriculture	Horticulture	Trainings	Animal Health camps	Forestry	Total
1	Madikeri	347	4.26	26.05	2.50	4.00	0.00	2.50	39.31
2	Somwarpet	360	4.20	30.39	3.00	0.00	0.00	3.00	40.59
3	Virajpet	333	3.95	30.35	2.00	2.00	0.50	2.00	40.80
	Total	1040	12.41	86.79	7.50	6.00	0.50	7.50	120.69

Source: Department of Watershed, Madikeri

People complain about the small size of farm ponds (50 ft x 50 ft) constructed in the villages as they cannot store enough water. Therefore people demand the construction of 100ft X 100ft farm ponds as they can store more water which can be used during summer. Secondly, their complaint relates to the quality and the distribution of number of seedlings under horticulture and forest plantations as these seedlings are not suitable for this climate and are prone to diseases as the department is not raising seedlings on its own. Thus, raising nurseries in the local area would be a better option and as people can get more number of quality seedlings. Farmers, particularly those with coffee estates appreciate the trench works in the coffee plantations. Trench works are constructed across slopes to arrest rainwater runoff and to promote rain water infiltration. Presently, they are constructing 6ft length x 1.5ft depth x 1.5 ft breadth trenches while farmers are demanding 10ft length x 2ft depth x 2 ft breadth trenches. Around 60% of the people have shown an interest to bear 50 % of the additional cost incurred for the construction trenches. On the other side, coffee yield levels have increased by about 15 % with a minimum of 2 kg per plant per season, while moisture level in the soil systems is retained for long. In addition, it is observed that there has been an improvement in the growth of plant after the construction of trenches in the coffee field. Besides, people are demanding more number of check dams wherever necessary as Kodagu is a high rainfall area and the construction of check dams will facilitate infiltration the rain water and at the same time ground water level will increase

Apart from soil conservation activities, the department has taken up forestry plantations like Silver oak, Teak etc iunder both private and public lands. Albeit the plantations are found in good condition, the distribution of seedlings needs to be increased.The seedlings of mango, Sapota, Lemon etc, have been distributed among the people and planted under horticulture

programmes. The distribution needs to be increased to further benefit the people and to restore the fragile ecosystems. The watershed department is not distributing livestock assets like sheep, goats, poultry in the district though it is desirable to consider it for the land less people.

Even though Kodagu receives around 2800-2900 mm annual rainfall during summer season, it experiences temporary drought like situations. If on time irrigation is provided during temporary drought periods, one can expect an increase in the yield level up to 20% in respect coffee and areca plantations. This can be achieved by building farm ponds on the farmer's fields. Farm ponds act as a source of irrigation for paddy crop besides being helpful to reducing the incidence of diseases and pests. During rainy season, heavy downpours hasten soil erosion in this hilly area, and as most of the hilly areas are covered by coffee plantations, soil erosion results in a reduction in coffee yield levels. Further since coffee trenches act as barriers to soil erosion the distribution of silver oak plants helps the farmers plant them as shade giving trees in the coffee plantation and as a support for growing pepper plants.

The watershed department officials are demanding that the budget of engineering department should be increased for soil conservation, horticulture and forestry plantation activities in the district.

11.2 Engineering Department

The Department of Engineering focuses on the construction of foot bridges, hanging bridges and other bridges across streams, rivers and canals to facilitate connectivity among local people during the rainy season. Construction activities are taken up based on the demands made by the local people. After receiving the demands officials of the engineering department cross check the genuine needs and prepare an action plan for construction activities. The government is duty bound to provide basic and essential rural infrastructure to the people and such activities are really vital in Kodagu district as it receives a high rainfall. Construction activities allotted account for 62 % under general, 18 % under SCP and 20 % under TSP (refer Table 6). We have noticed that certain violations in the construction of foot bridges. Instead of foot bridges they are constructing wider bridge through which vehicles can pass: this is not permitted as per the guidelines of WGDP.

Table 31: Budget allocation across the taluks for the Engineering Department for the year 2012-13 (Rupees in lakhs.)

Sl. No	Taluk	No. Of works	GEN	SCP	TSP	Estimated cost	GEN 62%	SCP 18%	TSP 20%
1	Madikeri	13	9	1	3	49.94	24.94	5.00	20.00
2	Somwarpet	14	10	3	1	50.00	34.00	12.00	4.00
3	Virajpet	9	7	1	1	52.06	36.06	10.00	6.00
	DISTRICT TOTAL	36	26	5	5	152.00	95.00	27.00	30.00

Source: Department of Engineering, Madikeri

The constructions of foot bridges has really helped children and women especially during the rainy season. Parents of school going children appreciate the construction of foot bridges as otherwise; they have to spend more time on bringing their children back from school. The local people are happy and contented as they can use vehicle to bring household commodities, construction materials etc instead of carrying them on head from long distances. Moreover, these bridges have saved many bamboo plantations as people used to cut bamboos every year to construct hanging bridges across rivers and streams to cross them. In addition they saved their money and time spending on construction bridges every year.

The Department officials demand more allocations under the budget for the Engineering department for constructing some more foot bridges.

The monitoring method and difficulties encountered during implementation remains the same as in Shimoga and Belgaum districts.

11.3 Suggestions from the Officials

- Increase the reward fund for the SHGs, to Rs.1-1.5 lakhs per SHG
- Increase the budget up to 30 % as allocation is less and distributed to two different departments
- Increase the labour wages/payments as per the NREGA norms which is Rs.156 per day.
- Fill up the vacancy positions in the watershed department to smoothen the functioning of the developmental activities and on time performance.
- WGDP model setup is well developed and should be continued
- Allocation of funds for the maintenance of completed activities should be increased.
- Increase the number of coffee plantation trenches.

- Trench cum- bunding scheme should not be continued as marginal landholders lose more land during trenching and bunding
- Construct more foot bridges because, it would be particularly helpful to children and women during the rainy season.

11.4 People's Perceptions

Interactions were carried out with beneficiary groups such as SHGs (5 people), UGs (6 people) and ECs (2) and also households using foot bridges, hanging bridges to reach their houses in Kalathmadu watershed in Virajpet taluk and foot bridge areas in Madikeri taluk for obtaining their views about the implementation of WGDP.

A research team from ISEC visited the Kalathmadu watershed site and adjacent villages and also Foot Bridge constructed areas to conduct interviews (using a questionnaire) with beneficiaries like SHGs, UGs and ECs at the household level for obtaining information about the initiation and development of WGDP programmes in the region. Around 80% of the interviewed people expressed satisfaction about the WGDP schemes as their views have been taken into consideration by the department officials. The department provides informative training to all the groups about livelihood improvement and income generation activities distributes seedlings under forestry and horticulture plantation programme. The landless people have obtained skilled training and visited many other areas under study tour programmes. People have appreciated the farm ponds though unhappy about the size. Coffee growing farmers are happy with the much needed trenches. The yield level of coffee has increased by 15 % with at least 2 kg per crop per season. People suggest that the department should focus on more check dams across the streams. Beneficiaries of the rural infrastructure schemes like foot bridges, hanging bridges etc are enthusiastic about providing information on the construction activities. In addition villagers, beneficiaries and committees have offered some more suggestions for the coming years. They include

- Consider more number of women groups as beneficiaries
- Increase the reward fund between Rs.1-2 lakh for each SHG because members can use it for other income generation activities like opening provision shops, tailoring shops and many others.
- Distribution of cows/buffalows is better than distributing sheeps, goats etc. People are willing to bear 50 per cent of the additional cost incurred while purchasing livestock
- Entertain piggery, poultry and livestock

- Milking cows/buffaloes are essential under livestock schemes
- Entertain organic farming and provide training on the organic manure
- Trainings on vermicompost, beautician etc required
- More subsidies are necessary for purchasing tailoring machines and other equipments to work in the house
- More number of trenches in the coffee estates required
- Bigger farm ponds are required rather than currently designed small ones.
- More subsidies are needed on bank loans for starting rural industries and micro level industries
- More number of study tours are required because coordination and interactions with knowledgeable people will add to their understanding besides and exposure.
- Training on tailoring particularly for women (housewife)
- Distribute more number of forestry plants, ornamental plants and also fruit bearing plants
- Increase the distribution number of Mango, Sapota, Lemon seedlings as they can support the household expenditure
- Increase vegetable kits to reduce the burden on kitchen materials.
- Provide good and quality seeds to grow vegetables in kitchen gardens as a way reducing additional expenditures
- Increase the number of social forestry plantations to reduce the burden on natural forests
- Larger area for watershed development is required within a minimum time frame for the benefit of a number of marginal farmers under the WGDP schemes.
- More number of foot bridges are required.

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WGDP Annexures

Annexure 1: Literature Review

Sl. no	Research issue	Methodology	Findings	References
1	Comparative study on economic evaluation of NWDPR and SUJALA in watershed in northern Karnataka	Sampling procedure followed, nature and source of data, analytical tools and technique employed	The study find that capital investment on soil and water conservation was high and showed positive results on impact of watershed on cropping pattern, crop protection, income and employment generation.	Lele, S et.al, (2002)
2	Comparative assessment of socioeconomic impact on watershed, in Bijapur and Kolar district in Karnataka state	Primary survey which includes discussion with households and beneficiaries of User group, Secondary survey including with discussions, data collection from concerned nodal agencies of state and data analysis and information	The study showed that successful implementation of watershed programme lead to increase in the utilization of land use and hence observed increase in crop production, increase in livestock, the community perceives that there was a reduction in migration during project implementation period	Kalpatharu Research foundation, (2001)
3	Studied on prediction model in teak based agroforestry systems in northern transitional zone of Karnataka Dharwad	Adopted experiment data of growth parameters of tree components procured from AICRP Planting perennial teak plants with field crops in experimental plot analysis of yield data of field crops and both tree and field crops and als applied staistical analysis.	The study concluded that net income from agroforestry system was high compared to sole cropping.	Chethana, H.M. (2009)
4	Social forestry in Karnataka: cost benefit appraisal of the project	Economic Evaluation, use of Standard Economic tools Like NPVs, BC ratio and IRRS ,Rigorous test and sensitivity analysis.	Paper reviews forestry projects initiated in India to improve the tree cover on degraded forest lands and common lands, as well as to meet the needs of local rural communities for fuel wood, fodder, small timber and supplementary food, are economically viable and socially desirable.	Ninan, K.N. and Jyothis, S. (2001)
5	Evaluation of industrial promoted agro forestry in Andhra Pradesh and Madhya Pradesh.	Statistical analysis using T-test and check-square test were conducted using data collected from the survey, and compared the means and distribution between two regions with respect to demographic variables, cost	Results showed that agro forestry systems adopted by the farmers in both the region were profitable at all discounts of rate applied	Donald, B.M. et. al. (2010)

		and revenue variables.		
6	Comparative study on Economic evaluation of NWRDP and Sujala watershed programme in north Karnataka Haveri and Dharwad	Sampling procedure followed, nature and source of data, analytical tools and technique employed	The capital investment on soil and water conservation structure was high, investment of the watershed was financially feasible watershed programme had a positive impact on cropping, pattern crop production, income, employment generation	Kalyan Kumar B.N. (2007)
7	Panchayaths Hariyali guideline and watershed Development: Lessons from Karnataka	The primary data was collected from related gram panchayat, questionnaire were formed to collect required information from concerned departments and organization and group discussion with stakeholders, SHG's and community members	The analysis showed that no institution or organization it may be panchayaths, NGO or government sectors can work independent of others	Shivanna, N. (2009)
8	Socio-economic and natural resource impact on sujala watershed project in Karnataka	A baseline survey of the watershed was conducted, physical and financial progress of various intervention was analysed using computerized management of information system, samples were selected and the random sampling method was conducted	Analysis showed that the watershed involvement on natural resources and livelihood status increase in employment opportunities and income enhanced the rural livelihoods, reduced migration, inequalities in income across the households there was an increase in crop yield and ground water level. Productivity in non arable land increased	Govinda Gowda .V and Sathish. A. (2011)
9	Socio-economic analysis of agro forestry system in western uttar pradesh	Selection of study area. The data generated from the study was analyzed using benefit cost analysis. The benefit cost ratio was worked out using the method adopted by Gittinger(1982)	The study was outcome of socio-economic diagnosis of traditional as well as agro forestry system followed by farmers in uttarpradesh. The results of survey showed that the net result from adaptation of traditional system from net return from Ha in 1 year was 989,54lakhs and in commercial region the B:C ratio was found higher for agrisilviculture.	Dwivedi, R.P. et al (2007)
10	Impact and effectiveness of watershed development programmes in India.	Centre for Rural Studies (CRS) has analysed and documented the reports submitted by various agencies. The cross comparison of indicators to provide overview of impact and effectiveness of WDPs.	The study revealed that watershed area reported reduction in soil erosion. Soil and moisture conservation activities are significant in reducing soil erosion. Activities like afforestation, pasture development, horticulture, etc. can directly check soil erosion. There was increase in crop production, cropping pattern, surface water and groundwater table and change in land use	Prem Singh,.et. al (2010)

			pattern.	
11	Evolution of watershed development programmes in India	Primary survey was conducted at 37 watershed locations under different agro-eco regions in India during 2001. Data were collected from the primary stakeholders pertaining to physical, biological and socio-economic parameters	The analysis indicated that there was an increase in all socio-economic biological factors in watershed area villages compared to non-watershed area villages.	Reddy, Y.V.R. et. al (2004)
12	Impact of NWRDP in Kair district of Gujarath	Statistical analysis using data collected from field survey	The results found that watershed project contribute positively in enhancing agriculture productivity, moisture retention in soil, ground water recharging and employment generation. Also prevented degradation of soil and study showed that NWRDP project was economically feasible	Shah and Patel (1996)
13	Meta-analysis to assess impacts of watershed programme and people participation	Meta-analysis:-It is a statistical procedure where exhaustive review of 311 case studies on watershed programme in India was made to document sustainability benefits of the programme	It was noted that mean benefit-cost ratio of the watershed programme in the country was quite high at 2.14; the programme generated enormous employment opportunities, augmented irrigated lands and coping intensity and helped in soil and water conservation.	Joshi, P.K. et al (2005)

Annexure 2: Mission and focuses of Western Ghats Task Force in Karnataka

Mission	Focuses
Assessment of current ecological and environmental status	Collection of all the ecological drawbacks data of Sahyadri region such as biodiversity loss, deforestation, landslides, tribal migration and soil erosion etc, helps for baseline data for further remedies
Monitoring & streamlining developmental process	Monitoring of development programmes according to provisions of the Environment (Protection) Act
Documentation and monitoring of biodiversity	Bringing all research institutes and universities which are involved in process of research process on biodiversity conservation into single forum helping to build a comprehensive data base
Land use planning and policy	Initiation to bring a comprehensive land use planning policy in consultation with dept. of Forest & Environment, Planning Commission, experts and all other stakeholders is done by WGTF
Promoting in-situ conservation	Initiating conservation of ecological biodiversities having more significance under active conservation programme in consultation with departments of forest, panchayat Raj bodies by WGTF
Promotion of Aforestation programme	Making social forestry programmes a successful mass movement by developing collaborations with civil society organizations public in general, People's bodies like Panchayat raj, cooperative societies, schools, colleges and self help groups

Source: Western Ghats task force

Annexure 3: Establishment and functions of community based groups at selected watershed area under WGDP

Importance of User Groups (UGs)

- 1) When a micro watershed area is about 500Ha and it will be having about 100 to 250 farmers and considered opinion of all the people during the preparation of the action plan.
- 2) If farmers are residing in different places becomes difficult to participate in micro watershed programme.
- 3) If the user group is absent, farmers are will not benefited by the important training programme and are will not be able to participate actively in watershed development programmes.
- 4) Farmers residing in the nearer places obtain information regarding action plan and its benefits only when they attend weekly meeting.
- 5) If executive committee members can't monitor implementation works of watershed programe regularly, user group takes responsibilities and performs implementation programme faster and better.
- 6) As each member in the group is a landholder, they directly participate and express more interest and responsibilities in the development activities of their own land.
- 7) As these groups are mobilizing their savings as self help group, they will be able to lend loans to other members in the group for watershed development activities in their land.
- 8) When the user groups perform their function better, they become eligible to get loans from banks.

Establishment of user group

Farmers collect watershed maps mentioned with land survey number and feature of land developed from remote sensing department, landholders list are obtained from the income tax office or taluk office with the help of field assistance from watershed department. Farmers take opinion of incharge officer from watershed development regarding the bunds and streams in their field, if there are any changes to be made it is reported to remote sensing department, for further correction.

Functions of user group

- 1) Membership should be given to the all farmers in the group who comes under the respected watershed area.
- 2) They should conduct weekly meetings
- 3) Electing a representative from each group
- 4) Mobilizing savings regularly
- 5) Lending loans to members of the group and loan recovery.
- 6) Sending their representative to the executive committee of watershed assosiciation
- 7) Participation during implementation of the action plan
- 8) Reporting of work plan and farmers information of respected watershed area to executive committee.
- 9) Representative of the group must attend executive committee meetings every week and should explain the preceding of meeting to other members of the group.
- 10) Participation in all activities of sujala training programme
- 11) Ensure women farmers participation during action plan preparation
- 12) Collects membership fees from farmers of its watershed area and deposits it in the bank
- 13) Members of this group should attend general body meeting
- 14) Action plan must be implemented properly benefiting both marginal and SC/ST farmers.
- 15) Group must take responsibilities in implementing action plans, should be able to report executive group when it finds mistakes in the programme.

Meetings of user groups

- 1) Members of the group get a chance to meet in a platform and can discuss on the progress of watershed programmes of their respected area.
- 2) By organizing the meetings members get alert and responsible regarding their work in the watershed development programme.
- 3) By having good discussions about the programmes in the meetings members learn from each other
- 4) Financial assistance works such Mobilizing savings, micro finance and loan recovery takes place.
- 5) Group gets aware of many other development programmes with visit of watershed development officer.
- 6) Members of the group get opportunity to express their views, perception and needs to the group.

Places and the materials needed during group meetings:

- Selected place for the meeting should be convenient for all the members to meet, place must be spacious to fit all members of the group and presence of all members of the group must be compulsory.
- Time selected for the meeting must be convenient to all members of the group and if meeting is kept at

nights it should have proper light facility

- Materials needed during discussion like related books regarding watershed activities, ledger and other stationary materials, list of subjects to be discussed in the meetings should be carried by group members

How does the User Group meeting works

- Members of the group start their meeting with an invocation song, to start with the meeting one of the members of the group is elected as chairmen.
- Attendance is being taken at the start of the meeting and at the end of the meeting to ensure that nobody leaves the meeting in the middle.
- The proceedings of last week's meeting are read, and the subjects to be discussed in the meeting are collected from all the members of the group.
- Financial status of the group regarding savings, membership fees interest rate for loan repayment, are discussed and after discussing this other subjects are discussed, during discussion all the members of the group should actively take part. Person who takes responsibility to implement the decided work in the meeting is selected.
- To know information regarding watershed development programme from the representative who attends watershed committee meeting and if needed decision are taken regarding the information collected from watershed development project.
- The final decision made in the meeting regarding development programmes are return in the decision book and got it signed by all the members of the group.

Responsibilities of members in the User Group

- They should attend weekly meetings
- He should be ready to take chairmen ships role to proceed the meeting when it comes to his turn.
- They should attend all training programmes, should have weekly savings in the group. If any member of the group has taken loans he should see that it is paid in time with its interest rate.
- They should participate in village development works
- They should be aware of development programmes and financial status in SUJALA project
- The person joining user group must pay membership fee to the committee in the account of watershed development. Fee structure for development project in there own land for SC/ST, backward classes, marginal farmers is 5%, for other farmers it is 15%.

Responsibilities of representatives in the User Group

- The representative must be present in the meeting 10 minutes before the meeting starts.
- To organise user group meeting properly
- He should take responsibility to maintain accounts book of the group.
- Participating in the meetings conducted by representatives of different water shed areas and discussing the results of meetings in the group.
- Involving in bank transaction in favor of user group, participating in account maintenance of the group and auditing the accounts of the group yearly.
- Participation in SUJALA action plan and implementing group action plan in the sujala scheme.
- He should have good coordination with grampanchayat and other societies in order to provide better facility to the members of the group.

Responsibilities of the representative elected from the user group to Executive Committee (E.C).

- He should attend the weekly meetings of executive committee, and should discuss the results of the meeting with other members in the group.
- Asking farmers related to his area to assemble at particular date time and place, While preparation of action plan.
- Guiding farmers coming under his area to implement action plan in their lands.
- Reporting of list of farmers to the executive committee decided in the group meeting, getting approval from the committee to implement farmers work.
- Monitoring whether the field assistance from the water shed department has measured and developed estimation chart of the approved farmers land.

- To get approval of estimation chart of his related area.
- Collecting membership fees from the members of his group and depositing them in executive committee account every week.
- Monitoring during implementation of action plan.
- Monitoring whether the watershed programmes are reaching to all categories of farmers.

Important features observed by User Group

- 1) Organizing a major active group that includes 20 landholders in the micro watershed area
- 2) After organization of the group they (farmers) can select the type of land activities they need in their land. Active Participation of members, at the time of taking decision on land development activities.
- 3) User group works same as Self Help Group, in mobilizing their savings, micro financing system within group, opening account in the bank to facilitate bank loan and they prepare a blue print regarding activities to be done in agriculture land and shares of the group is deposited in the bank for future use.
- 4) User group play important role in preparing plans at farmer level and bringing them into action.
- 5) Electing representative from the user group and making them as member of executive committee.
- 6) Members of the user group should implement the plan according departmental rules and regulation, giving equal importance to the community work and implementing in their respective areas.
- 7) By recognizing small channels and micro watersheds in the maps and organizing a group with particular name that includes 20 farmers, and submitting this report to the SUJALA organization.
- 8) Members of the user group should actively take part in implementing action plan with the knowledge of environment and social effect under the technical guidance of water shed development group, departmental officer and private institute.
- 9) The representative of the user group should be changed every year. Members of the user group should attend the general body meeting and openly discuss their opinion on the activities completed in the watershed programme.
- 10) Allocation/preparation of funds required for the maintenance and developmental activities of the completed works and getting regular benefit from them.

Annexure 4: Soil and water conservation activities carried in watershed programme

SL. NO	Function	Objective
A)	Treatment of waste lands/undeveloped lands:	
1	Equal depth trenches	Sloppy lands of less rainfall region equal depth trenches of 0.45 m depth, 0.6 m width and 15 m length. for 5 m slopes 10 m distances, for 5-10 m slopes 7.5 distances and for 10-20 m slopes 5 m distances is recommendable between the trenches. Then, these trenches forestry and horticultural planting materials are planted
2	(Varadi) Trenches	Construction of trenches is made in the area where rainfall is above 750mm. For 5 m slop, 5-10 slop and for 10-20 m slop trenches are constructed at 10m, 7.5m and 5m distances respectively between the trenches.
3	Terrance cultivation	Construction of terraces when the land has undulations and slopes. Distance b/w the two terraces should be 2 times of the below trench. For about 5m slop,5-10 m slop and for 10-20 m slop terraces are constructed at 10 m, 7.5 m and 5m distances respectively between the terrace.
4	Half moon shaped bunds	It is constructed in undulated lands for planting horticultural and forestry planting materials. The soil removed is used for construction of half moon shaped bunds. Forestry plants are planted in pits measuring 0.5m width, 0.5 m length and 0.5 m depth. Similarly horticulture plants are planted in a pits of (1x1x1)m.
5	Water channel	It is constructed to control the flow of water from uncultivated lands to cultivated lands. The flow of water will be deviated towards the large pits constructed which otherwise is also called water reservoirs. Thus it controls the flooding of water flow on the trenches
B)	Treatments in cultivable lands:	
1	Cultivation procedure	In order to facilitate the absorption of rain water in to the soil pre- ploughing, bunds construction and for every 10 feet furrows are constructed. In red soil to avoid the clods ridges and furrows are constructed. Against the slops ridges and furrows are constructed
2	Technical procedures	To avoid the soil erosion and to retain the soil moisture increasing the size of bunds
3	Trench cum bunds	In deep soils construction of trenches measuring 5m length, 1 m width and 0.5 m depth. The soil removed from these trenches is used to construct the bunds between the trenches
4	Bolder bunds	In rocky regions of the land, bolders are used to construct the buds.
5	Graded bunds-	In heavy rainfall areas of > 750 mm to remove the excess of rainwater from the cultivated lands bunds are constructed to make water channels
6	Equal trench and bunds	In less rainfall areas or in sloppy region in order to facilitate more penetration of rain water in to the soil bunds are constructed between two rows of trenches.
7	Water channels	In agricultural lands to channelize the flow off rain water into water reservoirs water channels are constructed.
8	Krishi Honda construction	To prevent the wastage of rain water from flooding, water harvesting structure is constructed across the water channels and thus harvests the rain water and use for various agricultural purposes. This would help to give protective irrigation during shortage of water and thus supports increased productivity in dry lands. This also helps to increase the water table; Krishi Hondas can also be used to take up the pisci-culture
9	Bench terracing	undulated lands are leveled and converted to cultivable lands
10	Rejuvenation off open wells	The harvested rain water from rainwater harvesting structure is allowed to flow into dried open wells through hallow pipes.
11	Rejuvenation of ground water and encouraging the growth of planting	It is recommended in the region where water penetration ability is low due to hard upper surface.

	materials	
12	Scooping	It is recommended in low penetration capacity of medium to black soils.
13	Square blocks	In less drainage soils especially in medium and dark black soils square blocks are constructed in July month
14	Green bunds	In order to prevent the flooding of water and soil erosion bunds constructed along with cultivable crops on the bunds.
c) 1	Water shed treatments Boulder check dams	These dams are constructed in an 8Ha watershed area, where there is increase water percolation. Constructed across the gully are used mainly to control channel erosion and to stabilize gully heads.
2	Loose stone check dams	These dams are made of relatively small rocks are placed across the gully. The main objectives for these dams are to control channel erosion along the gully bed, and to stop waterfall erosion by stabilizing gully heads
3	Nala bunds	These are constructed in 40-250Ha of water heavy rainfall areas across nala for checking velocity of runoff, increasing water percolation and improving soil moisture regime, Main objectives of nala bunding are to impound surface runoff coming from for catchments and to facilitate percolation of stored water into soil sub strata.
4	Minor percolation tanks	These type of treatments are made in land of about 5-10 Ha Where there is high gradient of water flow
5	Gabion check dams	These dams are constructed in areas of 15Ha. These are constructed in the area of heavy rainfall and they are wire Owen basket filled with stone constructed across the gully.
6	Stagard trench	These techniques are useful to slow runoff and erosion from sloping land, in high rainfall area and also to revegetate degraded areas. By use of this type of trench the flow of rain water gradient from the top of the mountain decreases gradually and helps decrease soil erosion.
7	Water retention pits	These types of pits are constructed in the areas where water penetration ability is low.
8	Check dams	Construction of cemented dams in the deep undulated lands, area required for construction of these types of dams is from 25-200Ha and deepness of the land for construction must be 2mts in depth. They help to increase water table level and stops further deepening and widening of the undulated lands.

Source: Watershed Development Shimoga

Annexure 4.1 a) Horticulture and forestry activities carried in watershed development project

Development activities carried under Horticulture are:

- Adaptation of growing rainfed horticulture crops in dry lands ex: mango, tamrid, cashewnut etc

Horticulture crops grown based on land classification are

- Hilly horticulture crops like: embellica clusterd , apple, Phylanthus etc which can be grown in the hilly zone regions
- Dry land horticulture crops like: cashew nut, mango, sapota etc, which can be grown in dry land regions
- Horticulture crops grown in cultivated lands are: Lemon, gavava, pomogrante etc
- Adopting inter cropping pattern like ex: cultivation of cotton/ragi in mango farms

Forestry

Development activities carried under forestry are:

- Development of forest nurseries
- Conversion of grazing land into forest area
- Plantation of tree species on either side of roads
- Mangroves cultivation
- Plantation of tree species like (bamboo, azardecta indica etc) on bunds in farmers land
- Protection of forest area
- Plantation of tree species which provides green manure

Annexure 4.1b: Farmer's demonstration school

Farmer's demonstration school is unique type of learning, where farmers learn with their respective groups. In this method farmers land is used as demonstration land where farmers understands better and gains self-confidence regarding use of agriculture technological methods by seeing demonstration in their own land.

Annexure 4.1c: Monitoring and evaluation of watershed development works

In this process in charged/field assistance/ programme officer/members of the committee monitors the developments of watershed programme, corrections are made in time if any faults are observed during monitoring. Continuous monitoring is made followed by evaluating at all stages of developments i.e. from starting to end stage. Evaluation of programme is also done using satellite images.

Maintains of watershed assets:

Continuous management and maintains of watershed assets: (Bunds,krushihonda,check dams,channels) etc under the guidance of executive committee with the help of nearby groups and organisations. Maintenance and management of assets is been made on land based activities like:

a) Self activities

b) Group activities

a) Self maintenance activities: (maintenance of the asset by the related farmer who have constructed assets in his own land and) in this method the Executive committee identifies the assets been constructed in the farmers land and guides respective farmer to manage and maintain those assets in a proper way. Committee members visits related farmers land before and after the rainy season, they identify, makes the list of damaged watersheds and pressurizes the beneficiaries of the watershed to take steps to repair the damaged watersheds.

b) Group maintenance activities: (maintenance of the assets by the related beneficiary group)

Executive community identifies the beneficiary group of water shed area who are been benefited from the check dams, nalabunds, krushihonda and negotiate regarding functions of executive community on management and maintenance of watershed areas, it collects funds from the beneficiary group for rejuvenation work of their own watershed areas and Community even helps the group in getting loans from water shed departments/grampanchyath for the rejuvenation work.

Annexure 5: Criteria for Watershed Selection in WGDP

Criteria for watershed selection:

The revised selection criteria proposed in the guidelines for watershed development,(2001) by department of land resources, ministry of development, has expanded its focus to not only to include geo-hydrological details like sedimentation, evapo-transpiration and rainfall(as per 1995 criteria) but also tried to infuse a greater degree of socioeconomic indices. The chief features of revised criteria are as follows:

1. Watershed area must be 500ha, if the watershed is found to have slightly less or more area the total area may be taken up for the development as a project.
2. In case a watershed falls into two habitations, it should be divided into two sub-watersheds confined to the designated habitations. Care should be taken to treat both the sub-water shed areas simultaneously.
3. Watersheds with acute shortage of drinking water
4. Watersheds with a large population of scheduled caste and scheduled tribes dependent on it.
5. Watershed that have a preponderance of non-forest waste lands/degraded lands
6. Watersheds that have preponderance of common lands.
7. Watersheds where actual wages are significantly lower than the minimum wages
8. Watersheds, which is contiguous to another watershed that has already been developed.
9. Watersheds where people's participation is assured through their contribution in terms of materials cash or labour for its development as well as for the operation and maintenance of created assets.

Following these guidelines, Annual plan devised 9 point criteria for selection of watershed habitation during the conference of collectors/project Directors for APRLP on 24th September, 2001. The nine factors taken into account are:

1. Percentage of small and marginal farmers.
2. Percentage of SC/ST holdings
3. Percentage of women organised in SHG's and participating in the programme.
4. Status of ground water
5. APSRAC prioritization
6. Live stock population
7. Number of families affected/involved immigration
8. Contiguity with treated/proposed watershed
9. Availability of fallow/waste land and CPR for the poor and landless to utilize Usufruct.

Annexure 6.1: Achievements of Western Ghats Task Force (WGTF) towards national parks and sanctuaries

SL.No	SCHEMES	FOCUS	POLICY	OUTCOME
1	Wild life Sanctuaries	To protect its pristine evergreen forest system with rare Bat species	As per the provisions of Wildlife (Protection) Act, 1972	Bhimagad Reserve Forest in Belgaum district has been declared as the Wildlife Sanctuary (WLS) Chincholi (Gulbarga dist.) & Kappata Gudda (Gadag dist.)
2	Conservation Reserves	These are the forest valley having endemic plants and animals being protected under conservation reserves	Wildlife Board under Wildlife (Protection) Act, 1972	Aghanahshini Valley in Uttara Kannada district. Bedthi Valley in Uttara Kannada district. Dandeli forest region in Uttara Kannada district Basur Amrutha Mahal Kaval in Chikamagalur
3	Natural Heritage Sites	In order to conserve ecologically sensitive areas	As per provision of Karnataka Biodiversity Board (Conservation) Act, 2002.	Netrani Island, U. K. District II. Vegetation area GKVK Campus, Bangalore III. Hogrekhan, Chikmagalore District IV. Ambaragudda, Shimoga District
4	Heritage trees	Karnataka Biodiversity Board has declared the following trees as 'Heritage Trees'	As per the provisions of Biological Diversity (Conservation), Act 2002.	Refer to the table-5
5	Agroforestry scheme	To promote agro-forestry practice and documentation through participatory principle by organizing workshops in the agro-biodiversity of different regions through Biodiversity Board		Conducted workshops to promote Agroforestry in Bagalkot, Chikmagalur, Shimoga, Tumkur, Bijapura and being made to document
6	Eco-restoration works	To avoid further mining in Amabragudda Field Investigate with experts on the impact of the mining in the Ambaragudda region (Shimoga dist.), landslides region in Karawar (Uttara Kannada) and Neriya (Dakshina Kannada) were made and recommendations are made to the government on taking up integrated eco-restoration works.		As a result of that, further mining is not allowed in Amabragudda and now it is declared as 'Natural Heritage Site' by Karnataka Biodiversity Board.

7	Wildlife protection strategies	Promoted through forming & strengthening the Eco-development committees in protected areas	.	Protected Area of the state like, Nagarahole, Bandipura, Bhadra, Kuduremukh, Mookambika Dandeli, Anshi, Shettihalli & Sharavati are promoted as wildlife sanctuaries
8	Rejuvenating of nurseries (socio-forestry)	Efforts were made to rejuvenate nurseries for effective large scale rising of medicinal, Bio-diesel & NTFP plant species		In the areas Gerusoppa, Dharwad, Mundgod, Tumkur, and Bangalore rejuvenating of nurseries were planned
9	Varada river basin as 'Agro-biodiversity Hotspot'	The work focuses on documenting the native paddy varieties in Varada river basin in Uttara Kannda and Shimoga district. Now the efforts are being made to declare the Varada river basin near Banavasi as 'Agro-biodiversity Hotspot', through Karnataka Biodiversity Board		Work is in progress on by involving progressive farmers, NGOs, Karnataka Biodiversity Board and the Dept of Agriculture.

Source: Western Ghats Task Force

Annexure 6.2: Achievements of WGTF towards climate change and ecological education

SL.No	SCHEMES	FOCUS	OUTCOME
1	Initiation of mitigation	Efforts are made to Initiate the mitigation efforts for the area with water and soil pollution by engaging with Karnataka Pollution Control Board (KSPCB).	Mitigation efforts are made in the places like Dandeli (Kali river)Bhadravati (Bhadra river), Londa Gokarna area
2	Integrated development programmes Jog	Initiated in association with the Jog Development Authority by incorporating components like development of the green corridor, eco-friendly tourism initiatives, botanical gardens, VFC formation for management of tourist spots, establishment of a new Medicinal Plant Conservation Area (MPCA) in the nearby valley.	Botanical gardens and development of tourist spots was initiated in the nearby valleys of Jog.
3	Climate Change	Efforts were taken to extend network of people working on climate change and its effects on Western Ghats Medicinal plants and their conservation	People working in the field of climate change issues took major role in a conference organized by MoEF, FRLHT
4	Environmental education	Interaction and apprise with University faculty & students in need of taking up direct field action, by Chairman of Task Force	Universities visited by Chairman are Mangalore, Dharwad, Kuvempu, Tumakur
5	Networking with educational and research institutions	Involvement of some major research & educational institutions in the conservation efforts	Institutes involved in this network are Indian Institute of Science, Bangalore, Institute for Social & Economic Change (ISEC), Bangalore, Ashoka Trust for Ecology & Environment (ATREE), Bangalore, National Centre for Biological Sciences (NCBS), Wildlife Conservation Society (WCS) Bangalore, Universities of institutions, Ujire, forestry colleges at Ponnampete and Sirsi, Agriculture Universities in Bangalore and Dharwad, Rasthrothana Parishat schools in Dharwad, National Engineering College, Shimogga, Vishweshwraiah Institute of Technology (VIT), Bangalore

Source: Western Ghats Task Force

Annexure 6.3: Achievements of WGTF in terms of watershed development and livelihood improvement

SL.N o	SCHEMES	FOCUS	OUTCOME
1	WesternGhat task force along with revenue Hobli-wise maps.	Description of westernGhats	An exact geographical area of western ghat has been finalized and described
2	Vriksharopana Abhiyana	Launched in 2008 by department of forest under guidance of a task force to plant more than two crore saplings across the state involving local farmers, Panchayat raj institutions, organizations, educational institutions and students, religious leaders	More than 50 individuals and organizations who are actively involved in biodiversity conservation were facilitated by govt. at this occasion
3	Establishment of alternative source of energy	Efforts were made to promote the use of alternate energy source by organizing workshops in Sirsi, Shimoga & Bangalore	Support was given to start small domestic hydel power project unit at Vanalli village in Uttara Kannada
4	Watershed development programme	Development schemes conducted for strengthening Watershed	workshops were conducted in WesternGhat region sirisi
5	Sacred Grove protection, Hasiru Samruddhi Grama Yojana	Project survey & Documenting Sacred groves. WGTF has come out with project schemes and action plans for all these programmes and has been implemented by the state government by making provisions in the state budget itself.	In the districts like Uttara Kannada, Shimoga, Dakshina Kannada, Chikamagalaur and kodugu district sacred grove project is under progress.
6	NREGAs	Subsequent follow-up works actions helped to identify region specific problems along with policy lacunas for further deliberations. Being effectively used for Afforestation works	Programmes are taken up in Sahyadri and Shimoga districts
7	Rejuvenate the existing Medicinal Plant Conservation Areas (MPCA)	Seeking further budgetary support and offering for Rejuvenation plan for existing 13 Medicinal Plant Conservation Areas (MPCA) in Western Ghats and Plain region.	Efforts are under progress
8	Eco-tourism centre	By taking integrated protection and development work involving dam, backwater, elephant camp, Ashvinivana botanical garden, Shettihalli sanctuary, the bird sanctuary etc,are further strengthened by allocating special grant and developing the programme in tourist places of western ghats.	Initiation are taken develop Gajanoor as a major eco-tourism centre. Work is under progress.

Source: Western Ghats Task Force

Annexure 6.4: Achievements of WGTF towards Coastal ecological management and development

SL.No	SCHEMES	FOCUS	OUTCOME
1	Coastal zone protection	Efforts are made to protect the coastal zone protection with (CRZ) principles by involving local people & organizations	District and taluks covered under this protection zone are:Ullala, Mangalore, Udupi, Kundapura, Bhatkala, Bengre, Honnavara, Mavinakurve, Kumata, Tadai, Gokarna, Ankola, Baithakola & Karwara
2	Coastal Green Wall Project	To prevent sea erosion and mitigate the coastal ecosystem degradation, Involves the components developing a vegetation barrier all along the coast beyond the High Tide Line (HTL), protection of mangrove & estuaries, restoring runoff water channels, establishment of coastal biodiversity parks etc	Special studies are also initiated at the coastal area of Karwara, Honnavara, Kundapura and Mangalore forest divisions

Source: Western Ghats Task Force

Annexure 7: Sector-wise and District-wise annual allocation under Western Ghats Development Programme for the year 2010-11, Karnataka. Finance in lakhs.

Sl.No	Name of the Sector/Scheme under WGD	North Karnataka			South Karnataka							Coastal Karnataka				Grand Total
		Belgaum	Dharwad	Total	C.R.Nagar	Chikamagalore	Hassan	Kodagu	Mysore	Shimoga	Total	D.Kannada	U.Kannada	Udupi	Total	
	A.Management Component			0.0							0.0				0.0	
1	Administrative cost	48.1	2.0	50.1	2.4	1.7		6.2	7.0	15.8	33.1	18.6	17.8	18.0	54.4	137.6
2	Monitering	4.1		4.1							0.0				0.0	4.1
	B.Preparatory phase			0.0							0.0				0.0	
3	Entry point activities									73.9	73.9				0.0	73.9
4	Institutional & capacity building (Training)/Community Organisation		1.0	1.0				6.2	8.6	51.4	66.1	10.5		21.7	32.2	99.3
5	DPR			0.0						22.5	22.5			9.6	9.6	32.1
	C.Watershed works phase			0.0							0.0				0.0	
6	Agriculture & Soil Conservation works	314.2	37.4	351.6	46.8	42.0		68.5	50.3	37.3	244.9	105.6	398.8	166.7	671.1	1267.6
7	Forest		3.1	3.1	5.6			22.1	10.5		38.2	38.2	68.2	29.1	135.4	176.7
8	Agro forestry/Social Forestry		4.6	4.6			30.0			45.5	75.5			25.9	25.9	105.9
9	Spice Board			0.0			3.5	3.3		3.3	10.2		2.7		2.7	12.8
10	Horticulture		3.0	3.0	5.6			22.1	10.5	45.5	83.7	18.3	29.0	20.0	67.3	154.0
11	Foot bridges/Hanging Bridges/		14.3	14.3	25.0	232.6	188.1	119.6			565.3				0.0	579.6
	Livelihood activities for asset less persons			0.0							0.0				0.0	

12	Animal husbandry, Supply of Giriraja birds/calves / Developmt of small animals,Supply of Sewing machines/ Masonary,Fodder,Carpentry kits/ Kichen garden Animal health camp /Fodder development	6.9	1.9	8.8	0.8				3.4	61.2	65.4	15.2		6.0	21.2	95.3
13	Livestock management including Goatry,Piggery, .etc	45.6		45.6					3.4		3.4				0.0	49.0
	Production system& micro enterprises			0.0							0.0				0.0	
14	Crop diversification,crop demonstration, Nutrition management/ Organic fertiliser etc.	48.8		48.8					3.3	54.0	57.3				0.0	106.1
15	WGDP CELL @ State level			0.0							0.0				0.0	30.0

Source: RDPR Bangalore

Annexure 8 : Sector-wise and District-wise annual allocation under Western Ghats Development Programme for the year 2011-12, Karnataka. Finance in lakhs
Finance: in Lakhs

	Name of the Sector/Scheme under WGDP	North Karnataka			South Karnataka							Coastal Karnataka				Grand Total
		Belgaum	Dharwad	Total	C.R.Nagar	Cikka.magalur	Hassan	Kodagu	Mysore	Shimoga	Total	D.Kannada	U.Kannada	Udupi	Total	
	A.Management Component			0.0							0.0				0.0	
1	Administrative cost	51.5	2.0	53.5		1.7		13.2	9.6	45.2	69.6	24.0	75.4	27.0	126.4	249.4
	Monitoring	5.1		5.1							0.0		17.4		17.4	22.5
	Income generating activities			0.0							0.0	2.3			2.3	2.3
	Evaluation	5.1		5.1		0.3					0.3				0.0	5.4
	B.Preparatory phase	0.0		0.0							0.0				0.0	0.0
3	Entry point activities	0.0		0.0		18.5			6.5		25.0	27.0		62.4	89.4	114.4
4	Institutional & capacity building (Training)/Community Organisation	0.0	2.0	2.0		0.5			9.0	45.2	54.7	12.8	23.2	39.0	75.0	131.6
5	DPR	0.0		0.0		1.3				11.3	12.5	6.8		15.6	22.4	34.9
	C.Watershed works phase	143.8	17.0	160.8							0.0	154.2			154.2	315.0
6	Agriculture & Soil Conservation works	0.0	26.6	26.6	81.6	18.5	62.7	97.0	51.6	146.7	458.1		125.2	72.0	197.2	682.0
7	Forest	0.0	4.4	4.4	1.5			11.3		48.5	61.3		33.6	36.0	69.6	135.3
8	Agro forestry/Social Forestry	37.4	2.9	40.3		6.0	40.0		10.5	57.6	114.1			26.5	26.5	181.0
9	Spice Board	0.0		0.0		5.3					5.3		2.7		2.7	7.9
10	Horticulture	34.1	3.0	37.1	2.0	7.7	7.3	11.3	10.5	74.5	113.2		70.2	36.0	106.2	256.5

11	Foot bridges/Hanging Bridges/vented dam cum foot bridges/PRED	93.3	14.0	107.3	9.7	244.4	133.8	140.0			527.9				0.0	635.3
	Livelihood activities for asset less persons	0.0		0.0					9.0		9.0		84.1		84.1	93.1
12	Animal husbandry, Supply of Giriraja birds/calves / Development of small animals,Supply of Sewing machines/ Masonry,Fodder,Carpentry kits/ Kitchen garden/ Animal health camp /Fodder development	51.5	2.0	53.5						22.6	22.6		43.5	12.0	55.5	131.5
13	Livestock management including Goatry,Piggery., etc	39.3		39.3							0.0				0.0	39.3
	Production system& micro enterprises	0.0		0.0							0.0		92.8		92.8	92.8
14	Crop diversification,crop demonstration, Nutrition management/ Organic fertiliser etc.	53.4		53.4							0.0				0.0	53.4
15	WGDP CELL @ State level	0.0		0.0							0.0				0.0	46.6

Source: RDPR Bangalore

Annexure 9 : Sector-wise and District-wise annual allocation under Western Ghats Development Programme for the year 2012-13, Karnataka

	Name of the Sector/Scheme under WGDP	North Karnataka			South Karnataka							Coastal Karnataka				Grand Total
		Belgaum	Dharwad	Total	C.R.Nagar	Cikkamagalur	Hassan	Kodagu	Mysore	Shimoga	Total	D.Kannada	U.Kannada	Udupi	Total	
	A.Management Component			0.0							0.0				0.0	
1	Administrative cost	51.5	2.0	53.5	3.2	6.0		12.4	9.6	45.0	76.2	9.2	37.7	30.0	77.0	206.6
2	Monitoring	5.2		5.2							0.0				0.0	5.2
	Income generating activities			0.0							0.0	7.7			7.7	7.7
	Evaluation	5.2		5.2		1.0					1.0	0.0	4.6		4.6	10.8
	B.Preparatory phase	0.0		0.0							0.0				0.0	0.0
3	Entry point activities	75.0		75.0					10.5		10.5	0.0	54.0		54.0	139.5
4	Institutional & capacity building (Training)/Community Organisation	30.9	2.0	32.9		0.0		6.0	9.0	25.0	40.0	6.0	22.4	7.5	35.9	108.8
5	DPR	0.0		0.0							0.0				0.0	0.0
	C.Watershed works phase		20.1	20.1			56.0				56.0		33.3		33.3	109.4
6	Agriculture & Soil Conservation works	182.3	23.5	205.8	57.8	111.9		86.8	47.6	74.0	378.0	148.1	319.8	143.8	611.7	1195.5
7	Forest	0.0	4.4	4.4	11.6			7.5			19.1	20.5	10.5	51.0	82.0	105.4
	Nursery/PB seedlings	0.0		0.0	0.0	11.2				33.1	44.3				0.0	44.3
8	Agro forestry/Social Forestry	38.6	2.9	41.5		16.5	25.3		10.5	54.3	106.6			26.5	26.5	174.6
9	Spice Board	0.0		0.0							0.0				0.0	0.0
10	Horticulture	38.6	3.0	41.6	11.6	33.7		7.5	10.5	115.0	178.2	21.9	9.0	51.0	81.9	301.7
11	Foot bridges/Hanging Bridges/vented dam cum foot bridges/PRED	0.0	14.0	14.0	9.7	123.8	162.6	152.0			448.1				0.0	462.1
	Livelihood activities for asset less persons	20.6		20.6					3.0	60.0	63.0	4.5	20.0		24.5	108.1

12	Animal husbandry, Supply of Giriraja birds/calves / Development of small animals,Supply of Sewing machines/ Masonry,Fodder,Carpentry kits/ Kitchen garden/ Animal health camp /Fodder development	28.1	2.0	30.1	1.0			0.5	3.0	30.0	34.5	9.2	11.8	9.2	30.1	94.7
13	Livestock management including Goatry,Piggery, etc.,	25.7		25.7							0.0				0.0	25.7
	Production system& micro enterprises	0.0		0.0							0.0		44.8	7.5	52.3	52.3
14	Crop diversification,crop demonstration, Nutrition management/ Organic fertiliser etc.	13.1		13.1					3.0	15.0	18.0				0.0	31.1
15	WGDP CELL @ State level	0.0		0.0							0.0				0.0	56.6

Source: RDPR Bangalore

Annexure 10: Sector-wise and district-wise Physical achievements under WesternGahts Development Programme for the year 2010-11, Karnataka

Sl.No	Name of the Sector/Scheme under WGDP	UNIT	North Karnataka			South Karnataka						Coastal Karnataka				GRAND TOTAL	
			Belgaum	Dharwad	Total	C.R.Nagar	Chikamagalore	Hassan	Kodagu	Mysore	Shimoga	Total	D.Kannada	U.Kannada	Udupi		Total
1	Entry point activities				0							0				0	
	Check Dam	Nos	0		0						6	6				0	6
	Retention wall/ Guide wall/Protection wall	Rmtr			0						220	220				0	220
	Tank development	Nos	8	8	16	8	8	8	8	8	8	48	8			8	72
	MTP	Nos	2	2	4	2	2	2	2	2	2	12	2			2	18
	Vented Dam cum foot bridge	Nos	13	13	26	13	13	13	13	13	13	78	13			13	117
2	Institutional & capacity buildg (Training)/Community Organisation				0							0				0	0
		Nos		1	1				6	8	40	54	12		20	32	87
3	Agriculture & Soil Conservation works				0							0				0	0
	a. Contour Bunding/ Contour Trenches	Ha	835	200	1035	720			84	930		1733.5				0	2768.5
	b. Bench Terracing	Ha	351	56	406.5							0				0	406.5
	c. Check Dam/Vented Dam cum foot bridge	Nos	38	10	48	3			2		9	14	18	189	72	279	341
	d. Farm Pond/Shallow Well/Gokatte/recharge pits	Nos	59	5	64	25	45		108	8	10	196	40	16		56	316
	e. Percolation pond/De-silting tanks	Nos	0		0	2					3	5	5			5	10
	f. Gully Checks/ Boulder/Rubble checks	Nos	0	65	65					4	40	44				0	109
	g. Nala revetment	mtr	0		0							0	200		290	490	490
	h. Mini percolation tank	Nos	0		0							0				0	0
	i. Nala bunds	Nos	3	1	4	3						3				0	7
	j. Retention wall/ Guide wall/Protection wall	mtr	0		0	30						120	150			0	150

	k. Diversion channe / feeder channel/water ways	mtr	1007		1007					2900	2900		2165		2165	6072
	l. Application of lime in acid soils / Land reclamation	Ha			0						0	26			26	26
	m. Nala bund stabilisation/Nala pitching	mtr			0						0	900	4135		5035	5035
	n. Organic farming	Nos			0						0				0	0
	o. Crop diversification	Ha			0						0				0	0
4	Forest				0						0				0	0
	a. Bank/Bund/Farmers land planting/Agro forestry	Ha		70	70	72		270	167		508.5	333	455	584	1372	1950.5
	b. Maintenance of PB seedlings	Nos			0						0				0	0
	c. Raising of PBs seedlings	Nos		6000	6000						0				0	6000
	d. Advance pitting work	Ha			0						0	40			40	40
5	Agro forestry/Social Forestry				0						0				0	0
	a. Maintenance of PB seedlings	Nos		7000	7000						0			310000	310000	317000
	b. Transportation of seedlings to beneficiaries	Nos			0						0				0	0
	c. Farmers land planting/Agro forestry	Ha		5	5			59			59			31	31	95
	d. Advance pitting work	Ha		5	5						0				0	5
	e. Rising of PBs	Nos		25000	25000					415000	415000				0	440000
	f. Maintenance of Plantations	Ha		6	6			135			135			96	96	237
	g. Road side plantation	mtr			0						0			5000	5000	5000
6	Spice Board				0						0				0	0
	a. I.P sets	Nos			0		18	8		29	55		24		24	79
	b. Sprinkler sets	Nos			0		2	4		1	7				0	7
	c. Farm ponds/well	Nos			0		25	25		15	65		13		13	78
	d. Gravity Irrigation	Nos			0			11			11				0	11

7	Horticulture				0						0				0	0
	a. Orchard horticulture - Cocanut, Mango,Sapota,Pepper,Cashew.	Ha	230	50	280	92		27 0	74	506	942.4	116	203	223	542	1764. 4
8	Foot bridges/Hanging Bridges/			3	3	8	69	48	29		0				0	0
											154				0	157
9	Livelihood activities for asset less persons				0						0				0	0
	Supply of Giriraja birds/calves	Nos		100	100				680 0	3200 0	3880 0	1960 0			19600	5850 0
	Fodder development	Ha			0	8				50	58	23		40	63	121
	Supply of Sewing machines/Fodder kits	Nos		100 0	1000					100	100	45			45	1145
	Livestock management including Goatry,Piggery, etc															
			470		470				150	250	400				0	870
	Animal health camp	Nos	23		23					50	50			40	40	113
10	Production system& micro enterprises				0						0				0	0
	crop demonstration,application of lime in acid soils	Ha														
			872		872				136		136				0	1008

Source: RDPR Bangalore

Annexure 11: Sector-wise and District-wise Physical achievements under Western Ghats Development Programme for the year 2011-12 Karnataka

Sl.No	Name of the Sector/Scheme under WGDP	UNIT	North Karnataka			South Karnataka							Coastal Karnataka			GRAND TOTAL		
			Belgaum	Dharwad	Total	C.R. Nagar	Chickmagalur	Hassan	Kodagu	Mysore	Shimoga	Total	D.Kannada	U.Kannada	Udupi		Total	
1	Entry point activities	Nos.			0.0		11.0						11.0				0.0	11.0
	Check Dam/percolation tank	Nos			0.0								0.0	9.0			9.0	9.0
	Retention wall/ Guide wall/Protection wall	Rmtr			0.0								0.0				0.0	0.0
	Tank development	Nos			0.0								0.0				0.0	0.0
	MTP	Nos			0.0								0.0				0.0	0.0
	Detailed Project Report (DPR)	Nos.			0.0								0.0				0.0	0.0
	Vented Dam cum foot bridge	Nos			0.0								0.0				0.0	0.0
2	Institutional & capacity building (Training)/Community Organisation	Nos			0.0								0.0				0.0	0.0
3	Agriculture & Soil Conservation works	Ha.			0.0								0.0				0.0	0.0
	a. Contour Bunding/ Contour Trenches/land reclamation	Ha	2547.0	58.0	2605.0	925.0		86.0	256.2	643.2	2116.0	4026.4					0.0	6631.4
	b. Bench Terracing	Ha		34.0	34.0	28.0						28.0		7.0			7.0	69.0

	c. Check Dam/Vented Dam cum foot bridge	Nos		10.0	10.0			13.0			13.0	40.0	72.0	79.0	191.0	214.0
	d. Farm Pond/Shallow Well/Ring well/ Gokatte/recharge pits/rubbles checks	Nos	98.0		98.0			70.0		41.0	111.0	14.0	18.0	87.0	119.0	328.0
	e. Percolation pond/De-silting tanks	Nos			0.0						0.0		13.0		13.0	13.0
	f. Gully Checks/ Boulder/Rubble checks	Nos		12.0	12.0				16.0		16.0		1.0		1.0	29.0
	g. Nala revetment	mtr			0.0	150.0	157.0	8.0		30350.0	30665.0		4143.0		4143.0	34808.0
	h. Mini percolation tank	Nos			0.0						0.0		2.0		2.0	2.0
	i. Nala bunds	Nos			0.0						0.0	600.0		16.0	616.0	616.0
	j. Retention wall/ Guide wall/Protection wall	mtr			0.0						0.0				0.0	0.0
	k. Diversion channel / feeder channel/water ways	Rmtr	1851.0	119.0	1970.0		179.0				179.0		27266.0		27266.0	29415.0
	l. Application of lime in acid soils / Land reclamation	Ha			0.0						0.0				0.0	0.0
	m. Nala bund stabilisation/Nala pitching	mtr			0.0						0.0		345.0		345.0	345.0
	n. Organic farming	Nos			0.0						0.0				0.0	0.0
	o. Crop diversification	Ha			0.0						0.0				0.0	0.0
	p.Nala desilting	Nos.			0.0						0.0				0.0	0.0

	q.NRVT	Nos.			0.0						0.0				0.0	0.0	
4	Forest				0.0						0.0				0.0	0.0	
	a. Bank/Bund/Farmers land planting/Agro forestry/block plantation	Ha		25.0	25.0	110.0		131.0	135.0	65.4	3217.0	3658.4	227.5	264.0	585.0	1076.5	4759.9
	b. Maintenance of PB seedlings	Nos			0.0							0.0				0.0	0.0
	c. Raising of PBs seedlings	Nos			0.0							16000.0	109671.0		58000.0	167671.0	183671.0
	d. Advance pitting work	Ha			0.0							0.0				0.0	0.0
5	Agro forestry/Social Forestry	Ha.			0.0							0.0				0.0	0.0
	a. Maintenance of PB seedlings	Nos			0.0				66600.0			66600.0				0.0	66600.0
	b. Transportation of seedlings to beneficiaries	Nos			0.0							0.0				0.0	0.0
	c. Farmers land planting/Agro forestry	Ha	446.4		446.4							0.0				0.0	446.4
	d. Advance pitting work	Ha			0.0							0.0				0.0	0.0
	e. Raising of PBs	Nos			0.0							0.0				0.0	0.0
	f. Maintenance of Plantations	Ha			0.0							0.0				0.0	0.0
	g. Road side plantation				0.0							0.0				0.0	0.0
	h.Raising of demonstration plots	mtr			0.0							0.0				0.0	0.0
6	Spice Board				0.0							0.0				0.0	0.0

	a. I.P sets	Nos			0.0			2.0	11.0			13.0			0.0	13.0	
	b. Sprinkler sets	Nos			0.0							0.0			0.0	0.0	
	c. Farm ponds/well	Nos			0.0							0.0			0.0	0.0	
	d.Gravity Irrigation	Nos			0.0							0.0			0.0	0.0	
7	Horticulture	Ha.			0.0							0.0			0.0	0.0	
	a. Orchard horticulture - Cocanut, Mango,Sapota,Pepper,Cashew.	Ha.	211.0	31.0	242.0	108.0		69.7	135.0		518.0	830.7	200.0	632.0	222.8	1054.8	2127.5
	Raising of seedlings	Nos.			0.0				1200.0			1200.0	29800.0		650.0	30450.0	31650.0
8	Foot bridges/Hanging Bridges/check dam/VCD	Nos.			0.0	3.0						3.0				0.0	3.0
9	Livelihood activities for asset less persons/Non land based activities				0.0							0.0				0.0	0.0
	a.Sewing machines/Carpentry kits	Nos.			0.0							0.0		1372.0		1372.0	1372.0
	Supply of Giriraja birds/calves	Nos			0.0				15.0	36.0	51.0	2600.0				2600.0	2651.0
	Fodder development	Ha			0.0							0.0			11.0	11.0	11.0
	Supply of Sewing machines/Fodder kits	Nos			0.0							0.0				0.0	0.0
	Livestock management including Goatry,Piggery, .etc	Nos.	241.0	500.0	741.0						927.0			45.0		45.0	1713.0
	Animal health	Nos		1.0	1.0							0.0				0.0	1.0

	camp																
10	Production system & micro enterprises				0.0							0.0				0.0	0.0
	crop Demonstration, application of lime in acid soils	Ha	6.0		6.0							0.0				0.0	6.0

Source: RDPR Bangalore

Annexure 12: Sector-wise and District-wise Physical achievements under Western Ghats Development Programme for the year 2012-13 Karnataka

Sl. No	Name of the Sector/Scheme under WGDP	UNI T	North Karnataka			South Karnataka							Coastal Karnataka			GRAND TOTAL	
			Belgaum	Dharwad	Total	C.R. Nagar	Chikka magalur	Hassan	Kodagu	Mysore	Shimoga	Total	Dakshina Kannada	Uttara Kannada	Udupi		Total
1	Entry point activities				0.0							0.0				0.0	
	Check Dam/percolation tank	Nos	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
	Retention wall/ Guide wall/Protection wall	Rmtr			0.0							0.0				0.0	0.0
	Tank development	Nos			0.0							0.0				0.0	0.0
	MTP	Nos			0.0							0.0				0.0	0.0
	Detailed Project Report (DPR)	Nos.			0.0							0.0				0.0	0.0
	Vented Dam cum foot bridge	Nos		7.0	7.0							0.0		18.0		18.0	25.0
2	Institutional & capacity building (Training)/Community Organisation	Nos			0.0							0.0				0.0	0.0
	Watershed	Nos.			0.0			44.0				44.0				0.0	44.0
3	Agriculture & Soil Conservation works	Ha.			0.0						65.0	65.0				0.0	65.0
		Nos.			0.0						11.0	11.0				0.0	11.0
		Rmtr			0.0						48387.0	48387.0				0.0	48387.0
	a. Contour Bunding/ Contour Trenches/land reclamation	Ha	1533.0	300.0	1833.0	323.0	168.3		119.4	620.0		1230.7				0.0	3063.7
	b. Bench Terracing	Ha	199.0	48.0	247.0							0.0				0.0	247.0
	c. Check Dam/Vented Dam cum foot bridge	Nos		5.0	5.0	8.0	2.0		2.0			12.0	32.0			32.0	49.0
	d. Farm Pond/Shallow Well/Ring well/ Gokatte/recharge pits/rubbles checks	Nos	30.0	2.0	32.0	28.0	73.0		82.0	33.0		216.0	44.0	530.0	83.0	657.0	905.0
	e. Percolation pond/De-silting tanks	Nos			0.0	1.0						1.0				0.0	1.0
	f. Gully Checks/ Boulder/Rubble checks	Nos		73.0	73.0							0.0				0.0	73.0

	g. Nala revetment	mtr			0.0	610.0	800.0				1410.0		4557.0		4557.0	5967.0
	h. Mini percolation tank	Nos			0.0						0.0				0.0	0.0
	i. Nala bunds	Nos	2.0	1.0	3.0						0.0			26.0	26.0	29.0
	j. Retention wall/ Guide wall/Protection wall	mtr			0.0	7.0					7.0				0.0	7.0
	k. Diversion channel / feeder channel/water ways	Rmtr		400.0	400.0	1.0	500.0		2070.0		2571.0		12000.0	4232.0	16232.0	19203.0
	l. Application of lime in acid soils / Land reclamation	Ha			0.0						0.0				0.0	0.0
	m. Nala bund stabilisation/Nala pitching	mtr			0.0						0.0	1025.0			1025.0	1025.0
	n. Organic farming	Nos			0.0						0.0				0.0	
	o. Crop diversification	Ha	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	p.Nala desilting	Nos.			0.0						0.0			24.0	24.0	24.0
	q.NRVT	Nos.			0.0						0.0			5815.0	5815.0	5815.0
	RRS	Nos.		5.0	5.0						0.0				0.0	5.0
4	Forest				0.0						0.0				0.0	0.0
	Afforestation	Nos.			0.0						0.0	170.4	3960.0		4130.4	4130.4
	a. Bank/Bund/Farmers land planting/Agro forestry/block plantation/Trenches	Ha	515.0	16.0	531.0		660.0		180.0		840.0			1525.5	1525.5	2896.5
	b. Maintenance of PB seedlings	Nos			0.0				1500.0		1500.0				0.0	1500.0
	c. Raising of PBs seedlings	Nos			0.0		66000.0				66000.0			105115.0	105115.0	171115.0
	d. Advance pitting work/WDD	Ha		112.0	112.0						0.0			265.5	265.5	377.5
5	Agro forestry/Social Forestry	Nos.		38300.0	38300.0			28.0		269.0	297.0				0.0	38597.0
	a. Maintenance of PB seedlings	Nos			0.0						0.0		51480.0	113398.0	164878.0	164878.0
		Hect			0.0						0.0		72.0		72.0	72.0
	b. Transportation of seedlings to beneficiaries	Nos			0.0						0.0				0.0	0.0
	c. Farmers land planting/Agro forestry	Ha			0.0	192.7		84.0			276.7			50.0	50.0	326.7

	d. Advance pitting work	Ha			0.0						0.0			0.0	0.0	
	e. Raising of PBs	Nos			0.0						0.0			0.0	0.0	
	f. Maintenance of Plantations	Ha			0.0						0.0			0.0	0.0	
	g. Road side plantation				0.0						0.0			0.0	0.0	
	h. Raising of demonstration plots	mtr			0.0						0.0			0.0	0.0	
6	Spice Board				0.0						0.0			0.0	0.0	
	a. I.P sets	Nos			0.0						0.0			0.0	0.0	
	b. Sprinkler sets	Nos			0.0						0.0			0.0	0.0	
	c. Farm ponds/well	Nos			0.0						0.0			0.0	0.0	
	d. Gravity Irrigation	Nos			0.0						0.0			0.0	0.0	
7	Horticulture	Ha.		30.0	30.0						0.0			0.0	30.0	
	a. Orchard horticulture - Cocanut, Mango, Sapota, Pepper, Cashew.	Ha.	456.0		456.0	96.3	312.0		90.0	180.0		678.3	200.0		200.0	1334.3
	Dry land horticulture	Nos			0.0		825.0				825.0			48010.0	48010.0	48835.0
	Vegetable mini kits/nutrition kitchen garden	Nos			0.0					185.0	185.0			3410.0	3410.0	3595.0
	Construction of farm pond/well	Nos			0.0						0.0			0.0	0.0	0.0
Horticulture plantation		Nos			0.0						1150.0	1150.0		8324.0	8324.0	9474.0
		Hect			0.0						1.2	1.2		83.2	83.2	84.4
8	Foot bridges/Hanging Bridges/check dam/VCD	Nos.			0.0		12.0	38.0	36.0			86.0			0.0	86.0
9	Livelihood activities for asset less persons/Non land based activities	Nos.			0.0				90.0			90.0			0.0	90.0
	a. Sewing machines/Carpentry kits	Nos.			0.0						72.0	72.0		196.0	196.0	268.0
	Supply of Giriraja birds/calves	Nos			0.0						11990.0	11990.0	12200.0		12200.0	24190.0
	Fodder development	Ha	675.0		675.0							0.0		3.0	3.0	678.0

	Supply of Sewing machines/Fodder kits	Nos		500.0	500.0							0.0		227.0		227.0	727.0	
	Livestock management including Goatry, Piggery, .etc	Nos.	514.0		514.0					3.0		3.0			794.0	794.0	1311.0	
	Animal health camp	Nos	25.0	2.0	27.0	4.0			2.0	90.0		96.0		46.0	7.0	53.0	176.0	
10	Production system & micro enterprises	Nos.			0.0							0.0			53.0	53.0	53.0	
	crop demonstration, application of lime in acid soils	Ha	125.0		125.0					90.0	1200.0	1290.0					0.0	1415.0

Source: RDPR Bangalore

Annexure 13: List of E.C committee and Watersheds selected for the year 2012-13 in Belgaum district

Sl. No	Name of Taluka	Name of Watershed	Water-shed selected Year	Name of Gram Panchayat	Allocation			
					Gen	SCP	TSP	Total
1	2	3	4	5	6	7	8	9
1	Belgaum	Karadiguddi 1 & 2	2012-13	Marihal	14.940	1.690	3.956	20.586
	Taluka Total				14.940	1.690	3.956	20.586
2	Bailhongal	Amatur-4	2012-13	Amatur	15.386	2.291	2.904	20.581
3		Anigol-1		Anigol	15.386	2.291	2.904	20.581
4		Anigol-2		Anigol	15.386	2.291	2.904	20.581
5		Bovankoppa-1		C.Bagewadi	15.386	2.291	2.904	20.581
6		Govankoppa-2		C.Bagewadi	15.384	2.293	2.904	20.581
7		Hirebellikatti		T.Sigihalli	15.366	1.753	3.462	20.581
8		Khodanpur-1		Khodanpur	15.026	1.770	3.785	20.581
9		Khodanpur-2		Khodanpur	15.368	2.181	3.032	20.581
10		Pattihal KB		Pattihal KB	15.366	1.744	3.471	20.581
	Taluka Total				138.054	18.905	28.270	185.229
11	Saundatti	Murugod	2012-13	Murugod	15.366	1.847	3.368	20.581
12		Hirebudnur		Hirebudnur	15.706	2.003	2.872	20.581
	Taluka Total				31.072	3.850	6.240	41.162
13	Khanapur	Iddalahonda	2012-13	Iddalhonda	15.421	3.250	1.910	20.581
14		Malankale		Iddalhonda	15.431	1.900	3.250	20.581
15		Rumewadi		Karambal	15.337	2.370	2.874	20.581
16		Bastwad 1 & 2		Nagargali	18.729	0.500	1.352	20.581
17		Surpur Kerwad 2		Kakkeri	10.002	3.150	7.429	20.581
18		Tinkumbi 1 & 2		Halaga	15.741	2.620	2.220	20.581
19		Uchawade		Bailur	17.581	3.000	0.000	20.581
20		Jamboti 2		Jamboti	16.791	2.450	1.340	20.581
21		Ottoli		Nilawade	17.315	2.326	0.940	20.581
22		Bandekarwada		Nilawade	17.071	2.510	1.000	20.581
	Taluka Total				159.419	24.076	22.315	205.810
	Belgaum Sub-Dn Total				343.485	48.521	60.781	452.787
23	Hukkeri	Honnihalli	2012-13		15.335	1.300	3.946	20.581
24		Salamwadi		Salamwadi	15.435	4.460	0.686	20.581
25		Hattialur		Hospet	15.435	1.609	3.537	20.581
	Taluka Total				46.205	7.369	8.169	61.743
	Chikkodi Sub-Dn Total				46.205	7.369	8.169	61.743
	W/S Committee Grand Total				389.690	55.890	68.950	514.530

Source: Watershed Department, Belgaum

Annexure 14: Study on Performance Evaluation of Western Ghat Development Programme (WGDP) in Karnataka

Questionnaires for Officials

1. General information

1.1 Name of the DWDO:	1.2 District:
1.3 Name of the TWDO/AHO/ACF:	1.4 Taluk:
1.5 Name of the GP President:	1.6 Gram Panchayat:
1.7 Name of the Head – E.C (WGDP) Committee:	
1.8 If other than the above, Name and Desig.: Phone	

2. Administration setup for WGDP

2.1 Who is engaged in preparation of the Annual Action Plans (APOs)?

a.	b.	c.	d.
----	----	----	----

2.2 What are the criteria followed in the preparation of APOs?

1	
2	
3	
4	
5	

3. Committees for WGDP

3.1 How many people will be there in the committee?.....

3.2 What is the representation type of people presiding in the committee?

a.	b.	c.	d.
e.	f.	g.	h.

3.3 Which are the major departments that participate in the committee specify the depts.. (depends on the region)

a. Agriculture	b. Horticulture	c. Forest	d. Animal Husbandry
e. Rural Infrastructure	f.	g.	h.

3.4. When is committee meeting held annually? (Mention the month).....

4. Fund allocation criteria

4.1 What are the major criteria followed during the fund allocation?

1	
2	
3	
4	
5	
6	
7	

4.2 Are you following the same criteria for fund allocation every year? Yes/No

5. Major allocation works/department

5.1 What are the major works taken up and which departments get more fund allocation by WGDP every year?

Sl.No.	Major Works	Major Department
1		
2		
3		
4		
5		
6		

5.2 What are the reasons? If these works are similar every years ?

- 1.
- 2.
- 3.

6. Target (Physical)

6.1 What is the physical target for the year 2012-13 and 2011-12?

Target	2012-13		2011-12	
	Planned	Maintenance (of last year)	Planned	Maintenance (of last year)
a. No. of acres				
b. No. of beneficiaries				
c. No. of Villages				
d.No. of GPs				
e.No. of Taluks:				

6.2 what are the major proposed activities under the SCP and TSP for the year 2012-13?

Sl. No.	SCP	STP
1		
2		
3		
4		
5		

6.3 Is physical activities increasing every year? Yes/No. if yes%

7. Implementation steps (Execution of allotted work)

7.1 What are the methods/process followed during the implementation of the schemes

Sl. No.	Methods followed during implementation of works
1	
2	
3	
4	
5	
6	
7	

7.2 Are you consulting local people before initiation of the work? Yes/No

7.3 Ares local people co-operative during the work? Yes/No

7.4 In your view, do you think there are overlapping of WGDG schemes with other schemes? Yes/No

7.4.1 If yes what are the reasons 1.

2.

3.

7.5 Who is accountable when the planned work does not get implemented as designed?

1.

2.

3.

8. Difficulties during implementations

8.1 What are the major difficulties encountered during the implementation of the schemes/programmes

Departments	Difficulties during implementation	Suggestions
a. Agriculture	1.	
	2.	
	3.	
b. Horticulture	1.	
	2.	
	3.	
c. Animal Husbandry	1.	
	2.	

	3.	
d. Forestry	1.	
	2.	
	3.	
	2.	
	3.	
e. Rural infrastructure	1.	
	2.	
	3.	
f. Administration	1.	
	2.	
	3.	

8.2 Is allotted fund sufficient? Yes/No

8.2.1 If No, what is the additional amount required, specify in percent% more

8.3 Do you encounter staffing issues, yes/no, if yes, specify

Inadequate staff a. Field level (.....% of shortage) b. Administration level (.....% of shortage)

8.3.1 Others, specify a. b. c.

9. Evaluation/monitoring

9.1 Is there any evaluation or monitoring mechanisms? Yes/No

9.2 What are the monitoring methods followed?

Sl.No.	Monitoring methods
1	
2	
3	
4	
5	

9.3 Are you providing any training programs for the implementing authorities/committee members? Yes/No

9.3.1 If yes, what type of trainings and number of trainings

Sl.No.	Trainings
1	
2	
3	
4	
5	

10. Policy bound drawbacks

10.1 Is there any policy obstacles associated with this scheme from central Govt. ? Yes/No

10.1.1 If yes, what are those? 1.

2.

3.

11. Local issues/conflicts (b/w official and local people and others)

11.1 What are the major issues/conflicts associated between officials and local people during and after the implementation of schemes

Sl.No.	During implementation	After implementation
1		
2		
3		
4		
5		

11.2 What are the major issues/conflicts associated between beneficiary and non-beneficiary

Sl.No.	Beneficiary	Non-beneficiary
1		
2		
3		
4		
5		

12. Case studies/success stories

13.1 Are there any success stories in your locality

Success stories/Case studies	Indicator of success	Village/location
1.	1	
	2	
	3	
2.	1	
	2	
	3	
3.	1	
	2	
	3	

13. Field suggestions for further developments

13.1 Please provide suggestions based on your field experiences for the betterment of WGDP in future

Sl.No.	Suggestion
1	
2	
3	
4	
5	

Annexure 15: Study on Performance Evaluation of Western Ghat Development Programme (WGDP) in Karnataka

Questionnaire - Beneficiary

1. General Information

1.1 Respondent Name				
1.2 Age				
1.3 Category	1.SC	2.ST	3.OBC	4.GEN
1.4 Family size				
1.5 Education	1. Matriculation & below	2. Matriculation & above	3. Illiterate	
1.6 Occupation	1.Agriculturist	2.Non-agriculturalist		
1.7 Type of Ration card	1.BPL	2.APL		
1.8 Address				

2. Awareness about WGDP

2.1 Are you aware about the WGDP programmes functioning in your locality (GP)? Yes/No

2.1.1 If yes, what type of schemes are being implemented?

Sl.No.	Schemes
1	
2	
3	
4	
5	

2.2 Have you participated in any programmes? Yes/No

2.2.1 If yes, which programme, specify.

2.3 Have the implementing officers taken you and considered your views before implementing the scheme in your locality ? Yes/No

2.3.1 If yes, on what Schemes?

Sl.No.	Schemes
1	
2	
3	

2.4 In your view, , has this scheme benefited your locality? Yes/No

2.4.1 If yes, specify.

2.4.2 If No, what type of schemes will be useful?

- 1.
- 2.
- 3.

2.5 Specify the benefits you have derived from the scheme – monetary and in Kind – Yes/No

2.5.1 If yes, what are those?

Sl. No.	Type of Monetary/kind support	Value (in Rs.)
1		
2		
3		
4		

2.6 Are they really necessary for your household? Yes/No

2.6.1 If No, what would be useful? Specify

- 1.
- 2.
- 3.

2.7 Are they functioning well? Yes/No

2.8 What is the longevity of the materials/product(s) (in years).....

2.9 Distribution of benefits is on time? Yes/No

3. Improvement in socioeconomic condition

3.1 Has WGDP programme improved your household income? Yes/No/ no difference

3.1.1 If yes what% of the income (compare to earlier)

3.1.2 If yes how it has improved?

Sl.No.	Improvements

3.2 Is WGDP programme helped your children's education? Due to improvement in your socioeconomic condition? Yes/No

3.2.1 If yes, what are the contributions?

- 1.
- 2.
- 3.

3.3 Has the socioeconomic condition of the locality improved after the WGDP programs? Yes/No

3.3.1 If yes, how, specify.

3.4 Particulars of support for your family

Schemes	Yes/No	Year	Numbers	Persistence/maintenance	Remarks
a. Supply of G. Bird, calf etc					
b. Sewing machine					
c. Masonry					
d. Fodder / fodder development					
e. Carpentry kits					
f. Kitchen garden					
g. Animal Health Camp					
h. Goatry/piggery					
i. Crop diversification/demonstration					
j. Organic fertilizer					
k. Micro enterprise					
i. Others					

4. Improvement in environment/ecological system

4.1 Is WGDP programs improved the below specify that

Sl.No.	Indicator	Yes	No	No change	Remarks
1	Increase in the Green cover				
2	Increase in Livestock population				
3	Increase in agricultural activities				
4	Increase in horticultural crops increased				
5	Increase in groundwater table				
6	Watershed area improved				
7	Rural infrastructure like road, foot bridges, etc have improved				
8	Ratio of supply of G.Birds/livestocks/agricultural machineries has improved				
9	Availability of irrigation water improved				
10	Decrease in soil erosion				

11	Increase in soil water retention capacity				
12	Any other specify?				

5. Scenario before and after the implementation of WGDP schemes

5.1 What is the scenario of WGDP schemes before and after the implementation

Sl.No.	Schemes	After WGDP			Before WGDP		
		Good	Bad	No change	Good	Bad	No change
1	Entry point activities (Check Dam/percolation tank, Retention wall/ Guide wall/Protection wall, Tank development, Vented Dam cum foot bridge)						
2	Institutional & capacity building (Training)/Community Organisation						
3	Agriculture & Soil Conservation works (Contour Bunding/ Contour Trenches/land reclamation, Percolation pond/De-silting tanks, Organic farming, Crop diversification etc)						
4	Forest (Bank/Bund/Farmers land planting/Agro forestry/block plantation, Maintenance & raisings of PB seedlings, Advance pitting work etc)						
5	Agro forestry/Social Forestry (Transportation of seedlings to beneficiaries, Farmers land planting/Agro forestry, Road side plantation etc)						
6	Horticulture (Orchard horticulture - Cocanut, Mango,Sapota,Pepper,Cashew)						
7	Livelihood activities for asset less persons/Non land based activities (Sewing machines/Carpentrykits, Supply of Giriraja birds/calves, Fodder development etc)						
8	Production system& micro enterprises (crop demonstration,application of lime in acid soils etc.)						

5.2 Where have you seen these changes? Your locality/Outside the locality

6. Drawbacks of the WGDP schemes

6.1 What are the drawbacks of the WGDP schemes

Sl. No.	Drawbacks
1	Officials are implementing not relevant schemes
2	Schemes are not implemented on timely
3	Minimum area considered for development

4	Beneficiary numbers are minimized
5	Works are imperfect
6	Lack of participatory decision making
7	Insufficient allocation of funds
8	Specify, if any?

7. Perception about the WGDP schemes

7.1 What is your perception about the WGDP schemes? Required/Not required

7.1.1 If yes, what specific changes do you expect?

- 1.
- 2.
- 3.

7.2 In your view, which sectors need to be given more attention

Sectors	Highly	Moderate	Low	No focus
a.Agriculture/watershed				
b.Livelihood generation				
c.Forestry/conservation				
d.Overall living standard				
e.Horticulture				
f.Rural infrastructure				

8. Necessary schemes

8.1 According to you specify and prioritise the required schemes for your location

Sl. No.	Basic Schemes
1	
2	
3	
4	
5	

8.2 Are you expecting these schemes under WGDP? Yes/No

8.2.1 If yes, give reasons,

- 1.
- 2.
- 3.

9. Suggestions for future consideration

9.1 What are your suggestions for further development of WGDP

Sectors	Suggestions
a. Agriculture	1.
	2.
	3.
b. Horticulture	1.
	2.
	3.
c. Animal Husbandry	1.
	2.
	3.
d. Forestry	1.
	2.
	3.
e. Rural infrastructure	1.
	2.
	3.
f. Administration	1.
	2.
	3.