

EXECUTIVE SUMMARY AND RECOMMENDATIONS

1. The Karnataka Forest Department (KFD) has implemented a JBIC assisted project “Forest and Environment Project for Eastern plains of Karnataka”. The concept of people’s participation has been part of the project. The principle of participatory management through a process of Joint Forest Planning and Management (JFPM) has been included as an important approach. The total cost of the project was envisaged to be Rs.566.55 crores out of which a loan of 15968 Yen (equivalent to Rs.508.54 Crore) was availed from JBIC. Even though the project was formulated as early as 1991-92, it came into operation only from the year 1997-98. Originally the project was scheduled to be completed in a period of five years, commencing from 1997-98 to 2001-02, and it was extended upto 2004-05, with a revised total cost of Rs.722.489 Crore.
2. The KFD has spent eight years for the completion of the project. As the project has achieved targets proposed, the KFD decided to review and evaluate the project work since its inception. The department invited bids from several organisations for the conduct of the study on Review and Evaluation on a competitive basis. The KFD awarded the assignment of Review and Evaluation to STEM and an Agreement to this effect was signed on February 16, 2005.
3. The specific objectives of the evaluation study are:
 - Assess the effectiveness and contents of the project objectives and components.
 - Evaluate and review the progress of the project.
 - Review, assess and comment on the phasing of both physical and financial targets and achievements of the project.
 - Evaluate and comment on the process of Joint Forest Planning and Management, and
 - Suggest modifications / corrections / components, if any for future directions so that the project could become a model for such projects in future.
4. Further the project under nine different components has set certain targets for achieving its objectives and aims. The evaluation should assess the extent of progress, the project has achieved the targets in physical and financial aspects.
5. The methodology adopted for the study involved, collection of secondary data from the Forest Department and primary data through surveys, extensive meeting and discussions with officials of the

department and people concerned with JFPM and VFCs. The methodology adopted includes the analysis of data at various levels, synthesising the analysis to arrive at findings, conclusions and finally recommendations.

6. All the relevant secondary data maintained with regard to the project by the Chief Conservator of Forests (Social Forestry) at Bangalore, data from the Deputy Conservator of Forests at division level were collected in person and by mail/fax etc.
7. Most of the methodology was dictated by the Terms of Reference, which has been meticulously followed. Collection of primary data as well as secondary data was the time consuming activity. Primary data collection involved very extensive fieldwork. The survey instruments used for collection of primary data were: i. Selected Plantations JBIC-Q1 ii. Village Forest Committee (VFC) JBIC-Q2 iii. VFC Members – Q3 iv. Range Forest Officers (RFOs) JBIC – Q4 v. Farm Forestry JBIC & Vanasamvardhane – Q5 vi. Buildings JBIC-Q6 vii. Vehicles JBIC – Q7 viii. Equipments JBIC – Q8. The total study consumed about 110 man-months time including field survey. First, ten per cent sample plantation in each division, covering all ranges, all models and all years was randomly selected for detailed survey. A structured questionnaire was designed to elicit information on survival rate of seedlings planted, growth condition and quality of work undertaken. The questionnaire elicited other information such as type of protection of plantation and espacement followed etc.
8. With regard to JFPM and VFCs, 320 VFCs at the rate of 10 per cent of VFCs per division was selected for detailed study. In addition, 20 VFC members were selected from each selected VFC for detailed survey. A structured questionnaire was designed and used for collection of data from the VFC officials as well as the selected members. The sampled VFC members include women and SC/ST categories.
9. A survey of one hundred and ninety six Range Forest Officers was also done through a structured questionnaire to elicit their perception on seedlings distribution under farm forestry. As in the terms of reference 1 to 2 per cent of villages were selected from each hobli for gathering data on both JBIC and Vanasamvardhane schemes. From the selected villages, farmers and Institutions were contacted to elicit information through a structured questionnaire on the species wise survival rate, growth condition, technical advice/ extension services of FD and farmers expectation from the FD under JBIC and Vanasamvardhane schemes.

10. With regard to the assets created by the project like buildings, vehicles and equipment, three questionnaires were used, one each dealing with buildings, vehicles and equipment to find their usage, status, maintenance and their impact on efficiency in the functioning of the department.
11. The data and information thus collected were analyzed and the results and recommendations are presented in the different chapters.
12. A review of project cost and achievements revealed that the cumulative project expenditure since inception to end of the project was about 92 per cent of the estimated project cost. Out of the reimbursable amount, 96 per cent of the claim has been made from JBIC. It can be observed that JBIC has been fairly prompt in releasing their share of the project cost.
13. The project report specifically splits the entire cost under nine different components like afforestation (62.92%), civil works (10.25%), salaries (10.65%), equipments, materials & furniture (8.75%), Overseas training (1.99%), Local training and workshops (1.55%), Vehicles (0.81%) and Research Studies (0.41%).
14. Regarding afforestation 92.6 per cent of the allocation has been incurred upto 2004-05, and the achievement of physical target under the 12 models of planting is 100 per cent. This achievement has to be commended. The second part of the afforestation activity is distribution of seedlings under JBIC and Vanasamvardhane scheme. Out of the envisaged distribution of 23.70 crore seedlings under JBIC, about 99 per cent of has been distributed till the end of 2004-05.
15. Physical and financial achievement under building activities was about 99 and 90 per cent respectively. It is worth noting that buildings increased the efficiency of the department.
16. The budget for the salaries component has been totally spent till 2004-05.
17. Under the component dealing with equipment, material and furniture, it is seen that about 74 per cent of the allocation has been spent so far. The equipment which prominently figure are computers, radio set mobiles, walkie-talkies where the physical achievement is more than 200 per cent.
18. Development of Geo-spatial database for 19 Forest Divisions at the cost of Rs. 76.00 lakhs has been completed and entrusted to the Karnataka State Remote Sensing Application Centre (KSRSAC), Bangalore.

19. About 98 per cent of the expenditure budgeted for repairs, maintenance and office expenses has been spent up to 2004-05.
20. Till the end of 2004-05, 70 officials at different levels ranging from Range Forest Officers to Chief Conservator of Forests attended 15 programmes in four countries. About eighty per cent of the estimated expenditure has been spent till the end of eighth year of the project. The achievement has not been very satisfactory in terms of number of officials sent for training. If one takes a look at the names of the training programmes, "Certificate Course in Community Forestry" and "Integrated Forest Planning: Community Needs for Sustainable Management" appear to be very relevant for a project like the JBIC sponsored one. Anyway this did not appear to be a limitation on the project activities.
21. It is seen that only 73 workshops have been conducted until 2004-05, whereas in the case of local training programmes the achievement of target is commendable. About 52,231 persons which includes department officials, VFC members, Farmers and others have been trained, which is more than three times the target. Local training programmes were conducted at Kadugodi, Gungaragatti and Thattihalla Departmental Training Centres in order to bring attitudinal changes and upgrade the social and rapport building skills. The expenditure incurred was about 91 per cent of the budgeted amount for local training and workshops. The attendance or enrolment in these programmes is also very impressive. There has been overwhelming participation of this group. This also goes to show the interest of the local people in the afforestation programme. Both the department and the local people as participants deserve appreciation. It should also be noted that this excellent performance accounted for only one per cent of the project cost originally estimated.
22. About eighty two per cent of the budgeted amount has been spent till the end of eighth year for purchasing of vehicles. It may also be pointed out that vehicles increased the efficiency of the department significantly.
23. The total expenditure on Research Studies component was about 91 per cent of the budgeted project expenditure. A total of 47 Research Studies under JFPM, Extension, Socio-economic research, Market Research, Agro Forestry, Eco Tourism, Wildlife Management have been taken up to the end of 2004-05. Out of planned 3725 ha, about 78 per cent (2906 ha) has been achieved in terms of area to be covered under Research Activities and Studies. Establishment of clonal orchards, progeny trial plots and production stands are to be given priority, as there is a demand for clonal seedlings.

24. With regard to plantations, 100 per cent of the physical target has been achieved across all models. Overall it can be said that all the divisions have been able to achieve the target in terms of area. This achievement is commendable. For most of the models the survival rate ranged from 61 to 85 per cent. Model 1 and 6 showed a survival rate of more than 80 and 85 per cent respectively. A model-wise analysis of survival rate revealed that model 2 showed less than 50 per cent survival rate followed by model 3 and 8 with a survival rate of 62 and 65 per cent respectively. The reasons attributed for the low survival rate were:

- Continuous drought condition during 2001-02 to 2003-04
- Root competition and Biotic pressure and influence in natural forest area
- No protection to the plantation like fencing for small area plantations
- Plantation got submerged in water
- Poor maintenance

These reasons appear to be genuine, considering the models. For example area for model 2 plantations are meant for reserved forests / natural forest area where the competition for new growth and biotic pressure are very high. Model 08 is 'foreshore plantations'. There is every possibility of the plantations being submerged because of the location and improper assessment of flood level. Water scarcity and drought condition might have resulted in poor survival rate.

25. The growth condition and quality of the work undertaken is between 'Good' and 'Satisfactory' across the models. Factors like water availability, type of soil in which the seedlings are planted and climatic conditions have an impact on the growth. Therefore, growth parameters cannot be compared across the years or across the divisions.

26. It is observed that plantations are spread over in a wide variety of land ownership. The espacement followed in different models is as per specification. In some institutional plantations, protection was lacking. It is suggested that manual protection to be strengthened until a stage where the plantation can withstand all interference. Soil and water harvesting works have been carried out. There seems to be an upgradation in the environment and marked improvement in the area treated under various models of plantations.

27. All the VFCs formed so far have been registered and about 96 per cent of them had prepared Microplan and also got the Memorandum of Understanding (MOU) signed. About 93 per cent of the VFCs formed so far have taken up the Entry Point Programme. At the micro level, the formation of VFCs, their registration, micro plan preparation and implementation of entry point programme were found to be highly satisfactory.
28. The proportion of selected VFCs, which received the seed money, was about 96 percent. Out of the remaining 13 VFCs, 4 VFCs have confirmed that they have not received the Seed Money and the remaining 9 VFCs the records are not forthcoming to ascertain the receipt of seed money. About 79 and 89 per cent of the selected VFCs have prepared micro plan and implemented entry point activities respectively. The progress with regard to activities like entry point programme, receipt of seed money appeared to be satisfactory. All the selected VFCs in 49 divisions have prepared micro plans. But, some of the VFCs in 29 divisions, the respondents were not in a position to explain about the micro plans prepared in detail. The major reason attributed for this situation was lack of cooperation among the members of the VFC themselves.
29. Planning and protection of forest in general, and particularly from illicit cuttings and forest fire are the major responsibilities as perceived by majority of VFCs. Besides, conservation and development of degraded forests and wasteland, prevention of encroachment, poaching and grazing also perceived as their responsibilities.
30. Necessary training not only for VFC members but also for the department officials, exposure trips for VFC members, strengthening of Entry Point Programme Activities are perceived by most of the VFCs as the necessary requirements for effective functioning of VFC.
31. The respondents expressed that some income generating activities should be taken up through which they could get some returns within a short period as the gestation period (time) between planting and sharing of forest produce is quite long.
32. About 18 per cent of surveyed VFCs reported the involvement of NGOs in their functioning in formation and strengthening of VFCs, distribution of plants/seedlings, creating awareness on socio - economic aspects and protection of forest.
33. About 12 per cent of the surveyed VFCs reported that they had received assistance from SHGs. SHGs provided financial / loan facilities, assisted in distribution of plants/seedlings, conducting awareness programmes and in environmental aspects.

34. Under the JBIC assisted programme, huge assets have been created in terms of plantations. These plantations will be ready for harvesting shortly as plantations are completing the gestation period and large scale sharing of forest produce will be taking place in the near future.
35. The entire concept of JFPM revolves around the hope of sharing forest produce sales with the participants of members of VFCs. It is also to be understood that the people actively participate in JFPM for tangible benefits. Already instances of such sharing are seen in Tumkur, Gulbarga and South Kanara divisions. It is understood that some of the bamboo plantations are mature for harvesting. If the members loose their confidence in VFCs and JFPM, the very concept may get defeated. Immediate action is required to see some revenues accrue to the VFCs and their members by harvesting and selling mature bamboo plantations raised under Model 5 and 6.
36. Most of the members interviewed were aware of the entry point activities taken up by the respective VFC, and amount spent for carrying out the work. Many of them admitted that the activity helped them in general and in income generation.
37. Many welfare programmes to the members has been carried out under entry point activities under pilot basis. Members are being provided with financial assistance for purchasing high yielding cows, buffaloes, sheep etc., especially for women, poor and landless members who were involved in this activity. To encourage SHG, loan is provided at lower interest and easy instalments.
38. It appears that, training programme/workshops has to be strengthened by offering more number of programmes and motivating more VFC members to attend.
39. The expectations of the VFC members are:
 - Sharing of revenue from forest produce.
 - Strengthening of entry point programme covering development activities which should lead to sustainability and income generation.
 - Building for effective functioning of VFC.
 - Necessary training to all VFC members to sustain their interest.
 - Free supply of seedlings in time for VFC members.
 - Participation of forest department officials and providing guidance at VFC meetings.

A vast majority of women respondents felt that they need training in other skills like basket making, tailoring or any such activities in addition to strengthening of Entry Point Activities. These expectations are with a view to augment the family income to some extent. Strengthening Entry Point Activities and free supply of selected seedlings was the expectation of majority of SC/ST members. The JFPM and VFCs may not be able to sustain themselves for a long time without attending to the needs of the population.

40. Adequate and necessary training, timely supply of seedlings to farmers through VFC, 'strengthening of entry point activities' and 'conducting regular meeting with active participation of VFC members' are suggested by the respondents for improved functioning of VFCs.
41. The sustainability of VFCs under JFPM will depend upon sharing of revenues in the agreed proportion and also meeting the local needs. The sharing of revenues will augment the income of VFCs to a great extent. It is also imperative that VFC members are entrusted with the responsibility of maintenance of forests after the crucial period, where damages cannot be caused. The crucial period will vary from three years to 10 years depending on the species of seedlings planted. This will also ensure stocking and improvement of ecology of the area.
42. A survey of farmers and institutions who purchased and who were supplied with free seedlings under JBIC and Vanasamvardhane scheme and planted them was done. The nurseries were able to sell / distribute 99 per cent and 87 per cent against a target of 2370 lakh and 500 lakh seedlings under JBIC and Vanasamvardhane scheme respectively. The achievement of seedling distribution/sale has been very good. Even though the achievement appears to be excellent, the RFOs incharge of nurseries were asked the possible reasons for not being able to sell/distribute all the seedlings raised. They opined that farmers' expectation of free seedlings, non-availability of grafted seedlings of required species were the main cause. It is suggested that the forest department pay attention to the above reasons by examining them seriously.
43. A total of 2506 respondents including 2246 farmers and 260 institutions were surveyed under JBIC assisted Farm Forestry scheme. The overall survival percentage is 78 per cent of the seedlings planted, which is to a certain extent a satisfactory performance.
44. Under JBIC scheme, the survival rate of plants is about 79 per cent for farmers. The survival rate ranged from 79 to 82 per cent between farmers and institutions. In case of institutions it ranged from 33 to 82 per cent, highest being in educational institutions and the lowest in Panchayat institutions. Panchayat Institutions need special attention

since the survival rate was very low at 33 per cent only.

45. The highest survival rate of more than 90 per cent was in the case of species like Pomegranate - *Punica granatum*, Champaka tree – *Michelia champaca*, Thoremathi - *Terminalia arjuna*, and Balanji – *Acrocarpus fraxinifolius*. There were a few species where the survival rate was hundred percent. The lowest survival rate of 0.7 per cent was in the case of Canon ball tree-*Couroupita guianensis* species. About 25 species which showed a survival rate of more than 80 per cent in the farmers' plantations and some of them are lemon scented gum tree - '*Eucalyptus Citriodora*', 'Casuarina' – *Casuarina equisetifolia*, 'Bage' – *Albizia lebbbeck*, 'Mahogani' – *Swietenia mahagony*, Curry leaves – *Murraya koengii*, Indian Almond – *Terminalia catappa*, and 'Silver oak' – *Grevillea robusta*.
46. Majority of the respondents reported 'water scarcity' due to prolonged drought condition as the main reason for mortality for farmers as well as institutions.
47. Growth condition of the seedlings planted appeared to be highly satisfactory.
48. The most prominent advice rendered by the department was on planting methods. About Sixty per cent of the farmers reported of receiving advice and guidance on planting methods. Similar kind of response was reported in the case of institutions also. In the case of farmers the next important advice received was on maintenance of the plantations (24 per cent). This was also mentioned by institutions (31 per cent of the respondents). The third important advice was on selling followed by harvesting. It appears that the department is rendering technical advice / extension services to a large extent. The respondents were asked to say their expectations in addition to the services already being received.
49. The type of extension services required by farmers and institutions are:
 - Free supply of seedlings
 - Supply of required species of seedlings
 - Supply of Grafted/ Clonal / improved varieties of seedlings
 - Adequate supply of seedlings

50. A sample of randomly selected assets created under JBIC project such as buildings, vehicles and equipments were surveyed with a view to assess their usage, condition, maintenance and contribution to efficiency of the department. On the whole the scenario appeared to be very encouraging since buildings, vehicles and equipment contributed substantially to the improvement in the efficiency of the department. This also goes to show that the given proper infrastructure and environment, the functioning can be improved appreciably thus increasing the efficiency.
51. To conclude, it can be positively said that the Forest Department has achieved its objectives as envisaged in the project. The sustainability of the plantations will depend up on the revenue sharing from sale of forest produce with VFCs and their members. Since the Government Order G.O. FEE 50 FAP 2000 dated June 19, 2002 has issued revised order enhancing the sharing of forest produce to an extent of 90 per cent of sale proceeds to VFCs, the sustainability of VFCs could be achieved without much problem.