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FINANCE FOR AND BANKABILITY OF  
FORESTRY DEVELOPMENT PROJECTS  
IN INDIA

By

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FINANCE FOR AND BANKABILITY OF  
FORESTRY DEVELOPMENT PROJECTS IN INDIA

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I. Introduction and Objectives

A variety of afforestation and reforestation projects are being established in India on behalf of the State Forest Departments and Forest Development Corporations (FDCs). Most of these projects are primarily intended to increase timber and fuelwood production, but they also generate considerable amounts of non-wood products, and other indirect and intangible benefits, e.g., restoring environmental and ecological balance, providing employment to the rural poor in the vicinity of the forests, providing recreational opportunities, enhancing wildlife, conserving soils and water. Some projects may be undertaken primarily for soil and water conservation or for increase in production of fuelwood. Forestry projects may also vary in size, gestation periods, methods of implementation, degree of mechanisation, etc. Like other

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developmental projects, resources required for afforestation projects are land, labour, and capital. But the relative importance of these resources may differ amongst projects.

Outlays on forestry works may be divided into capital and revenue expenditures. The former category is meant for introducing fundamental improvements in the quality and quantity of forest products and covers land preparation for new plantations, purchase of equipment and machinery, provision of infrastructure, e.g., roads, buildings. The latter category of outlays aims to conserving the productivity of the existing tree stands through regular management. The working or current expenditures are generally appropriated out of the annual budgets. The financing of capital expenditure may, however, present problems particularly where the resources available with the project authority may not be enough to meet the same. In the case of Forest Departments, this expenditure is to be financed out of the annual state government budgets. The main problem in their case is the competition with other departments for allocation out of the general revenues. In India, there has been no correlation between revenues earned from forestry and funds made available for its development (Gupta, 1978, pp. 790-91). The Forest Departments may also receive grants under centrally sponsored schemes. Once again, the flow of funds under such schemes has not made any significant dent on the investible resources available to the forestry sector.

While the FDCs can borrow from the institutional financing agencies in India, the Forest Departments are not free to do so. They may, however, be able to enhance their resources through borrowings for specific projects from the international developmental agencies, e.g., the World Bank. In such cases, the lending agency has to be approached through the concerned state government and the Government of India. The social forestry projects in Uttar Pradesh and Gujarat are examples of this type of borrowings. The borrowing agency is charged interest @ 6.5 per cent per annum on such loans. This source of funding can not, however, be considered a regular one.

One incidental advantage of borrowings is that the project proposals have to be specifically prepared and appraised for their technical, financial, managerial and economic feasibilities. But, problems may arise due to long gestation periods of most forestry projects. Firstly, this implies that the degrees of uncertainty and risk associated with such projects are relatively high. The costs incurred and the yields received in actual practice may be considerably different from those considered in the initial appraisal and an apparently viable project may turn out to be a financial liability. Secondly, the institutional agencies may not be geared to lending for long enough periods required for a forestry project to start yielding returns to enable repayment of the loan.

In this context, the main objectives of this paper are to :

- i) assess the procedures and problems of acquiring institutional finance for forestry development projects;
- ii) discuss some steps that have been or may be taken to enhance bankat of forestry development projects;
- iii) review the investment requirements of production forestry in India and the institutional finance provided for the same; and
- iv) assess some economic and management aspects of the expressed needs for a separate financial institution and differential rate of interest for the forestry sector in India.

## II. Procedures and Problems of Acquiring Institutional Finance

The institutional sources of finance are, by and large, open only for production or man-made commercial forestry projects. To be able to avail of this facility, a project authority, i.e. the concerned FDC, must draw a detailed project proposal indicating its different components, e.g., lengths of different types of roads to be constructed, machinery to be purchased, nurseries to be planted, area to be covered by chosen species, species-wise growth rates and expected yields, office and residential accommodation to be constructed, and the marketing depots to be organised. Most importantly, a project proposal must include i) a statement of estimated costs and returns, and ii) a cash flow chart.

At present, the Agricultural Refinance and Development Corporation (ARDC) is the only major apex level institution which refines long term agricultural credit. The Corporation was established under the ARDC Act, 1963, with an authorised share capital of Rs. 250 millions. The Act was amended in 1975. The amendment provided that the Reserve Bank of India may, with the prior approval of the Central Government, increase the authorised capital upto Rs. 1000 millions. The ARDC raises resources through borrowings from the open market by floating bonds and taking loans from the Reserve Bank of India and the Government of India. These resources are utilised for providing refinance assistance to the eligible institutions, which are shareholders of the ARDC, against the loans given by these institutions for schemes of agricultural development including forestry. The current rates of interest charged by the ARDC on refinance assistance vary from 6.5 to 7.5 per cent per annum depending upon the nature and purpose of development. The eligible institutions are required to keep a margin of 3 per cent over the rate of interest on refinance. The current rates of interest to the ultimate borrower, therefore, range from 9.5 to 10.5 percent per annum. The rate of interest for forest development projects is 10.5 per cent per annum.

The ARDC reviews a project proposal with the main objective of assessing its bankability. A "bankable" project must satisfy at least two conditions. Firstly, the expected financial rate of returns on the investment must be at least 3 per cent higher than the rate of interest charged by the banking institutions, i.e., it should not be below 13.5 or 14 per cent. This margin is considered necessary to account

for the risks associated with even well conceived projects. Secondly, the project must generate enough revenues to enable repayment of the total loan and interest thereon within a period of 15 years starting with the first instalment of the loan<sup>1/</sup>.

Once the project is considered bankable, and other administrative arrangements are completed to ARDC's satisfaction, the commercial banks are authorised to provide credit to the project authority. Since the outlays involved are substantial, the ARDC generally evolves multi-banking arrangements with refinance facilities upto 90 per cent of the loan advanced and necessary technical support.<sup>2/</sup> The latter is considered important because the commercial banks have very little experience in forestry activities.

The participating banks and the ARDC evolve an approach for supervising the financed projects. This supervision aims at ensuring that the various commitments made by the concerned state governments are fulfilled in time to ensure smooth implementation of the project. Such commitments include, i) protection of forests where area under the project is scattered over different units, ii) transference of the required land to the concerned Corporation, iii) help in technical assistance, procurement of equipments, etc.

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1/ Interest on a loan has to be paid each year unless a special deferment is agreed upon.

2/ The financing bank(s) has (have) to meet 10 per cent of the total assistance from its (their) own resources. Thus, if the total loan requirement for a project is Rs. 100 thousand and, if three banks are involved in financing the project, each bank will provide Rs. 10 thousand from its own resources and the balance will be available as refinance assistance from the ARDC.



To ensure appropriate implementation of the project by the FDC the ARDC may appoint a supervision team consisting of technical, financial, and management experts. The function of such a team is not only to ensure that the expenditures have been properly incurred on the approved developmental activities in the most economic manner but also that the physical achievements are according to the technical standards prescribed. For meeting the supervision costs, the financing banks are expected to contribute 0.5 per cent from the margin available to them and the ARDC contributes 0.25 per cent of the margin allowed to the finance banks. These arrangements do not preclude a participating bank from undertaking more detailed supervision on its own, if considered necessary.

The conditions of "bankability" of a project may serve to emphasise the need for a thorough assessment of the financial (as against economic) viability of a proposed project. This, in turn, enhances the importance of cost reducing and revenue increasing steps. We will return to the steps that have been or may be taken to enhance bankability of forestry development projects after we examine some of the procedural problems in financing such projects.

### III. Some Procedural Problems in Financing Forestry Development Projects

It may be recognised that ARDC funds are meant for developmental work and are generally channelled through commercial banking institutions. No banker is likely to advance money till he has satisfied himself regarding the security of the loan. A number of problems may arise

in the process. The main problem in processing forestry development projects arise due to delays in, i) securing the guarantees from the concerned State Governments to an FDC borrowings,<sup>3/</sup> ii) transferring the project area to the concerned FDC, and iii) finalising the terms and conditions of lease rental payable by an FDC to the concerned State Government/Forest Department. Can the ARDC and/or the commercial banks be held responsible for such problems ?

Relatively more complicated problems, however, arise when funds are required for maintaining or enhancing the productivity of the existing forest plantations. For instance, there may be considerable variations in the age and yield amongst trees in an existing plantation. In this situation, even if further investments are called for, it may be difficult for the concerned project authority to demonstrate that the plantation continues to be economic, and additional investments in the same will be financially viable. Consequently, it may be difficult for the banking institutions to finance such projects. The implications of the issue may be realised in view of the fact that the productivity of a much larger portion of the forest area in India may have to be enhanced by appropriate management of existing stands rather than by clearfelling and creating new man-made forests.

Faced with the problems of ensuring bankability of a project, and the requirement that a loan be repaid within 15 years, the ARDC

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<sup>3/</sup> Such guarantees from the State Governments are considered necessary because the FDCs are wholly public owned companies.

has taken a view that unless exploitation of existing tree growth on the forest forms part of the activity of the FDCs and returns from clearfelling the natural stands are made available to them, the forestry development proposals would not be bankable. This raises a number of issues.

Firstly, this attitude may limit or even restrict the flow of funds for better management of existing forests. It has already been pointed out that productivity of a significantly larger portion of natural forests in India may have to be enhanced without clearfelling and creating man-made forests. This may be considered important to minimise i) the capital investments, and ii) adverse environmental/ecological consequences of clearfelling the natural forests on a large scale.

Secondly, the condition that the returns from clearfelling the natural forests must be made available to the FDC undertaking man-made forestry project, appears to imply that such returns must be included in the benefit streams of the new project. The issue has been debated in the past. In the present context, it may suffice to point out that a standing crop has a capital value which is mostly independent of the project. By no stretch of imagination can the capital for a project be treated as benefits flowing from it (Gupta, 1979, pp. 324-25). It is, therefore, illogical to treat a capital item as returns simply to ensure bankability of a project. Moreover, the practice of accounting the returns from clearfelling as benefits of man-made forestry projects may induce clearfelling on some of the best forest sites in order to ensure success of or higher returns from the project. This will be

contrary to the felt need for improving the productivity of underdeveloped or depleted forest areas.

IV. Some Steps to Enhance the Bankability of Intensive Forestry Development Projects

The importance of ensuring a certain minimum rate of return on forestry development projects has already been discussed. The FDCs can take a number of steps to enhance the acceptability of their projects by the banking institutions. Firstly, besides the expected returns from timber and fuelwood from the main crop, returns from other outputs can also be considered. For instance, the outputs of non-wood or minor forest products which are generally ignored can and should be accorded appropriate attention. Efforts should also be made to enhance production of such goods. Similarly, the possibility of raising crops by interplanting, which may grow during the first 3-5 years before the proposed (main) tree crops cover the top, or those which tolerate shade and can be grown as under storey crops, may be considered by the project authority.

Secondly, consideration has already been and may continue to be given to the role of fast growing species, e.g., tropical pines, and eucalyptus. This, of course, will depend on the adaptability of such species under the agro-climatic conditions of the project area. Care may also have to be taken to see that the land productivity is not depleted by repeated rotations of the fast growing species. The

choice of species may also be limited by the local needs for fuelwood, small timber, fodder, etc.<sup>4/</sup>

Thirdly, the flow of net returns from the project may be considerably improved by economising on costs. In this context, the possibilities of minimising the expenditures on office and residential accommodation, road construction, purchase and maintenance of machinery, equipment, and other materials, must be examined. Cost saving is, however, a complicated issue. In choosing between roads with metalled and unmetalled surface, for example, differences in costs of i) maintenance and wear and tear of vehicles, ii) maintenance costs and depreciation of the road itself, iii) reduced/increased speed and efficiency in use, etc., must be considered.

Fourthly, the intangible and tangible benefits "stemming from" and "induced by" a project must be carefully identified and evaluated.<sup>5/</sup> The concerned governments and/or other public bodies may be persuaded to subsidise the project to the extent of such benefits. In this way, a project which is not considered bankable in terms of its direct monetary costs and returns, may become viable and get funded. In other words, even an "unbankable" project can be made bankable if its overall

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<sup>4/</sup> A concern has been expressed by some people that the intensive forest development projects in India have placed a relatively greater emphasis on fast growing tree species and/or on plantation crops, e.g., rubber, cashew, tea, coffee. An examination of this issue is called for, but does not fall within the purview of this paper.

<sup>5/</sup> Bankers may consider such benefits in general terms or for prioritizing between two financially sound projects. In fact, the ARDC or the banking institution do seem to consider the social benefits of forestry development projects but do not or can not take these into account while applying the test of financial viability which mainly focusses on the capacity to repay the loan out of the resources generated by a project.

societal benefits are found to be appreciable and receive appropriate support from the political and budgetary processes. In fact, the significance of indirect and intangible benefits of forestry projects has already been accepted to some extent. The National Commission on Agriculture emphasised that forests are used for 'multiple purposes' and did not, therefore, agree to the suggestion of leasing out forest lands to pulp and paper industry for raising plantations to meet its own requirements (Anon., 1976, p. 74).

Another ground to make a case for differential treatment to forestry development projects is that most of the forests are situated in comparatively backward or remote areas. The development of forests will, undoubtedly, accelerate the economic development and social regeneration processes in such areas.

Yet another argument for a differential treatment in favour of forestry projects originates from a wide margin between the value of timber and other materials in the forests and the value of products derived from processing the same. For instance, the value of 3 tons of dry wood in the forests may be only Rs. 100 but the paper produced from the same may have a market price of Rs. 5,500. Moreover, the processing activity creates and/or widens the tax base. Such facts have been and can be used to argue that only the stumpage value of timber should not be considered while assessing the bankability of forest development projects (Seth and Rao, 1970, p. 446). Once again, however, the banking institutions can not be expected to buy such arguments. But these

can be valuable tools for mobilising support from the political and budgetary processes.

V. Assessment of the Investment Requirements of Production Forestry

The first step in a systematic assessment of the investment requirements of the forestry sector has to be an assessment of the demand for wood and wood products at different periods in the future. The demand projections should consider changes in income, changes in population, changes in life styles and consumption habits, availability of substitutes, etc. While a systematic exercise of this nature does not appear to have been attempted, some estimates of investment needs have been made on the basis of "minimum" requirements for forest products in India.

One set of such estimates between the years 1972-80 and 1981-90 has been Rs. 2,420 millions and Rs. 3,060 millions, respectively. The main plank of the production programme was expected to be clearfelling and planting about 100 thousand hectares annually during the periods under references (Anon., 1972, p. 32). Another view is that to meet the demand for industrial wood alone by 1990, at least 20 per cent or 15 million hectares of the forest area in India will have to be placed under intensive management compared to 2 per cent at present (Thapar, 1975, p. 6). This effort was estimated to cost Rs. 1,200 per hectare (Anon., 1976, p. 65). On this basis, the total investment needed for production forestry during the next 11-12 years worked out at approximately Rs. 16,000 millions. The wide gap between these estimates may serve

to emphasise the need for more systematic studies on the subject. For the present, however, even the lower of the two estimates may indicate the magnitude of the task ahead. The issue is whether or not such requirements can be accommodated within the existing organizational set up of, and resources available with the State Forest Departments and the FDCs.

#### VI. Extent of Institutional Finance Provided to the Forestry Sector

It has already been pointed out that the credit institutions in India are mainly concerned with man-made commercial forestry projects. There are at present 16 FDCs in the States/Union Territories in India. Since the year 1975-76, the ARDC has approved loans worth Rs. 345 millions for 18 developmental projects with 10 FDCs (Data supplied by ARDC). These projects include two tea production and one coffee production projects in Tamil Nadu and Andhra Pradesh. On the basis of the schemes in the pipeline, the ARDC was geared for an outlay of Rs. 625 million during the years 1978-83. It may, thus, be clear that the loans approved for the forestry sector have been very low in comparison with even the lower end of the estimated investment needs reviewed earlier.<sup>6/</sup>

#### VII. Separate Institution to Finance Forestry Projects and Differential Rate of Interest

Given the wide gap between the investment requirements in forestry and the amount of credit sanctioned by the banking institutions, there has been a demand for a separate apex institution which may be named

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<sup>6/</sup> Data on actual investments in forestry during the period under review were not available.



Forest Credit Corporation of India or National Forest Fund. It has been suggested that such an institution can be established with the necessary share capital from the Government of India. The amount of share capital to be raised may be determined on the basis of the estimated credit requirements of the FDCs over the next 10-15 years. A portion of the excise duties levied on forest based industrial products e.g., plywood, paper, may also be paid into a special account in the name of the new institution. International aid organisations such as USAID, the World Bank, are reportedly looking for new areas of economic activity for financing. Since forestry development meets the broad objectives of the current economic policy in India, i.e., the objective of growth with social justice, cooperation of such organisations for funding the proposed institution may be sought. Some people have also supported such an idea by drawing attention to the Rural Electrification Corporation which was established in 1969 with the main objective of financing rural electrification schemes through the State Electricity Boards (Agarwala, 1971, p. 395).

There has also been a demand for differential rates of interest in favour of the forestry sector. It is argued that loan administration is prone to economies of scale. Compared to other agricultural development projects where a large number of clients spread over a large area are involved, an FDC is a single entity dealing with all aspects of the project(s) run by it. In fact, the ARDC likes to see that the area for a forest development project is contiguous to form a viable unit. This means that the costs of servicing one big loan will be considerably

less than several smaller ones of the same total amount. This provides a basis for a lower rate of interest for forest development projects compared to other agricultural projects. We may examine the merits of these two issues starting with the latter.

Contrary to the lower costs of servicing the loan for forestry projects, the bankers seem to point to some inherent features of the forestry sector which serve as deterrents to large investments. For instance, the long gestation periods for many investments in forestry, have a bearing on the nature of the business risks. This lead to a question as to why should the financial institutions wait 15 years for the repayment of their advances when a good number of other investment opportunities with quicker turnover and comparatively lower risks are available ? The issue may assume further importance when it is realised that the supply of forest products can not be readily adjusted in accordance with changes in market demand. Further, the banks like to take an overall view and feel that they must be allowed to compensate for what they lose on lendings to the small and marginal farmers. There is also the view that if a small farmer can afford to pay interest @ 11 per cent, why a large Corporation cannot afford the same ?

The effective rate of interest to the FDCs can, however, be lowered if the ARDC provides the loans directly. The ARDC Act provides for such operations. But, the organisation may have to enhance its operation facilities to be able to enter into direct dealings with the forestry system. The FDCs may be required to bear the

extra costs involved in operationalizing the system of direct loans from the ARDC. This may add, say, 0.5 per cent to the rate of interest charged by the ARDC on its refinances. The loans to the FDCs may thus, become available at around 8.0 per cent per annum.

A tenable case for such arrangements can, however, be made only after the ARDC is assured that, i) the funds set aside for forestry development will be fully utilized, and ii) the forestry system as well as the concerned state governments will be receptive to the banking procedures. More generally, the whole issue of the rate of interest for the forestry sector must be looked at in the light of, i) the overall interest rate structure in the country, ii) the rate of interest charged on agricultural development projects, and ARDC's relationship with the commercial banks.

Returning to the issue of a separate institution to meet the financial needs of the forestry sector in India, it may be noted that there are some mixed feelings regarding the needs of the forestry sector for institutional finance. It has already been pointed out that during the past five years or so, the ARDC sanctioned disbursements totalling Rs. 345 millions for 18 development projects undertaken by the FDCs in 10 States/Union Territories in India. Personal discussions with the ARDC officers, however, indicated that the actual borrowings have been only 3-4 per cent of the amount sanctioned. Part of this may be explained by some administrative problems. An important reason for this situation, however, seems to be that the FDCs have considerable amounts of

"loose money" sitting in their bank accounts which is to be paid to the state governments as lease rental only after the accounts are finalised. The FDCs have the opportunity to use these funds rather than take up the liability of interest payments on borrowed funds. More importantly, the net returns from clearfelling the natural forests on the project areas have been many times higher than the initial estimates. This situation leads one to think that the forestry system is not dependent on "external" funds for investment. In other words, a planned use of existing resources within the forestry sector may be relatively more important for its development than arguing for higher allocation of institutional funds on concessional rates of interest.

A significant fact in this connection is that, leaving aside a few practically bare forest areas, the costs incurred in raising new plantations / quite often considerably / than the revenues to be derived from clearfelling the area under question (Agarwala, 1971, p. 394). Attention may also be drawn to an estimate that the net annual growth of timber and fuelwood in India's forests, excluding protection reserves, is of the order of 42 million cubic metres (Seth and Rao, 1970, p. 45). Against this, current removal of industrial fuelwood may be taken at a maximum of 30 million cubic metres.<sup>7/</sup> The implication is that an increment of some 12 million cubic metres is left behind in the forests

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<sup>7/</sup> This estimate is based on an extrapolation of the estimated 9.9 million m<sup>3</sup> and 16.4 million metric tonnes of timber and fuelwood, respectively, extracted in 1976 (Anonymous, 1978).

every year. If this material is valued at a minimum of Rs. 300 per m<sup>3</sup>, there appears to be a scope for increasing the forest revenues by Rs. 3,600 millions per year. Besides harnessing this resource, a mechanism may be devised to ensure that 50 per cent of the additional revenues thus generated will be used for forest development. These two steps can enhance the investible funds for forestry sector by some Rs. 1,800 millions per year without constraining the resources of the state governments or the lending institutions. This is more than the highest estimate of investment needs of the forestry sector during the next 10-12 years.

This overall picture does not, however, mean that facilities for institutional finance need not be developed for the forestry sector. Since forestry is a State subject and the existing forests are not well distributed all over India, or they are not equally productive, special efforts will have to be made to encourage developmental projects in forest poor states. Besides concerted efforts on the part of the disadvantaged states, the Forestry Division, Department of Agriculture and Irrigation, Government of India, may like to think of measures to help such situations. One suggestion is to restrict the flow of funds from international institutions/agencies for social forestry projects to such states/regions.

### VIII. Summary and Conclusions

The paper has discussed the procedures and problems in acquiring institutional finance for production forestry projects in India. Some steps, e.g., accounting the returns from outputs other than timber and fuelwood, raising crops by interplanting during the first 3-5 years before the main crops cover the top, and/or raising under storey crops, raising fast growing species, accounting for intangible benefits, reducing costs, have been suggested for improving "bankability" of forestry development projects. The estimated investment needs of the forestry sector during the 1970s and 1980s have been compared with the actual loans sanctioned through the regular institutional sources in India. There is a wide gap between the two which may be partly responsible for a demand for a separate institution to meet the financial needs of the forestry sector and a differential rate of interest in favour of forestry development projects. It is, however, pointed out that only 3-4 per cent of the loans sanctioned in the recent past have been utilized by the FDCs. Two main reasons for this appear to be, i) the availability of large sums of money with the FDCs out of the funds from which lease rental is to be paid to the state governments, and ii) considerably higher net returns from clearfelling natural crops compared to the initial estimates. It is pointed out that except in case of some practically bare areas, the expenditure incurred on raising new forests is likely to be considerably less than the revenues to be derived from clearfelling the area under

question. Moreover, some 12 million m<sup>3</sup> of annual wood increment worth, at least, Rs. 3,600 million is left unharvested. If this resource can be harnessed and 50 per cent of it can be ploughed back into forestry, the sector will have enough funds of its own to meet the investment needs of production forestry. This, however, does not obviate the need for developing institutional sources of finance, particularly for the forest poor regions/states.

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