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portion to at least one-third. Such an increase in forested area can make the forests not only more efficient than at present in discharging their primary function of protection, but also make a positive contribution towards meeting the growing energy needs of the rural households. If necessary funds for increasing the forest area are not made available, the rising rural demand¹¹ for firewood will result in great pressure on the existing forests. The consequent increase in illicit and indiscriminate fellings from forests—what the Inspector-General of Forests, V.S. Rao, aptly describes as “operation of a robber economy by neighbouring population”¹²—may further impair the protective role of the forests on the one hand and a further reduction in tree population on the other.

Non-availability of firewood in requisite quantity can have a deleterious effect on agriculture in a direct way as well. Presently, the rural households meet about 15 per cent of their energy needs from animal dung. This significant dependence on animal dung in the rural domestic energy pattern is symptomatic of the fact that fuelwood is in short supply, with the result that the rural people are being forced to use animal dung more as a fuel than as a fertilizer. “Today about two-thirds of the total cattle dung produced in India is burnt as fuel because there is a shortage of other fuel in most villages.”¹³ If this hiatus between demand and supply tends to widen further in the years to come, the rural people will be forced to use more of animal dung for fuel purposes, thereby depriving the already depleted soils from an important source of organic nutrient.

NATIONAL FOREST POLICY AND FORESTRY DEVELOPMENT IN INDIA

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Land utilization data show that the area under forests formed only 22.48 per cent of the total geographical area in 1950-51 and this percentage further fell to 21.10 per cent in 1960-61. This decline may be attributed to a number of factors, such as, the submergence of large areas of forests in river valley projects; settlement of landless agriculturists; settlement of displaced persons in forest areas by clearing the forests; unauthorised clearance and occupation of wood lands; exercise of ruinous rights by tribals and others living in areas adjacent to forests; practice of shifting cultivation; and excessive grazing of cattle.

11. According to the National Council of Applied Economic Research's study *Domestic Fuels in Rural India, 1965*, the rural demand for firewood is anticipated to rise from about 86 million tons in 1962 to about 112 million tons in 1975-76. Again, the Energy Survey of India Committee estimated that the household demand for firewood would rise from 95 million tons of coal equivalent in 1960-61 to 122 million tons of coal equivalent in 1970-71 and 155 million tons of coal equivalent in 1980-81.

12. 100 Years of Indian Forestry, *op. cit.*, p. vii.

13. S. R. Sen, “Forestry and Agriculture in India: Competition or Coexistence,” *The Strategy for Agricultural Development*, Asia Publishing House, Bombay, 1962, p. 43.

New Forest Policy

After Independence, in recognition of the importance of forests in the national economy, and to ensure the best possible land use and land management in the country so that there could be a balanced development of forests and agriculture and the needs of the industries and transport could be easily met, a new forest policy was enunciated in 1952. The main principles on which it is based are :

1. That a system of balanced and complementary land use is evolved under which each type of land is used according to its land use capability so that it could produce most and deteriorate least.

2. That it satisfies the need for checking : (i) denudation on mountainous regions (on which depends the perennial water supply of the river systems whose basins constitute the fertile core of the country; (ii) the erosion progressing apace along the treeless banks of the great rivers (leading to ravine formations and vast stretches of undulating waste lands depriving the adjoining fields of their fertility); and (iii) the invasion of sea-sands on coastal tracts, and the shifting of sand dunes (more particularly in the Rajasthan desert).

3. That the tree lands should be established wherever possible, for improving the physical and climatic conditions and for promoting the general well-being of the people.

4. That progressively increasing supplies of fodder (for grazing), timber (for agricultural implements) and firewood (for releasing the cow dung for use as manure) should be ensured to the cultivators.

5. That the forests should be maintained on the principle of progressively increasing and eventually the highest sustained yield to meet the requirements of defence, communications and industry.

6. That the maximum annual revenue should be realized (in perpetuity) to fulfil the above needs.

Main Features of the New Policy

The forest policy opposed the indiscriminate extension of agriculture by the extension of the forest area, as this not only deprives the local population of wood, grass, etc., but also deprives the land of its natural defences against dust storms, hot winds and erosion. It emphasized the need for affording protection to wild life by its proper management for scientific study and for recreational purposes through provision of sanctuaries at appropriate places. It emphasized that the notion widely entertained—that forestry has no intrinsic right to land but may be permitted on sufferance on residual land not required for any other purpose—has to be combatted. It further said that it should be the duty of the forester to awaken the interest of the people in the development, extension and establishment of tree lands wherever possible and to make them tree-minded.

The policy laid stress on : (i) weaning the primitive people, by persuasion, of the baneful practice of shifting cultivation; (ii) increasing the efficiency of forest

administration by having adequate forest laws; (iii) providing adequate facilities for the management of forests and for conducting research in forestry and forest product utilization; (iv) controlling grazing in the forests; and (v) the need for promoting the welfare of the people.

In order to make up the deficiency of forest resources in the country, the policy laid down that the average proportion of the forest should be raised to 33.3 per cent from the present area of 20 per cent, *i.e.*, at least one-third of the area should be under forests with regional differences. For insurance against erosion, floods and denudations in the Himalayas, the Deccan plateau and other mountainous regions, 60 per cent of the areas in these parts should be under forest; while in the plains this proportion should be 20 per cent.

For meeting the deficiencies for fuel wood, it was suggested that tree lands should be extended on river banks and other convenient places unsuitable for cultivation.

In view of the above approach, forests have now been classified into protective forests, national forests, village forests and tree lands.¹

Forest Development under the Plans

For soil and water conservation and satisfaction of the present and prospective demand of the people for fuel wood and of the industries for industrial woods and other raw materials, forest development has been regarded as a *sine qua non* for the economic progress of the country. With this aim in view, the improvement of the existing forests received attention in the Five-Year Plans. The first two Plans put considerable emphasis on their consolidation, improvement of degraded forests, establishment of economic plantations of fast growing trees and improvement of communications. The scheme for demarcation of ex-private forests and preparation of maps (of over 18,000 sq. miles), were taken up. Inferior varieties of timber were better utilized by seasoning and preservation processes. Improvements were made in modern logging techniques, especially in the mountainous forests of Punjab, Himachal Pradesh, Uttar Pradesh, Jammu and Kashmir. Forest roads were built up (about 9,000 miles). New plantations of match wood (extending over an area of about 55,000 acres) and industrial wood (over an area of 330,000 acres) were undertaken. Modern systems of intensive forest management were adopted. Schemes undertaken by the Central Government related to forest research, forest education and preservation of the wild life. There are now about 80 sanctuaries covering an area of 15,000 sq. k.m. A sum of Rs. 9.5 crores was

1. *Protective forests* are those which are preserved for physical and climatic reasons. These have been needed for reconditioning the mountainous regions, river valleys and coastal lands.

National forests are those which are maintained and managed to meet the needs of defence, communication, industry and other general purposes of public importance; and are developed for attaining national self-sufficiency in timber supplies.

Village forests are those which are maintained to provide firewood to the villagers and to yield small timber for agricultural implements and other forest produce for local requirements and to provide grazing to the village cattle.

Tree lands are those areas which are outside the scope of the ordinary forest management and are essential for the amelioration of the physical conditions of the country.

spent during the First Plan and about Rs. 19.3 crores during the Second Plan;² the percentage of the Plan outlay on forests being 0.49 and 0.41 respectively.

In response to the forest policy of 1952, the *Vana Mahotsava* was inaugurated to create an enthusiasm in the popular mind for the preservation of forests and planting of new trees, as "trees mean water, water means bread and bread is life." The campaign evoked good response from the people. In 1951, 4.43 crores of trees were planted out of which only 1.71 crores could survive. In 1961, 1.76 crores of plants were raised out of which only 1.19 crores could survive.

The Third Plan emphasized the protective as well as the productive role of forests in the Indian economy and suggested a long term objective that a third of the land area should be under forests. It laid emphasis on the measures to meet long term needs of the country for timber and other forest products. The immediate objective was to increase the output from forests through intensive management and improved methods of timber extraction, to develop forest communications and to bring about better utilization of forest products through the increased use of preservation and seasoning processes. Out of a provision of Rs. 51.4 crores, the actual expenditure incurred during 1961-1965 was about Rs. 31.7 crores. During these four years, over 4.5 lakh acres of plantations of industrial and commercial species were raised against the Plan target of 7 lakh acres. Under the Centrally-sponsored schemes, plantations were raised on 132,000 acres against the target of 137,500 acres. As a result of the merger of Princely States and abolition of the ex-proprietory rights, large tracts of degraded forests situated in the erstwhile States and zamindari estates came under Government control.³ There was a considerable shortfall in farm forestry schemes. The target for all-India was 6,39,232 acres, while the achievement was 52,120 acres only. Survey and demarcation also lagged behind the target. The target was 59,714 sq. miles + 10,350 miles, and the achievement was 49,424 sq. miles + 18,652 miles. Only 7,699 miles of roads could be constructed against the target of 10,017 miles. Rehabilitation of degraded forests did not progress well in several States. The target was 515,400 acres while the achievement was 530,656 acres.⁴

The Fourth Plan envisages a high increase in the demand for various forest products both for industrial and for fuel purposes. The demand for industrial wood alone is expected to increase from 11 million cubic metres in 1965-66 to 17 million cubic metres in 1970-71 and further to 24 million cubic metres in 1975-76, as against the present production of only 8 million cubic metres.⁵ To meet this deficiency three important schemes are being undertaken, viz., (i) plantation of quick growing species covering 10 lakh acres, suitable for industries like match, paper, plywood, pulp and boards; (ii) plantation of economic species covering 8.40 lakh acres (like teak, semal, sissoo); and (iii) plantation to be raised under the scheme of rehabilitation of degraded forests (5 lakh acres). Besides, farm

2. Third Five-Year Plan, Planning Commission, Government of India, New Delhi, 1961, pp. 363-366.

3. The Third Plan Progress Report, 1963-65, Planning Commission, Government of India, p. 58.

4. L. C. Sharma and K. B. Lall, "Forestry Development—An Analysis," *AICC Economic Review*, Vol. 18, No. 21, May 15, 1967, p. 32.

5. Fourth Five-Year Plan—A Draft Outline, Government of India, 1966, p. 205.

forestry programmes with a target of covering 3.90 lakh acres is also to be undertaken for raising the production of fuel wood on all waste lands contiguous to the forests and in large blocks of 50 acres and above. About 10,000 miles of forest roads are to be constructed with a view to increase the extraction of the forest produce.⁶ Provision is also to be made for the training of forest officers. The Fourth Plan makes a provision of Rs. 122 crores, which is 0.82 per cent of the total Plan outlay against 0.62 per cent during the Third Plan period.

Further Improvements in Forest Policy Needed

We feel that the forest policy needs further modifications. It should highlight the necessity of rehabilitating the depleted forests and restocking those that contain inferior or slow growing species with fast growing suitable industrial woods like eucalyptus, mulberry, wattle, blue gum, etc. Secondly, greater stress is necessary on the multiple role that well-managed forests play in promoting the national well-being and on the economic aspect of land under forestry. Thirdly, the aim of the policy should be multi-faceted, *i.e.*, we should aim at maintaining protective forests for the prevention of soil erosion, floods, landslides, controlling water supply and retaining sub-soil water, and preserving wild life for scenic beauty and recreation; maintaining a minimum area of high forests to supply commercial timbers for constructional purposes, maintaining wood lands for the supply of much needed fuel wood; and reorganizing forests with the deliberate object of establishing and developing a number of highly profitable industries.

Fourthly, since the forests come under State subjects, individual States have the option to respond or not to the general forest policy of the Central Government. They first look to their own interests and to achieve that they might overlook the fact that they are a coherent part of a united whole. This hampers the integration of the forest policy. This discrepancy can be removed by making forests a Central subject (as they were before 1935) so that a uniform policy may be enforced all over the country in regard to forests.

Fifthly, there should be an integrated approach to the whole problem. In this connection the Dhebar Commission observes: "The Forest Department as a branch of Government should consider itself for the development of the tribals as well as the forest areas. It should not think in terms of an exclusive obligation to trees or vegetation but should also accept an obligation to utilize the forests as much as possible from the angle of the economic development of the tribes residing in it. In return the tribals should recognize the need to preserve the forests.... Development of forests and the betterment of the tribals should no longer be at loggerheads. They have to go hand in hand."⁷ We fully endorse this view.

6. *ibid.*, p. 207.

7. Report of the Scheduled Areas and Scheduled Tribes Commission, Ministry of Home Affairs, Government of India, New Delhi, 1961, p. 120.