

5 Human Resource Development

The low level of human resource development is a serious constraint to the development of Bangladesh. According to the UNDP's Human Resource Development Index (HDI), Bangladesh ranked 143 out of 174 countries in 1996, with a value of 0.365. The HDI for Bangladesh is higher than that for Nepal and Bhutan, but lower than that for Sri Lanka, Pakistan, India, or Myanmar. The Bangladesh Government has recognised the fact that human resource development through education, training, and other means of improving knowledge and skills can contribute to poverty alleviation, economic growth, and sustainable development and has given it a high national priority.

Human resource development planning is being included in the planning activities of all government sectors. Such planning includes setting up goals to achieve sectoral objectives. Though most of the national sectors have succeeded in following a well-recognised scientific approach for human resource development, such an approach has yet to be established in the Bangladesh Forest Department. The department still does not establish working norms or practise needs' assessment for skilled and qualified personnel in specialised fields of the forestry sector. Shortage of staff in terms of numbers, skill, and capability is a common feature in all the government forestry institutions. The non-government organizations engaged in forestry activities are in an even worse situation in this respect.

The introduction of social or participatory forestry in Bangladesh by the Forest Department has also had a marked effect on human resource needs. Social forestry has been introduced in response to the recognition of the failure of the custodial approach to successfully protect the forest resources of the country. But implementation requires that foresters who previously only had knowledge of the techniques associated with the custodial approach must now learn more about participatory approaches.

Educational and training institutions have become aware of the problems faced by forestry and are also attempting to integrate issues related to participatory forest management into their curricula. At the beginning, resource persons were borrowed or hired from disciplines other than forestry to teach and train students and trainees. Now the universities and colleges have specialised teachers to teach participatory forestry. The curricula have been modified to accommodate subjects such as rural sociology, agroforestry, participatory forestry, and forest extension.

The curriculum revision in universities and colleges is done by a committee of the department or discipline and approved by the academic council of the university. In most cases, the departments revise their curriculum by themselves without involving personnel from related fields or organizations.

The different courses offered are described in the following section.

5.1 Forestry Education and Training

Bangladesh has eight institutions offering education and training services in forestry. Of these institutions, three impart university level, one sub-professional, two technical level, and two vocational level education and training.

5.1.1 Professional Forestry Education

Institute of Forestry, Chittagong University

The first professional forestry education institution in Bangladesh, the Institute of Forestry at Chittagong University under the Faculty of Science (IFCU), was established in 1976 with direct funding from the Bangladesh Forestry Department. IFCU has a separate governing body in which the Forestry Department and forest industries are represented in significant numbers. The name of the Institute has now been changed to the Institute of Forestry and Environmental Science (IFES). The four-year course leading to a B.Sc. (Honours) degree in forestry consists of eight semesters. The current annual intake for the B.Sc. (Honours) course is 47, of which five places are reserved for students from abroad with preference given to students from the SAARC countries. Currently 184 students, including 18 women, are enrolled in the B.Sc. (Honours) course.

The syllabus covers the range of subjects normally required for a professional forester. It includes a comprehensive course in social or participatory forestry. The curriculum covers theory, practicals, field trips, and *via voce(s)*. But in practice, the courses tend to be more theoretical with an inadequate number of field trips or discussion of practical application of forestry knowledge. Field visits to demonstrate different forestry activities at different times of the year are scarce. Literature and journals on forestry in general, and especially those on contemporary indigenous forestry practices, are not easily available in Bangladesh. Because there are few experienced practical foresters on the faculty, the courses do not incorporate sufficient examples or practical demonstrations from Bangladesh forestry. The graduates are

also inadequately trained in the use of most of the forestry equipment required for application of their knowledge of forestry.

The Institute has recently started to offer a one-year Master's Degree course in forestry, involving both course work and research. The approved syllabus contains three modular options for specialisation in forest management, silviculture, or wood science.

Forestry and Wood Technology Discipline, Khulna University

Khulna University is a publicly funded university opened in 1987. In 1992, a new Department of Forestry and Wood Technology (DFWT) was opened under the School of Life Sciences. This department offers a four-year B.Sc. (Honours) degree course in forestry and wood technology. The course is divided into eight semesters. The annual student enrollment is 25 students. This institution has increased the availability of professional forestry personnel for employment by the Forest Department as well as by other forestry and environment-related public and private sectors, including NGOs. The University also has plans to offer M.Sc. and Ph.D. degrees in forestry and wood science in the near future.

The University also offers courses in social and participatory forestry separately from the degree programmes.

Both the Chittagong and the Khulna universities have direct contact with the Forestry Department for syllabus formulation and for the approval of their degree courses in forestry, although the Forestry Department does not oversee the standard of the academic courses.

Bangladesh Agricultural University

The Bangladesh Agricultural University (BAU) at Mymensingh has started a degree course in agroforestry. However, neither the Forestry Department nor other universities offering forestry courses have any input into the Bangladesh Agricultural University agroforestry course. This course emphasises farming system agroforestry rather than forest land agroforestry,

and in strict terms cannot be considered a professional forestry course.

5.1.2 Sub-Professional Forestry Education

Bangladesh Forest College

The Bangladesh Forest College (BFC) in Chittagong was established in 1964 to train sub-professional forestry staff (forest rangers) from the Forestry Department in forestry-related subjects. This is an in-service training school and it is used to offer a two-year B.Sc. course to forest rangers recruited by the Forestry Department. In 1985, it was proposed that the Forestry Department stop direct recruitment for the position of forest rangers and that the positions only be filled through promotion of existing staff. Since then, the BFC has stopped offering the B.Sc. course in forestry but has continued to offer short in-service courses (of 15 days to two months' duration) to professionals and sub-professionals. The college has offered the following in-service courses in recent years.

- Refresher Course for Promoted Forest Rangers (2 months)
- Plantation Forestry for Assistant Conservators of Forest (ACFs) (10 days)
- Management of Hill Forests and Afforestation for ACFs (7 days)
- Conservation and Protection of Forest Heritage for ACFs (10 days)
- Coastal Land Stability in Bangladesh for ACFs (10 days)
- Resource Information Management System for ACFs (10 days)
- Forest Extension and Development for Deputy Conservators of Forest (DCFs) (7 days)
- Survey and Settlement for Forest Rangers (15 days)
- Forest Protection and Forest Laws for ACFs (10 days)
- Forest Policy, Planning, Implementation, Monitoring and Evaluation (10 days)
- Case Conducting for Forest Case Conducting Officers (10 days)

5.1.3 Forestry Technical Education

The Forest School at Sylhet

The Forest School at Sylhet was established in 1947 to train forestry personnel. The School used to offer a one-year course for persons with at least a secondary level school education leading to a certificate in 'Forestry Technical Training'. In 1985, a two-year Diploma in Forestry programme was introduced in affiliation with the Bangladesh Technical Education Board. The entry requirement for the trainees is a higher secondary school certificate. A three-month forest guard training course for 30 students has also been initiated. The foresters' training course gives very good coverage of participatory or social forestry. Subjects like sociology, agroforestry, and social forestry are included in the curriculum as compulsory subjects.

The Forest School at Rajshahi

The Forest School at Rajshahi was established under the first Community Forestry Project of Bangladesh in 1985 to impart training on social and community forestry to forest extension workers. At that time the Forest School at Sylhet had neither an appropriate curriculum nor the motivation needed for promotion of social and community forestry. It also had insufficient manpower to cope with the training needs of the foresters who were to implement participatory programmes. The Forest School in Rajshahi was designed to take 25 students a year for a two-year Diploma in Forestry course. The school also holds short courses for forestry extension workers.

Chittagong Forest School

The Chittagong Forest School offers a three-year diploma course in forestry. The diploma course is run under the Technical Education Board of Bangladesh, which is entrusted with the responsibility to formulate and overview curricula and conduct examinations for different technical disciplines in the country.

The Forest Department used to offer a two-year diploma in forestry course to persons with a

higher secondary school certificate (A-level). Now, students with a secondary school certificate (O-level) are admitted to a three-year diploma course in forestry (six semesters, each of six months). Recently, a fundamental change was introduced in the three-year course. Previously it was an in-service training programme of the Forest Department which was the only employer of trained foresters. However, the demand from other organizations for foresters has increased, especially from NGOs and private companies, and the course was made into an open programme to accommodate this. Prior to this three-year open diploma course in forestry, there were no forestry technicians available for employment outside the Forest Department. Now, any organization or agency can recruit trained persons through open advertisement. The present policy of the Government of Bangladesh is to broad-base professional and technical forestry education in the country so that sufficient qualified manpower is available to meet the growing needs not only of the Forest Department, but also of the various agencies involved in the forestry and environmental sectors. This has become particularly important with the introduction of social/participatory forestry programmes.

5.1.4 Vocational Training

The Forestry Development and Training Centre

The Forestry Development and Training Centre (FDTC) was established in 1976 under a Government of Bangladesh/Swedish International Development Agency (GOB/SIDA) project. It was supported by SIDA, and later the United Nations Development Programme and the Food and Agriculture Organization (UNDP/FAO), until 1986. In 1986, the Forest Department took over the management and control of this institution, primarily to provide vocational training to forestry workers in various fields of forestry such as forest extension, basic logging, and saw doctoring and saw mills. At present, the centre trains about 300 people annually.

Forest Extension. This is a course on community development and rural reform. It

offers vocational-level training on subjects such as forest extension, agroforestry, community and social forestry, sloping agricultural land technology, plant seedling nursery techniques, and plantation establishment and maintenance.

Basic Logging. This is a course on the techniques of logging, timber harvesting, and construction of forest roads. It offers vocational-level training on felling of trees, wastage reduction during logging, timber extraction methods and procedures, transportation of forest produce, sawing, maintenance of transport and logging equipment, and maintenance of road building machines and equipment.

Saw Doctoring and Sawmill Maintenance. This course focusses on the reduction of wastage during sawing and maintenance of saws and sawmills to enhance their life span and improve the quality of sawing. The majority of the trainees for this course are sawmill operators, sawmill owners, sawmill managers, or timber merchants and their workers.

The FDTC also offers training to university-level students of forestry disciplines and botany on the above-mentioned subjects as supplementary courses.

Table 1 gives some details of the number of trainees attending different courses offered by FDTC over the last five years (1992-93 to 1996-97).

The Forest School at Sylhet

Forest Guards are the lowest level of staff in the Forestry Department with law-enforcing powers. Foresters and forest guards are the grass roots' workers of the Department. They are key in the field implementation of technical and legal prescriptions for forest management and need to be skilled in field forestry activities. Forest guards are given vocational training at the Forest School at Sylhet. Vocational training at this staff level is considered to be of paramount importance for the overall successful implementation of various field programmes, including social or participatory forestry programmes.

Table 1: Number of Trainees Attending Various Courses at the Forestry Development and Training Centre, 1992-93 to 1996-97

| Year | Basic Logging | Forest Extension | Saw Doctoring | Supplement Courses | Total Number Trained |
|---------|---------------|------------------|---------------|--------------------|----------------------|
| 1992-93 | 162 | 133 | 576 | 44 | 915 |
| 1993-94 | 135 | 140 | 225 | 47 | 547 |
| 1994-95 | - | - | 275 | 30 | 305 |
| 1995-96 | 94 | 107 | 211 | 18 | 430 |
| 1996-97 | 107 | 103 | 389 | 32 | 631 |
| Total | 498 | 483 | 1676 | 171 | 2828 |

Initially the Forest School at Sylhet trained both foresters and forest guards. The emphasis was on training of foresters and the duration of vocational training for forest guards was very short (one to two weeks only). In 1965, the course for forest guards was extended to three months. In 1991, the Forest Department decided to abandon the training of foresters at Sylhet, as a diploma course in forestry had been started at Chittagong. It was decided that the school would be used for vocational training, especially for forest guards, and a four-month training course for forest guards was started. It is expected that an appropriate curriculum for vocational training, already formulated by a consultant, will be introduced soon. The existing facilities, however, need to be upgraded.

The subjects taught during the four-month training course include silviculture, forest engineering, surveying, forest extension and rural development, mensuration, forest utilisation, forest law, forest protection, and wildlife and recreation. In the revised curriculum, emphasis has been given to participatory and extension forestry.

5.2 Extra Institutional Human Resource Development

Apart from the formal institutions offering education and training services, considerable efforts have been made by government and non-government organizations to develop human resources for the promotion of social/participatory forestry and rural development in Bangladesh. A brief account of the training

conducted under different government sponsored, NGO operated, and donor assisted social/participatory forestry projects is given below.

5.2.1 The Community Forestry Project

The Community Forestry Project (1982-87) was the first attempt by the Government of Bangladesh to implement a social/participatory forestry project. It was implemented in the north-western part of the country as a pilot project. One of its main objectives was to promote people's participation in forestry programmes. During the project period, eight different in-country training programmes were organized involving 1,087 training sessions attended by 22,158 participants at various levels.

5.2.2 Thana Afforestation and Nursery Development Project

Following the success of the first Community Forestry Project, the Government of Bangladesh, with the financial assistance of the Asian Development Bank, embarked on the second social forestry project entitled the *Thana* Afforestation and Nursery Development Project. The project area included 61 of the 64 districts in Bangladesh and covered about 85 per cent of the total area of the country. The project was implemented for an eight-year period from 1988 to 1995.

Considerable importance was given to human resource development and institutional strengthening to promote participatory forestry

and rural development. By the end of the project, 91,108 people, including at least one individual from nearly every village in the country, had been trained in basic skills for improved tree cultivation. These individuals included community leaders, NGO personnel, women, private nursery operators, farmers, and high and mid-level government officers. Fourteen officials and extension officers were also trained abroad under this project.

5.2.3 The Chittagong Hill Tracts Development Board

The Chittagong Hill Tracts' Development Board (CHTDB) was established with the aim of accelerating socioeconomic development in the hill tracts of Chittagong. This board has conducted a number of workshops and training courses through the Promotion of Sloping Agricultural Land Technology (SALT) and Other Appropriate Technologies for Soil Conserving Farming Systems' Project. These include:

- a one-day awareness creating workshop for 34 national-level officers from agriculture, forest, and soil resource departments;
- a three-day workshop for 19 district-level officers from agricultural extension, forest, and soil resource departments and 43 hill farmers from three hill districts;
- a training workshop for 83 field level staff and 120 hill farmers; and

- training of 416 people in Bandarban district in literacy, sanitation, health, nutrition, and cultivation of vegetables and fruit orchards.

5.2.4 NGO Efforts in Human Resource Development

There are many different NGOs training grassroots' level people in social/participatory forestry activities.

GREEN HILL

GREEN HILL conducts training courses on plantation management, raising of seedlings, and group development. They have so far trained two hundred workers. The number of workers of different levels trained yearly is shown in Table 2.

The Christian Commission for Development in Bangladesh

The Christian Commission for Development in Bangladesh (CCDB) started working in the hill tracts of Bangladesh in 1994. It conducts training for its group members in knowledge and skills in horticulture, tree plantation, and vegetable cultivation with the aim of improving the productivity of farms and increasing income. It also imparts training in environmental awareness raising methods and child health care and trains midwives. CCDB has so far trained more than one thousand people.

Table 2: Training Organized for Different Levels of Staff by Green Hill (1995-1997)

| Level | 1995 | 1996 | 1997 | Total |
|-------------------------|------|------|------|-------|
| Supervisor | 1 | 2 | 3 | 6 |
| Field Organizer | 2 | 4 | 8 | 14 |
| Group Level (Caretaker) | 20 | 56 | 104 | 180 |