

Contributions of Pakistan Forest Institute in Sustainable Natural Resources Management

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Pakistan Forest Institute (PFI) was established for Sustainable Development of Forests and Allied Biodiversity through Research, Education and Training as attached department of Ministry of Food and Agriculture, in 1947. The Institute has been devolved to Khyber Pakhtunkhwa (Under 18th Amendment) and placed under Environment Department as Attached Department. There are five directorates including: four Research Divisions and one Education Division. The Institute covers all aspects of research, education both long and short term, extension and collaboration with line departments at national and provincial level and with international organizations related to the field of forestry and allied disciplines. Pakistan is a forest deficit country with about 4.6 million ha forests and forest plantations which are equivalent to 5.1% of the total land area. The per capita forest is 0.03 ha which compares unfavorably with average world per capita of 0.6 ha. These forests are not enough to meet the nation's demand of timber, fuelwood and wood based products. Apart from wood and wood products, forests are providing ecological services, and livelihood to forest dependent communities. The contribution of forestry sector and allied disciplines to national economy in current national accounting system may be lower but is much higher in absolute terms which will suffer by non sustainable management of these natural resources. For sustainable forest management, PFI has: (i) Developed nursery raising techniques, (ii) Introduced fast growing multipurpose tree species (iii) Propagated high yielding forage/fodder grass species (iii) Developed different afforestation and Watershed management techniques (iv) Developed techniques for efficient utilization of wood for wood-based products (v) Developed propagation and conservation modules for medicinal plants (vi) Developed integrated pest and disease management techniques (vii) Evolved and distributed bivoltine hybrid disease free silk-seed and high yielding mulberry varieties, and (viii) preserved *in-situ* and *ex-situ* germplams by maintaining botanical garden, medicinal plant garden, mulberry garden, rangeland garden and seeds of important forest trees, herbs, grasses and silkworm. Recently PFI has completed two important studies related to sustainable management of forest resources, namely: (i) National Response Strategy to Combat Impacts of Climate Change on Forest of Pakistan, and (ii) Land use pattern and assessment of forest cover in Pakistan using GIS/RS techniques. PFI has produced more than 2589 forestry graduates who are managing forest resources in Pakistan, as well as, in some friendly countries in Asia and Africa.