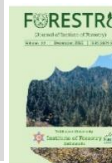




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Prospective

Revisiting traditional forestry education in Nepal: Conceptual insights from early practices at the Institute of Forestry

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Forestry education in Nepal has evolved in close relationship with the country's environmental governance, national development priorities, and global sustainability commitments. Formal forestry education in Nepal began in 1947 with the establishment of the Nepal Forest Institute (NFI) under the Department of Forest, which signaled the start of organized professional training in forest management. As forests are increasingly acknowledged as both national and global commons, Nepal's forestry education has evolved over the years from vocational training to university-based academic programs. The NFI came under Tribhuvan University in 1972 and renamed it as Institute of Forestry (IOF), which shifted from vocational training to university-based academic programs and started offering mainly certificate level forestry program at Hetauda. As forests are increasingly acknowledged as both national resources and global commons, forestry education has become more important. The adoption of the Sustainable Development Goals in 2015, especially SDG 4 (quality education) and SDGs 13, 14, and 15, which specifically link education with climate action and ecological protection, gave this trajectory even more relevance. In this larger framework, soil degradation, biodiversity loss, watershed management, and climate mitigation were all strategically addressed through forestry education. Forestry education is being offered by different institutions in Nepal; however, the IOF is the pioneer one. The IOF's Bachelor of Science in Forestry (BSc forestry) program was launched in 1981 at Pokhara Campus, Pokhara with the support of the World Bank and USAID, which marked a turning point in Nepal's history of higher education in forestry education by introducing an immersive, field-oriented pedagogical paradigm intended to generate skilled, disciplined, and morally grounded forestry professionals. This conventional paradigm, in contrast to modern modular systems, placed a strong emphasis on extended field participation, regular daily routines, and residential learning as fundamental educational

concepts. Revisiting these early practices is particularly relevant today, as forestry education faces growing pressure to respond to climate uncertainty, complex socio-ecological systems, and the need for practice-ready graduates capable of managing forests for sustainable development.

The emergence of the BSc Forestry program in Nepal was directly shaped by policy reforms and institutional needs of the late 1970s, particularly the Government of Nepal's decision to introduce community forestry as a national forest management strategy. During this period, the Ministry of Forests and Soil Conservation recognized that certificate-level training was insufficient to meet the technical and managerial demands of decentralized forest governance. This realization culminated in the design of establishing Pokhara Forestry Campus and incorporated it as part of upcoming Resource Conservation and Utilization Project (RCUP) with the financial and technical support from USAID and World Bank. The project was designed to assist the government of Nepal in protection and restoration of the soil, water and plant resource base on which the rural population is dependent with an estimated cost of US\$32 million. The selection of Pokhara as the site for the new forestry campus was a strategic decision aimed at expanding regional access, especially for students from the hill regions. The campus area covered with a total of 1,560 *ropanies* at hariyo kharka – 1,394 *ropanis* of forest land in *banpale danda* provided by MFSC and 175 *ropanis* through land acquisition (*adhikaran*). The IOF Pokhara Campus was formally established on 22 September 1981, and Nepal's first BSc Forestry classes commenced on 4 November 1981, initially in a rented building due to infrastructure constraints. Between 1982 and 1987, the campus underwent a transitional phase, temporarily relocating to Hetauda before returning permanently to Pokhara in January 1987, where permanent facilities were developed with concessional World Bank loans. During the RCUP period (1980–1988), extensive investments were made in faculty development, with

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51 individuals sent abroad for advanced studies, although less than half ultimately returned to serve at IOF. Despite these challenges, the program established a strong academic foundation through limited intake (40 students per year), gender-inclusive admission policies (10% reservation for female students), and the introduction of a three-month "capsule course" designed to harmonize academic backgrounds of science graduates. These design features reflect an intentional effort to balance inclusivity, academic rigor, and professional relevance—an approach that remains instructive for contemporary forestry education reform.

Particularly in the 1980s and early 1990s, IOF's highly structured academic atmosphere and intensely immersive pedagogy were the hallmarks of traditional forestry education. The program's residential format guaranteed ongoing participation, with students adhering to a strict daily routine that included theoretical instruction and hands-on activities between early morning physical training at 06:00 and evening games at 18:00 – 06:00-07:00 (physical training), 08:00 - 12:00 and 14:00 - 17:00 (regular classes), 12:00 - 14:00 (lunch break) and 17:00 - 18:00 (games). The core of applied learning consisted of subject-specific field trips lasting one to three weeks and weekly excursions, usually on Fridays. These carefully planned field trips included safety briefings, orientation sessions, and the use of specialized forestry tools like Abney levels, diameter tapes, and clinometers. Students lived in tents pitched within forest areas, often in proximity to wildlife habitats, which fostered both practical competence and psychological resilience. When students lived in a tent, they feel that they are in real field work. Staying in forest is important as it allows students to observe trees and ecosystems very closely. When students sleep in a tent in a forest and wake up, they frequently see trees even while they are talking, walking, eating and drinking. As they see trees and forests around them it encourages them to think about trees that make students promoting feeling of being connected to nature and also build their confidence in the natural world. Field activities included tree measurement, volume estimation, nursery establishment, soil conservation structures, and controlled tree felling, allowing students to directly translate classroom theory into field practice. A campfire is unique event arranged at the end of the tour program where all resources persons, concerned forest officials and staff were invited to eat evening meals together. A special dish i.e., meat is prepared and served in the meals. A cultural program i.e., singing and dancing program was organized where each participant invited to participate. Similarly, students were responsible for running a mess for field participants with the support of cook and helpers. They formed a mess management committee consisting of 3-5 members on rotational basis.

Social and professional bonding was reinforced through shared responsibilities, collective mess management, and campfire events an integral feature of field tours during this period. These practices cultivated not only technical skills but also conservation ethics, teamwork, time management, and

a strong sense of professional identity. However, following the 1995 revision of the BSc Forestry curriculum, the three-year BSc Forestry program was extended to four years, and several traditional components including physical training, structured excursions, tent-based field camps, and campfire activities were gradually phased out. Field tours increasingly shifted toward shorter visits with accommodation in hostels or hotels, reflecting broader trends toward academic formalization and logistical efficiency. While these changes expanded access and reduced operational complexity, they also diluted the immersive field experience that once distinguished forestry education at IOF.

In light of the rapid changes in the environment and society, the historical experience of forestry education in Nepal provides important insights for improving current curriculum. Master's and PhD programs have been added to IOF's academic offerings since 2000 and 2004. In response to the increasing demand for advanced training, the School of Forestry and Natural Resource Management was founded in Kathmandu in 2018. The government received USD 9.4 million in forest carbon credits in 2025 under the Forest Carbon Partnership Facility, demonstrating how Nepal's forests have grown in importance on a worldwide scale thanks to mechanisms like climate finance and carbon markets. These developments underscore the urgent need for forestry professionals who are not only academically qualified but also deeply grounded in field realities and ethical stewardship. This perspective argues that selectively reintegrating experiential elements from traditional forestry education such as extended field immersion, residential learning modules, and community-embedded practice can significantly enhance the effectiveness of modern forestry training. Such reintegration does not imply a return to outdated systems, but rather an adaptive blending of proven pedagogical traditions with contemporary academic, technological, and safety standards. Aligning forestry education with Nepal's National Education Policy (2019) and the SDG 4: Education 2030 Framework requires a renewed emphasis on learning-by-doing, ecological literacy, and professional discipline. By bridging its rich educational heritage with future-oriented innovation, forestry education in Nepal can continue to produce professionals capable of managing forests as resilient socio-ecological systems locally relevant, nationally strategic, and globally responsible.