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Development of Forestry Education in Sri Lanka: With Special Reference to University of Sri Jayewardenepura

Hemanthi Ranasinghe

Department of Forestry and Environmental Science, University of Sri Jayewardenepura, Sri Lanka

Introduction

Forests embrace all living forms on the planet, including human beings. They provide clean air and water, food, shelter and rich nutrition for the soil, river and ocean. They also contribute to climate and environmental stability. Considering the current critical issues of climate change and loss of biodiversity, forest conservation and afforestation is a key to the future existence of humans and other creatures. However, forests especially tropical forests are diminishing at a rapid pace mainly due to human activities. Current activities in forests are based on the human desire for rapid and continuous economic growth and have damaged forests and natural environment, both of which are fundamental for life. To reverse the deterioration of forests and minimise human impact on the environment, humans may need to reconsider their current way of life based on mass production and consumption and change their views and approaches to forest conservation and the natural environment. Otherwise, the current civilisation might follow the similar destiny as some ancient civilisations that disappeared when deforestation progressed.

Critical to this reversal is improved forestry education. Manpower should be trained to manage the forests and natural resource base of a country and the world at large in a sustainable manner so that the benefits could be reaped by both present and future generations. Forestry education is interdisciplinary and takes into account ecological, social, economic, environmental and cultural aspects. In order to meet the demands required by the interdisciplinary approach it is required to enhance and expand the knowledge and skills to capture a holistic view of the complex issues associated with forestry and environment.

Institutes Dealing with Forestry Education in Sri Lanka

There are two institutes dealing with forestry education in Sri Lanka, Sri Lanka Forestry Institute and University of Sri Jayewardenepura. The former deals with technical training in forestry largely for in-service staff while the latter deals with formal education at both undergraduate and postgraduate levels.

Development of Forestry Education in the Sri Lanka Forestry Institute

Forestry education in Sri Lanka laid its first step in 1898 when a class in general forestry was conducted by the School of Agriculture in Peradeniya to the officers of the Forest Department. The first forestry field training session was declared open on 4th of July 1951 at the School of Agriculture in Peradeniya by Dissawa P.B. Bulankulama. Then Hon. Minister of Land and Land Development. This school conducted two parallel courses of three months duration in technical forestry, one for the Range Forest Officers and other for the Beat Forest Officers. In 1958 this school was shifted to Monkey Bridge, China Bay, Trincomalee. The short term practical sessions were subsequently converted to a one year training programme in the early part of 1960 and the school was renamed as 'Ceylon Forest College'. In 1963 the one year Forest Rangers course was converted to a two year training course. However, after 1965 this training programme failed to sustain itself primarily due to lack of physical resources and professionally qualified staff to serve as lecturers. Therefore, during early 1966 the Forest Rangers Course was abandoned. However, the one year Beat Forest Officers Training Course was continued.

Some Forest Rangers were also trained in India at the Forest College of Coimbatore and Dehra Dun under the sponsorship of Colombo Plan. The expansion of the activities and the development of the forestry sector during the late 1970s resulted in growing demand for trained personnel. Therefore the in country two year training course for Forest Rangers was re commenced at China Bay, Trincomalee in 1983 while the one year training programme for the Beat Forest Officers continued. However, due to security risks in the locality these training programmes could not be continued and it was compelled to suspend the training sessions at Trincomalee. In 1987 with the financial assistance of the United States Agency for International Development (USAID) Sri Lanka Forestry Institute (SLFI) came into being at its present site in Moon Plains, Nuwara Eliya. Subsequently with the assistance of International Development Agency through World Bank and Finnish International Development Agency (FINNIDA) both the physical and man power resources were further developed and currently the Institute offers two year Forestry Diploma Course for the Range Forest Officers and one year Forest Certificate Course for the Beat Forest Officers.

Development of Forestry Education in the University of Sri Jayewardenepura

The University of Sri Jayewardenepura is one of the nine universities in Sri Lanka located in a suburb, eight miles away from Colombo, in the vicinity of the new capital of the country, Sri Jayewardenepura, Kotte. The University started from the academic institution for Buddhist and Oriental Studies, known as the Vidyodaya Pirivena which had been established in 1873. The Vidyodaya University of Ceylon was established by Act of Parliament in 1959. Under the Universities Act of 1978, it was re named the University of Sri Jayewardenepura.

Forestry teaching in the University dates back to 1970 when it was taught as a small unit in the subject Botany. As there were no internal lecturers to teach this unit, it was largely done by the visiting lecturers primarily from the Forest Department. In 1983, the University was identified as a partner organisation to World Bank funded larger national project, Forest Resources Development Project (FRDP) to handle the professional forestry training component. Many universities competed for this and University of Sri Jayewardenepura was selected primarily due to its location which is in close proximity to the Forest Department from which it was expected to have visiting lecturers. Late Prof. A.C.J. Weerakoon, then Professor of Biology, Late Prof. Winston Ratnayake have to be saluted for their effort in winning this project to the University of Sri Jayewardenepura. The Master of Science in Forestry was thus commenced in 1983 in the University as a Forestry Project and was attached to the Department of Botany for administrative purposes. The main objective of starting the Masters Degree course in forestry was to train the forestry personnel attached to forestry related institutions at professional level. Despite the fact that there were no forestry trained personnel among the teaching staff in the University, the course was able to attract experts from forestry institutions and also from abroad to provide a multidisciplinary education. It covered a wide range of subjects including ecology, conservation and management of natural forests, establishment and management of plantations and the appropriate utilisation of forest resources to meet the national economic and social needs on a sustainable basis.

The participants were almost all sponsored candidates from forestry related institutions such as Forest Department, State Timber Corporation, Janatha Estates Development Board, National Paper Corporation etc. University of Sri Jayewardenepura also with the intention of formulating a forestry trained cadre trained staff members through this course. Gradually this course was opened to other individuals who were interested in obtaining a forestry degree. The entry requirements were that the applicants should have a Bachelor's Degree from a recognised university in Agricultural, Biological Science, Physical Science or Forestry. The entry requirements were now revised and the course is open to those who possess degrees of other disciplines also but who have at least 5 years experience working in forestry and environmental fields. Candidates are selected after an interview. Preference is given to those who are sponsored by Government and Private Institutes related to forestry and environment.

The Course and the Project was headed by a Course Coordinator. The first Course Coordinator was Prof. H.G. Nandadasa who was in office from 1983 to 1987. During his tenure, he contributed immensely towards the development of both physical and human resources in the Project. The first building of forestry came during his time and he personally supervised the progress of it. He also put lot of effort in selecting the right personnel both for academic and non academic staff and also for selecting avenues for further training for the academic staff. Being a non forester the personnel attention he paid to the development of the forestry at these initial stages was commendable. Although he is now retired from university service he will be fondly remembered by the forestry staff. After his tenure, Prof. P.L.D. Waidyasekera, an Associate Professor in the Department of Zoology took over as the Course Coordinator and served from 1988 to 1991. He was also involved in further development of forestry including recruitment of staff, long and short term foreign consultants and development of physical resources. During his time the plans for the second building in forestry were finalised and 100 acres of land from the Yagirala Forest Reserve was granted to the University on long term lease by the Forest Department. With the World Bank funds a forest field station was constructed to function as a field laboratory to the forestry students. By this time Forestry Project was having many physical facilities such as three fully fledged laboratories, state of the art auditorium having seating capacity for about 150 people and two other smaller lecture halls, green house and five vehicles including a bus. Although Prof. Waidyasekera is no more he is also fondly remembered by the forestry staff for his contribution.

1989 goes in history as the year when I the first staff member, trained at PhD level in forestry from the University of Wales, Bangor, UK returned to the University. My area of expertise was Silviculture and Agroforestry. I was followed by Dr. B.M.P. Singhakumara who was trained at PhD level in forest ecology in the University of Oxford, UK in 1990. Dr. Hiran Amarasekera, the third staff member also returned to the country with a PhD from the University of Wales, Bangor having Wood Science and Timber Technology as the areas of expertise. Forestry teaching and research in the University got stronger with the injection of fully trained qualified internal staff. The University also lost two forestry staff members to USA and to UK who did not return after postgraduate training.

In 1990 the first phase of World Bank funding ended and after an appraisal it was joined by the Overseas Development Agency (ODA) of the UK for another five years. More staff was trained through this assistance in UK universities. I took office as the Course Coordinator from Prof. Waidyasekera in 1991. In 1992 Forestry Project was upgraded to Forestry Unit directly under the Dean of the Faculty of Applied Science of the University. In 1993, a link was formulated with the University of Wales, Bangor, UK to facilitate staff training and research. It also funded a long term consultant, Dr. Sydney Banyard and many short term consultants from UK who provided valuable inputs to the forestry training and elevated it on par with that of international levels.

By this time, forestry teaching expanded its wings to environment arena also as a response to national and international demand for environmental education. Among these introductions Environmental Chemistry, Pollution Control and Waste Management, Policies and laws in environment, Tools in environmental management such as EIA, IEE, SEA, and Corporate Environmental Management including environmental certification, Resource and Environmental Economics, Environmental Microbiology can be mentioned. However, as almost all the staff were trained in pure forestry the Unit had to invite visiting staff to conduct environmental teaching. Mrs. Nilanthi Bandara, a senior lecturer in the Open University who contributed especially in Waste Management, Pollution Control, EIA and Environmental Chemistry later joined the Department as a lecturer on environment. Dr. Prasanthi Gunawardene trained in Environmental Economics in University Edinburgh, UK brought socio-economic and resource economics perspective to the teaching in the Department. The forest management aspects were further strengthened since the arrival of Dr. Upul Subasinghe, who was trained in forest management in the University of Wales, Bangor, UK.

Apart from being a truly interdisciplinary one, the curriculum was significant as it has both the basic sciences in forest and environmental teaching as well as the applied sciences which are more targeted to a professional education. For example, subjects like Environmental Entrepreneurship Development, Eco-tourism and Recreational Area Management, Preparation of Forest Management Plans, Natural Resource Management, Land Reclamation and Soil Remediation, Modelling in Waste Management etc. mostly done by practitioners exposes the students to the real world and sharpens their skills while enhancing the knowledge. Dr. Hiran Amarasekera, Dr. Upul Subasinghe and Mrs. Nilanthi Bandara provided a valuable service as Course Coordinators to further develop and sustain the quality of the Masters Degree Programme and make it the talk of the town. We are proud to say that more than 250 personnel had obtained postgraduate degrees in forestry and later forestry and environmental science from the University and are now well placed in mid and top management positions in leading forestry and environmental institutions in the country as well as abroad.

1995 marks a very important year to the Forestry Unit as well as the entire University. The Forestry Unit was upgraded to a fully fledged department 'Department of Forestry and Environmental Science' and entered into undergraduate education in forestry and environment. The vision of the Department was to be the Centre of Excellence in forestry and environmental education in the country. The mission of the Department was to assist in the sustainable management of resources and environment through development of knowledge and skills. The undergraduate course ran parallel to the two year Masters Degree in Forestry and Environmental Management. The intake was directly taken from the University Grants Commission. The subject 'Forestry and Environmental Science' (FES) was offered along with two other subjects offered in the Faculty of Applied Science. It was open to students from both physical and biological streams. Some of the subject combinations are FES, Chemistry, Zoology, FES, Chemistry, Management, FES, Physics, Chemistry, FES, Plant Biotechnology and Chemistry. FES, Mathematics, Management. Students who had taken high Z scores were taken for forestry and environmental science and a ceiling of 40 was maintained. This was done with a view to impart personalised training which leads to enhance the skills of students needed for resource management. Initially the students from the physical science stream were reluctant to join forestry but with time they were able to overcome the initial fear and most of the time topped their batches. The introduction of the Field/Factory Assignment in the 3rd year was very valuable to the students as through this they got an opportunity to work in a forest/environmental related enterprise and be familiar with the world of work prior to graduation. This was gladly embraced by all the students. Further, the students of the 3rd year have to work for a week in Forest Field Research Station in Yagirala in preparing a forest management plan. This hands on training enhances the knowledge and sharpen their skills in forest management. In addition to this, the forestry and environmental teaching encompasses many field tours which opens the eyes of the students to practical aspects of the theory they had learnt in the classroom.

Another landmark event was the introduction of the B.Sc. Special Degree in Forestry and Environmental Science in 2001. About 8 students were taken per batch from the second year students who had excelled in forestry and environmental science. The four year degree course encompasses a one full year of research in a selected field.

With the establishment of undergraduate education in forestry in the University, students of forestry formed the 'Forestry and Environmental Science Society' which became very active in numerous ways. They organised many events i.e. exhibitions, workshops and seminars, tours, campaigns such as waste management in the university and also formed many networks even outside the university who are active in forestry and environment fields. They also work along with the academic staff in many national projects which are undertaken by the University and other agencies too. Through this the students get an opportunity to apply their knowledge to practice which gives them ample practical experience which is an added advantage in the procurement of a suitable employment.

As the only forestry education institutes in the country, the University of Sri Jayewardenepura has collaborated with the Sri Lanka Forestry Institute in allowing two of the best performers of the Forestry Diploma Course meant for the Range Forest Officers to join the University to obtain degrees. This has proved to be fruitful both ways, the officers benefiting from getting degrees while the undergraduates benefitting from the wide practical knowledge possessed by these officers in forestry. The first batch of graduates passed out in 1998 and since then 10 batches have passed out so far. The graduates in forestry and environmental science has been able to secure relevant employment and are doing very well in the country as well as abroad. The extension of forestry to private sector also helped to increase the availability of relevant employment opportunities to these graduates. The Department got further strengthened from the addition of staff especially from the special degree students in forestry and environment.

The Annual Forestry and Environmental Symposium which was initiated in 1995 is a landmark event and fondly looked forward to by researchers scattered around the country. Since two years back it became an international event. This is a forum where researchers and policy makers and implementers meet on the same stage to present the research findings and discuss the future directions that can be taken from the findings. The 13th Symposium will be held in 2008 in parallel with the Silver Jubilee celebrations of the Forestry in the University.

Finally as the only academic institution in professional forestry and environment education the University gives its pledge to continue to serve the nation in assisting the sustainable management of resources and environment through development of manpower adequately knowledgeable and skilful in this endeavour.