



Lake 2016: Conference on Conservation and Sustainable Management of Ecologically Sensitive Regions in Western Ghats

[THE 10TH BIENNIAL LAKE CONFERENCE]

Date: 28-30th December 2016, <http://ces.iisc.ernet.in/energy>

Venue: V.S. Acharya Auditorium, Alva's Education Foundation, Sundari Ananda Alva Campus, Vidyagiri, Moodbidri, D.K. Dist., Karnataka, India – 574227

EXPERIENCE OF INVOLVING UNDERGRADUATE COLLEGE STUDENTS IN BIODIVERSITY CONSERVATION AWARENESS PROGRAMS

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The National Policy on Education, 1986 states that the “Protection of the Environment” is a value which along with certain other values, must form an integral part of the curriculum at all stages of education. Environmental education is a process that allows individuals to explore environmental issues, engage in problem solving, and take action to improve the environment. As a result, individuals develop a deeper understanding of environmental issues and have the skills to make informed and responsible decisions. The components of environmental education are awareness and sensitivity to the environment and environmental challenges, knowledge and understanding of the environment and environmental challenges, attitudes of concern for the environment and motivation to improve or maintain environmental quality, skills to identify and help resolve environmental challenges, participation in activities that lead to the resolution of environmental challenges. The primary aim of environmental education is to impart knowledge about the principles required for the conservation and utilization of natural sources for the existence of mankind. Environmental education gives required knowledge and experience realizing the value of such important views. The role of environmental education is important in the realization of the necessity of maintaining a friendly and well balanced relationship between man and nature.

The importance of the environment education was considered by UGC and it was decided that a six months compulsory core module course in environmental studies may be prepared and compulsorily implemented in all the University/Colleges of India. This was followed by

framing of the core module syllabus for environmental studies for undergraduate courses of all branches of Higher Education. In addition to this program the colleges having Eco clubs and nature clubs conducting number of biodiversity conservation awareness programs. Biodiversity conservation awareness programs are the important component of the Environment Education. The Convention on Biological Diversity, emphasizes the importance of environment education and awareness through promoting and encouraging measures required for the conservation of biological diversity. Awareness and understanding of environmental issues provide the basis and rationale for commitment and meaningful action towards environmentally sound and sustainable development. The celebrations of National Environment Days and Weeks across the region, provide a focal point for various environmental activities. With a view to generate awareness on biodiversity issues and help people to understand the importance of biodiversity for sustainable development, the various government and non-government organizations framing various programs involving students and public. Eco clubs and nature clubs of the colleges play an important role in creating awareness regarding the biodiversity utilization and conservation by conducting number of programs.

I had an opportunity to participate in the mega project titled ”The Western Ghats Biodiversity Inventory Project” a project headed by Dr. Madhav Gadgil, International Ecologist and Former Professor of IISc, Bengaluru. I also had the opportunity to interact with Prof. Gadgil continuously for about 12 years during the different projects. This inspired and motivated me



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to carry on these type of works and in turn made me inspire student community to get interested in biodiversity studies. I am proud to work as a faculty of the Department of Botany. This has given me an opportunity to involve the students along with me in biodiversity related work. Through this activity I have been successful in creating awareness among

Table-1: List of biodiversity conservation awareness programs for the students

Sl.N o.	Type of the program	Objectives of the program	No. of Programs
1	Nature camps	To train the students on identification of local biodiversity	21
2	Field visit	To observe and document the biodiversity in the nature	more than 100
3	Trekking	To study of biodiversity of remote area	52
4	Biodiversity tours	To study of biodiversity of in-situ and ex-situ conservation area	48
5	Visit to research institutes	To know ongoing research activities on biodiversity	18
6	Documentation of Ethno-biological knowledge	To provide the opportunities of interaction with local people to document the ethno knowledge, traditional medicine practices, role of traditional culture in biodiversity conservation	35
7	Scientific paper presentation in the national and international seminars/conferences by the students	To provide the opportunities of interaction with scientists, professors, subject experts, research scholars regarding the higher education, research opportunities, placements etc.	8 (international) 19 (National)
8	Preparation of People Biodiversity Registers	To participate in the government programs sponsored by the Karnataka Biodiversity Board	6
9	Participation in the Environment movements	To know the conflicts and consensus of local environment issues	5
10	Job oriented training programs	To get the information, ideas and skills regarding the self employment projects	12

Each year, within six months of joining the first years' BSc course, the students are exposed to nature study through holding a week-long nature camp wherein they are exposed to study the diversity of plant and animal kingdom by studying medicinal plants, birds, butterflies, ants, snakes, frogs etc. In the following two and a half years of the BSc course, the students are taken on field visits to different landscape elements and they are guided in the ways of recording the diversity of different species and their functions and activities in the given landscape. Trekking program has been planned for the students to study the diversity of life forms in the remote deeper areas of Western Ghats. This is planned during the vacations after the University Examinations. Three or four days' trekking has been carried out in the thick jungles of

the student community regarding biodiversity. Throughout a career span of thirty years I have been conducting awareness programs on a particular few issues every year for the undergraduates students. Some of the important ones have been listed in the table 1 below:

Western Ghats of Kerala, Karnataka, Tamilnadu and Maharashtra. Many times the students are guided on the aspects of recording the sounds of the animals during night time in thick forests and sky watching while spending the night in the jungle. Study tours have been conducted to *in-situ* and *ex situ* conservation areas designated by the Central and State governments to study their significances. They have also visited research institutes like Indian Institute of Science, Bengaluru, FRLHT, Bengaluru, KBB, Bengaluru, TBGRI, Thiruvananthapuram, FRI, Uttarakhand, KFRI, Thrisoor, BSI, Coimbatore, MSSRF, Chennai, CPCRI, Kasaragod and Vittal, NCRI, Puttur etc.

Ethno-botany knowledge and traditional practices play a vital role in biodiversity



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conservation. Hence each year an opportunity is created for the students to collect and record biodiversity related information, to visit farmlands, to meet the traditional medicinal practitioners (*nativaidyas*), and to interact with the local community members. In order to inculcate an interest in scientific research, the students are guided and trained in the field work, in preparing the abstracts and research papers. Many students have already presented papers in the national and international seminars and conferences. Through this, they are able to meet and interact with world known scientists, subject experts and research schoolers to understand their work, to explore research and career opportunities in related areas. As per the Biodiversity Act implemented by the Government of India in the year 2003, in each village Panchayat, a People's Biodiversity Register must be prepared. Students have been involved in such PBR preparation. PBRs of seven Gram Panchayats have already been prepared. By participating in such studies one can get a deeper understanding and knowledge of the various aspects/dimensions of biodiversity. We come across incidence of environmental movements to conserve our environment. In recent times, students have been involved even in such activities. Through such activities, students get a deeper understanding of the local issues related to biodiversity and hence are able to perceive the problems more clearly through greater awareness. Many trainings have been given to students of Life Sciences streams to generate the awareness about self-employment opportunities and to become entrepreneurs themselves. Trainings on mushroom culture, bee keeping, grafting, dairy farming, nursery preparation, green house farming, Maintenance of aquarium, production of eco-friendly products, etc have already been imparted.

When guidance, encouragement and opportunity is given to the students, they take part with enthusiasm. Since most of the students of the two colleges where I served were from agriculture families, it was easy for me to involve them. 99.5% of the programs have been conducted for the students by spending money from our own pockets,

without any financial help either from any agency or from the college. We were able to save money by not getting the invitations printed, by avoiding inaugural and valedictory functions. I can never forget the fact that the parents have sent their children with good faith and enthusiasm. Also I can never forget the encouragement and suggestions that I received from Scientists of CES, IISc Bangalore especially from Utkarsh Ghate and Harish Bhat. Though I have been organizing programs as a teacher I used to participate as a student! This has given me more happiness and satisfaction.

Obstacles: The only obstacle that I could feel now is that sufficient time was not available for extra-curricular activities in semester scheme system as compared to non-semester scheme system.

Suggestions: While the students participating in NSS, NCC, Sports, etc. have reservation at time admission to higher education but there is no such provision for students participating biodiversity conservation awareness programs. Hence just as UGC's API system for evaluating the college lecturers, if a system of evaluation for college students is put in place, then if the student is also evaluated and based on the eligibility of the students if he/she is given reservation then every student would get justice.