



ipac

**2nd Certificate Course
on
Applied Conservation Biology
and Co-Management**

Jointly organized

By

Jahangirnagar University (JU)

And

Independent University, Bangladesh (IUB)



1. Background of the Training Program

The technical assistance support contract for the Integrated Protected Area Co-Management (IPAC) project was awarded to International Resources Group (IRG) for the period of June 5, 2008 to June 4, 2013 by USAID/Bangladesh. The IPAC project aims to ensure sustainable natural resource management and preserve natural capital of Bangladesh through strengthening environmental governance and biodiversity conservation in combination with support for public-private partnerships and sustainable economic growth.

In this context, IPAC is working with Jahangirnagar University (JU) and Independent University, Bangladesh (IUB) to introduce a series of certificate courses on Applied Conservation Biology and Co-Management which will promote efficient co-management of Protected Areas (PAs) and alternative income generation activities in these protected forests and wetland landscapes for the conservation of biodiversity and improved socio-economic well-being of local communities.

The Applied Conservation Biology and Co-Management certificate course will aim to enable the participants from government technical agencies and non-governmental organizations to collaborate more effectively in the management of PAs, Wetlands and Ecologically Critical Areas (ECAs) in ways that both conserve biodiversity and promote more sustainable and secure economic growth that directly benefits local communities.

2. Course Objectives

The objectives of the applied Conservation Biology and Co-Management course are:

- Enable participants to have a basic understanding of the challenging context for PAs, Wetlands and ECAs co-management, including an appreciation of major trends and pressures affecting natural resources in Bangladesh
- Provide a basic understanding of ecology and environment
- Develop an understanding of PAs, Wetlands and ECAs and management objectives and experiences, with an emphasis on successful, proven PA co-management strategies and approaches
- Understanding of bio-diversity conservation and restoration techniques
- Understanding of national and international treaties and conventions on natural resource management

- Develop analytical skills for identifying appropriate AIGAs in and around the PAs, Wetlands and ECAs for conservation
- Provide a management framework on how to integrate ecotourism and biodiversity conservation for development of ecotourism in and around the PAs, Wetlands and ECAs.
- Develop a practical approach for managers to formulate and implement a conservation strategy for a targeted PAs, Wetlands and ECAs and corresponding action plan

3. Course Structure

The Certificate Course on Applied Conservation Biology and Co-Management is encompassed under 13 major subjects viz.

- a. Background on the natural resources of Bangladesh;
- b. Existing roles and responsibilities of departments/organizations;
- c. Background on socio-economic parameters affecting the use and management of natural resources;
- d. Fundamentals of ecology;
- e. Biodiversity conservation;
- f. Restoration ecology;
- g. Protected Area management;
- h. Co-management strategies and models;
- i. Global climate change and environmental vulnerability;
- j. Sustainable development and alternative income generation;
- k. Eco-tourism in PAs, Wetlands and ECAs; and
- l. Conservation strategy and approach for the managers.

A total of 80 lecture sessions are allotted in the whole course. Each lecture session of 75 minutes has been subdivided into two parts with a consecutive short and interactive discussion period.

Two field trips will be arranged for the trainees and they will be taken to any one of the PAs, Wetlands and ECAs to have practical knowledge about the bio-diversity, local community, existing management practices and problems.

4. Selection Eligibility and Nomination of the Participants

The course is planned to serve the needs of rank of Assistant Conservator of Forests from Forest Department and rank of Assistant Director from Department of Environment and Department of Fisheries. Participants will be also drawn from various government and non-government agencies who are directly and indirectly related with forest and wetland management/ conservation. The maximum number of participants to be enrolled in the course will be 20.

The concerned authority of the GOB departments and NGOs will nominate the appropriate participants after getting request from IPAC.

5. Course Duration

Generally the course will be offered twice a year with duration of 4 weeks each. The second batch will be offered from 27 February 2010 and will end on 28 March 2010.

6. Language

Language of instruction in the class will be basically English. Occasionally Bangla will be used to facilitate exchange of views where /if necessary. Class assessments (Tests and assignments) will be done in English. Field trip report will be submitted in English. Group report will be encouraged with chapters allocated for individual group member. Report presentation and Viva will be in English.

7. Attendance

This is a residential training course in nature. Participation in all sections of the course, field tour, lectures, exercises, assessments, group discussions, etc. is compulsory.

8. Assignment

Participants will prepare a report (5000 words) which will reflect the lessons they have learned gathered practical experience from the fieldtrip. This will also help them in overcoming the local level area specific problems that may arise in future management of protected areas. Individual faculty may give assignments which will have to be submitted independently or as a group.

9. Course Evaluation:

After completion of each module of course the participants' will be assessed on learning performance by conducting tests suitable to module's objectives based on verifiable indicators. The other assessments methods would be quality of participation in class room, group discussions and field visits; along with performance relating to the quality of written assignments. Each module will be evaluated by the participants on the overall organization and management based on verifiable indicators.

10. Expected Outcome

The participants of this course will use their competence gained from the course in the successful development of co-management approach and thereby ensure sustainable management of Protected Areas, Wetlands and Ecologically Critical Areas.

11. Lodging and Board:

The venue of the residential training is Fisheries Training Academy at Savar (near PATC). The co-operative mess in the hostel will be managed by the officer trainee themselves. The academy will provide cook and bearer and all kitchen facilities for day to day functioning of the mess.

12. Course Management

For the smooth functioning of the course Prof. Haroun Er Rashid, Director, School of Environmental Science and Management, Independent University, Bangladesh will be designated as the course Director. Course director will be in overall charge of the course

implementation. Prof. Md. Mofizul Kabir, Department of Zoology, JU will work as Coordinator while Dr. Md. Monirul Hasan Khan, Mrs. Dil Rowshan, Md. Abdul Aziz and Md. Kamrul Hasan will work as course co-coordinator.

13. Course Contents

Module No.	Modules and Associated Contents	No. of Sessions
1	<p>Background on the natural resources of Bangladesh:</p> <ul style="list-style-type: none"> • Natural Resources Profile (General aspects on Land Use, Soil and Water resources, fisheries, energy, etc); • Land pattern and Geographical Distribution of Bangladesh; Atmospheres and Climate; • Forests Resources Profile (forests-flora, wildlife and fauna, other forest products; forest types & forest land cover; PAs; etc); • Wetland Resources Profile (clarity on wetlands, types, coverage, etc; wetlands of national & international importance and other wetlands; and • Ecologically Critical Areas (clarity on ECA concept, number and coverage, national & global importance, etc. 	6
2	<p>Existing Roles & Responsibilities of Departments / Organizations:</p> <p>Existing Roles & Responsibilities of Forest Department, Department of Fisheries and Department of Environment (Central & Local Government Offices, NGOs, CBOs & Civil Society Members), Socio Economic Stratification, Management of Natural Resources.</p>	3
3	<p>Background on Socio-economic parameters affecting the use and management of Natural Resources:</p> <p>Socio-Economic Stratification (demographic distribution, classes, power structure, patron-client relationship, etc.);</p> <p>Poverty Profile (types of poverty, unemployment, under employment, etc); and</p>	3

Module No.	Modules and Associated Contents	No. of Sessions
	Management of Natural Resources (legal and illegal use, power-poor relationship, etc.).	
4	<p>Fundamentals of Ecology: Introduction to Ecology and the diversity of life, Plant Adaptations to Land, Animal Adaptations, Protected areas, Populations & Population Growth, Interspecific Competition, Symbioses: Parasitism and Mutualism, Communities: Structure and Dynamics, Community Dynamics: Succession, Ecosystems, Terrestrial Ecosystems, Aquatic Ecosystems, Fish diversity and management</p>	12
5	<p>Biodiversity Conservation: Species Diversity and Species Loss, Uses of Biological Resources, Valuing Biodiversity, National Policies and Instruments, International Policy and Instruments, Convention on Biological Conservation, Education and awareness Programs for biodiversity conservation.</p>	7
6	<p>Restoration Ecology: An account of the Denuded Forests of Bangladesh, Resource Use Conflict and Degradation of Forests and Wetland Resources, Restoration of Threatened Species-Techniques and Management Practices, Stop Further Degradation and Build up Strategy for Restoration</p>	4
7	<p>Protected Area Management: Concept of protected areas in international and national levels, Protected Areas in Bangladesh, Wildlife habitats in Bangladesh and their significance, Wildlife diversity in the protected areas of Bangladesh and their significance, Wildlife management practices, Wildlife habitat analysis and evaluation, Wildlife – habitat relationship and habitat suitability index, Wildlife habitat manipulation practices: food production water development and cover improvement, Protected area management plans in Bangladesh,</p>	13

Module No.	Modules and Associated Contents	No. of Sessions
	<p>Anti-poaching operations (patrolling, movement control, and intelligence networks) buffer zone management for protected area management,</p> <p>Wildlife Population density estimations and distribution,</p> <p>Use of bio-indicators (wildlife and its habitats) for temporal monitoring of PAs,</p> <p>Environmental Impact Assessment of developmental activities in and around the Protected Areas,</p> <p>Outcomes and lessons learned from projects focusing on the protected areas (FRMP, SBCP, MACH, NSP, IPAC, etc</p>	
8	<p>Co-management Strategies and Models: Introduction to Co-management strategies and models, Positive and Negative impact of Using local communities in monitoring and patrolling, Co-management and Traditional Conservation, Co-management and Alternative Income Generation</p>	4
9	<p>Global Climate Change and Environmental Vulnerability: IPCC Current Assessment and adaptation to climate change, Agro-ecological Zones in BD and Climate Change, Climate change and Natural Disasters Preparedness : Bangladesh, Impact of Climate Change on Protected Areas and Vulnerability to Biodiversity, Adaptation to Climate Change: Coastal greenbelt, Agro-forestry</p>	5
10	<p>Sustainable Development and Alternative Income Generation: Principle and Elements (Economic, Social and Environmental) of Sustainable Development, National and Regional Opportunities of AIG in Bangladesh, Alternative Income Generation Models (Forestry) (Department of Forest), Alternative Income Generation Models (Fishery) (Department of Fisheries), Alternative Income Generation Models (Livestock) (Department of Livestock), Alternative Income Generation through Sustainable Use of Natural Resources, Value Chain Analysis and Market Potentials , IPAC Support Package for AIGs, AIGs under NSP.</p>	10

Module No.	Modules and Associated Contents	No. of Sessions
11	Eco-Tourism in Protected Areas: Introduction to Nature Tourism , Sustainable Development of Infrastructure and Services for Managing Nature Tourism in PAs, Nature Tourism Development: International, National and Regional Conventions and Treaties, Community Participation in Nature-Tourism: Outcomes and lessons learned from BD (viz., by IUCN under NSP), Future of Nature Tourism in Bangladesh	5
12	Conservation Strategy and Approach for the Managers: Situation Analysis (including identification of strengths, weaknesses, opportunities & threats in small groups), Situation Analysis (plenary), Strategy Formulation (in small groups), Strategy Formulation (plenary), Action Planning (in small groups), Action Planning (plenary)	8
13	Final Report: Report Preparation, Presentation and Viva	
14	Certificate giving ceremony	

14. Key Personnel

- Prof. Haroun Er Rashid: Director, School of Environmental Science and Management. Educational Background: M. A. (Economics) Center for Development Economics, Williams College, Mass; U.S.A. M. A. (Geography), Emmanuel College, Cambridge University; UK, Course in Economic Planning and Development, E. D.
- Prof. Zahurul Karim: Former Secretary, Ministry of Fisheries and Livestock, Government of the Peoples Republic of Bangladesh . Ph.D. in Soil Science, University of Reading, Rothamsted, IACR, UK, M. Sc. (Ag.) in Soil Science (Soil fertility and crop production).
- Prof. Md. Mofizul Kabir: Professor in the Dept. of Zoology, Jahangirnagar University, Ph.D from University of Cambridge, UK.
- Dr. M. Monirul H. Khan: Associate Professor, Dept. of Zoology, Jahangirnagar University, Ph.D from University of Cambridge, UK.
- Mrs. Dil Rowshan: Assistant Professor in the School of Environment Science, Independent University, Bangladesh, Masters from Dhaka University and MURP from Bangladesh University of Engineering & Technology
- Md. Abdul Aziz: Assistant Professor, Dept. of Zoology, Jahangirnagar University,
- Md. Kamrul Hasan: Assistant Professor, Dept. of Zoology, Jahangirnagar University