SECTION 1 – *Basic information*

(a) **Course title:** Ecological and economic evaluation approaches for mainstreaming biodiversity in EIA

(b) **Level:** This two day course is an intermediate level course designed to cater for early and mid career professionals who have five or more years of experience in EIA.

(c) **Prerequisites for participants:** Participants offering to take the course are required to have a basic understanding of ecological concepts and principles of environmental economics. Familiarity with generic EIA framework and experience of project evaluation and economic planning will be useful though not a must for taking the course

(d) **Language of delivery: English**

(e) **Duration: 2 days**

(f) **Minimum and maximum number of participants: 10 to 15**

(g) **Name and contact details of each trainer:**

Dr Asha Rajvanshi
Professor and Head,
Environmental Impact Assessment Cell
Wildlife Institute of India,
Chandrabani,
Dehradun - 248 001,
(Uttarakhand), India.

Tel: +91-135-2640990 Ext. 225
ar@wii.gov.in
Fax: +91-135-2640117

ii) Dr. Vinod.B. Mathur
Senior Professor and Dean,
Faculty of Wildlife Science,
Wildlife Institute of India,
Chandrabani,
Dehradun - 248 001
(Uttarakhand), India.

Tel: +91-135-2640304
vbm@wii.gov.in
Fax: +91-135-2640117

(iii) Dr. Jo Treweek
Technical Programme Manager,IAIA-CBBIA Programme,
Chancery Cottage, Kentisbeare,
Cullompton, Devon, UK

Tel +44 (0)1884 266525
jo@treweek.fsnet.co.uk

SECTION 2 – *Course description*

(a) Summary of the purpose(s), content, and anticipated learning outcomes of the course (maximum 300 words).

The international obligations for biodiversity conservation are not just linked to the Convention on Biological Diversity (CBD), but also to the fact that management and protection of biological diversity is interlinked with the efforts to achieve several of the Millennium Development Goals. For these reasons, and the significant negative trends in global biodiversity resources as observed in the Millennium Ecosystem Assessment, biodiversity commands importance in impact assessment.

As biodiversity is more often perceived as a precondition for ecosystem services, rather than just a resource, part of the puzzle surrounding biodiversity loss lies in an incomplete understanding of how humans value the functions and services that flow from biodiversity conservation and how decline in benefits from these services is reflected in economic terms.

Valuing biodiversity using economic techniques and incorporating those values into the decision-making process can be a powerful way to demonstrate the importance of biodiversity protection to the broader public. By capturing both environmental and socio-economic factors, an integrated framework incorporating ecological and economic valuation outcomes can provide a way for decision-makers to identify the most promising development options and make informed decisions to balance the relative gains from different activities and investments, including those that are concerned with conservation as well as those that lead to ecosystem modification, degradation or conversion.

The desired changes in biodiversity conservation based on wider recognition of the ecosystem services concept require major adaptation of EIA frameworks for integrating economic evaluation approaches.

The course is aimed to provide a theoretical rationale for promoting ecosystem approach in assessing the impacts of development proposals on biodiversity and to stimulate the importance of integrating economic valuation principles in EA framework for mainstreaming biodiversity in impact assessment.

The contents of the course are aimed at ensuring the recognition of the importance of ecosystem approach in promoting biodiversity inclusive impact assessment; enhancing the use of economic instruments for the valuation of ecosystem goods and services and to apply the learning from best practice models to promote sustainable development.

The course will cover the following main elements:

i. Relevance of valuing ecosystem goods and services for mainstreaming biodiversity in impact assessment

ii. Importance of integrating economic valuation approach in biodiversity inclusive impact assessment

iii. Retooling the generic EA framework for integrating economic evaluation approaches for assessing impacts of economic development on biodiversity, ecosystem services and livelihoods

iv. Introduction to a range of economic tools and techniques for valuing biodiversity

v. Introduction to regulatory and market-based mechanisms for integrating biodiversity into mitigation approaches

(b) Detailed description of the course structure and content

Day 1 (AR,VBM, JT)	**Relevance of valuing ecosystem goods and services for mainstreaming biodiversity in impact assessment.**
	General introduction and overview: • Millennium Development Goals: The links with biodiversity • Why value biodiversity in impact assessment: The role of ecosystems in providing supporting, provisioning, regulating and cultural services for sustaining lives, livelihoods and economies • Causes of decline of the biodiversity as a natural capital: The findings of the Millennium Ecosystem • Why do we need to measure biodiversity in economic terms? • Obstacles to wider use of biodiversity valuation: Ethical and technical constraints
	Re-tooling the generic EA framework for integrating economic evaluation approaches for assessing impacts of economic development on biodiversity, ecosystem services and livelihoods ó How to ô approaches for integrating economic valuation in different stages of EIA framework
	Valuation of ecosystems: From concepts to measurements • Introduction to a range of economic evaluation tools and techniques and anticipated outcomes relevant in impact assessment • Relative merits, appropriateness and data needs for use of various economic instruments for valuing biodiversity • Case studies of successful integration of economic and ecological valuation tools
Day 2 (KK, AR,VBM, JT)	**Introduction to regulatory and market-based mechanisms for integrating biodiversity into mitigation planning for biodiversity** Bio-banking approaches for economic compensation of impacts on biodiversity Presentation of case studies demonstrating use of economic incentive approaches for mitigation planning.
	Learning by doing: Practical exercise session planned for participatory learning Two sessions are planned for involving the participants in the following: • Building consensus for valuing ecosystem services of a forest land to be submerged by the development of a dam. • Review of an offset scheme for effective mitigation of biodiversity loss from a development project

The training course will consist of a series of presentations by experienced instructors with practical experience in the subject area. The training sessions will include formal presentations, group working, role playing and presentation of case studies. The course is intended to be relatively practical and ó hands on ô, to prepare participants to develop effective approaches for mainstreaming biodiversity in impact assessment.

(c) Description of the materials participants will receive during the course

1. Copy of the ñBest practice guidance for biodiversity-inclusive impact assessment: A manual for practitioners and reviewersòCBBIA-IAIA publication, co-authored by two of the trainers

2. A CD containing power point presentations from all course instructors and other relevant training material

3. Biodiversity in EIA and SEA. Background document to CBD decision VIII/28: Voluntary guidelines on biodiversity-inclusive impact assessment. The Netherlands: The Netherlands Commission for Environmental Assessment.

4. IAIAôs best practice principles for integrating biodiversity and impact assessment.

(d) Provisions for pre-conference and post-conference communication with participants.

Trainers will register for and attend the full conference to allow for maximum face-to-face communication immediately following course delivery.

Follow up support to all participants will be provided through email exchanges and through postings on biodiversity list server and discussion forum of IAIA and the websites of the organizations that represent the affiliation of the trainers.

Depending on the level of sustained interest of the participants to remain networked for serving as a regional or country level resource pool for future initiatives of capacity building and other collaborative efforts, an electronic notice board will be maintained where all participants can post and receive messages on current and future events, availability of recent training resources and lessons learnt from new initiatives of EIA practices.

SECTION 3 – *Qualifications of the trainer(s)*

(a) An abridged curriculum vitae (maximum 1 page) for each trainer

Dr. Asha

Dr. Asha Rajvanshi has a doctorate in Environmental Science and is a member of the faculty of the Wildlife Institute of India (WII) for last 21 years. She heads the EIA Cell of the Institute. In her capacity as an EIA practitioner, she has led several EIA studies to assess the impacts of development projects in key sectors. As a trainer, she has been actively involved in national and

global capacity building initiatives. She has effectively contributed to the development of learning resources and guidance manuals for mainstreaming biodiversity in impact assessment. These are becoming increasingly popular as tools for professionalizing EIA in south Asia. Asha's professional experience is also being sought in advisory support to Govt. of India and other professional bodies. She is serving as a member of various advisory committees of Government of India dealing with environmental appraisal of developmental projects. She is also a member of the Environment Committee, Indian Road Congress and member of Technical Committee National Registration Board of the Quality Council of India for registration of EIA consultants. Asha is a member of the International Association for Impact Assessment, USA and is currently the Co-chair of its Biodiversity Section. Asha co-presented IAIA's pre-conference training courses in Boston (USA), Stavangar (Norway) and Seoul (Korea).

Dr. Vinod.B. Mathur

Dr. Vinod Mathur holds a Masters' degree in Forestry and a doctorate in Wildlife Ecology from the University of Oxford. As a faculty member of the Wildlife Institute of India, he has been actively involved in conducting training and research in the field of natural resource conservation for the last 21 years. He has also worked as a FAO International Training and Protected Area Planning Consultant in Sri Lanka. He has been responsible for the planning, organization and conduct of training programs for various target groups. Dr. Mathur also has vast experience of conducting environmental assessments and developing mitigation plans for safeguarding critical biodiversity resources. He is also a member of the Environmental Appraisal Committee (EAC) of the Government of India for the mining projects. He is a member of the IUCN World Commission on Protected Areas (WCPA) and the IUCN Commission on Ecosystem Management (CEM). Dr. Mathur is an IAIA member and is actively involved in the CBBIA project of IAIA. As an initiative of CBBIA project of IAIA, Dr. Mathur presented the IAIA's pre conference training courses jointly with Dr. Asha Rajvanshi in Boston (USA), Stavangar (Norway) and Seoul (Korea).

Dr. Jo Treweek

Dr. Treweek is an ecologist with special interest in ecological impact assessment, ecological risk assessment and habitat restoration. She is an active IAIA member and also has been a Director on the IAIA Board. She has authored several publications and books on ecology, biodiversity and impact assessment. She is the Technical Programme Manager of IAIA's Capacity Building in Biodiversity and Impact Assessment (CBBIA) Project and has been providing significant professional support in the training initiatives of the CBBIA Project. She has practical experience of implementing biodiversity offset projects and has also worked with businesses to develop corporate biodiversity strategies and action plans.

(b) History of the course

The trainers have been actively involved in capacity building initiatives of IAIA both at the global and regional level and have the experience of conducting pre- meeting training programmes for IAIA. The summary of the three courses presented for IAIA is presented below:

Training courses conducted for International Association for Impact Assessment (IAIA):

Year	Title of the course & year	Place of delivery	Target group	Trainers	Feedback & overall course rating
2007	Mitigation of Impacts on Biodiversity: Best Practices in Key Sectors	The pre-meeting training course of IAIA07 at Seoul, Korea	Professionals involved in biodiversity conservation, EIA, business and development planning and project finance ***No. of attendees: 17***	Dr. Asha Rajvanshi Dr. Vinod Mathur Dr. Jo Treweek Dr. Kerry ten Kate	Excellent
2006	Mainstreaming Biodiversity in EIA and SEA for Improved Environmental Decision Making	The pre-meeting training course of IAIA06 at Norway	EIA professionals, researchers, trainers, consultants, planners, EA reviewers and decision- makers ***No. of attendees: 23***	Dr. Asha Rajvanshi Dr. Vinod Mathur Dr. Jo Treweek	Excellent
2005	Mainstreaming Biodiversity in Impact Assessment for Improved Environmental Decision Making	The pre-meeting training course of IAIA05 at Boston, Massachusetts, USA	EIA professionals, researchers, trainers, consultants, planners, EA reviewers and decision- makers ***No. of attendees: 24***	Dr. Asha Rajvanshi Dr. Vinod Mathur Dr. Jo Treweek	Excellent

Feedback of participants of the above three courses (summarized below) amply demonstrate the success of these courses.

Experience of the trainers at the national level

In the home country (India), the two trainers (Asha and Vinod) have been conducting a one week modular course on EIA as part of the 9-month Post-Graduate Diploma Course in Wildlife Management at the Wildlife Institute of India for forest officers, wildlife and protected area managers and EIA consultants from India and the region. These courses are specially aimed at building capacity in the region for conducting biodiversity inclusive impact assessment. This is the only course of its kind that is being currently offered in the country. 10 such courses have been conducted with the benefits having been extended to 247 participants from India and 58 participants from the countries in the region. These courses have received excellent feedback and have been recognized as a major effort of building capacity for conducting biodiversity inclusive impact assessment. For details and verification of facts presented here visit: http://wii.gov.in/eianew/eia/training.htm