GSDP 2019-20: GREEN SKILL DEVELOPMENT PROGRAMME

"VALUATION OF ECOSYSTEM GOODS AND SERVICES"
1-15 JANUARY 2020

Registration Form

(Apply online on or before 20th November 2019)

http://www.gsdp-envis.gov.in/Default3.aspx

1. Name: _____

2. Age: _____   Gender: Male/Female

3. Date of Birth: _____

4. Address: _____
   _____
   _____

5. Landline No._____
   with STD Code: _____

6. Mobile No _____

7. Email ID: _____

8. Academic Qualifications (attach photocopy of testimonials)

Degree   subject   year   University

B.Sc./Economics…........…………………………………..

B.E/B.Tech/M.Sc. …………………………………………..

M.E/M.Tech./M.Phil…………………….…….…...…… ..

Thesis Title _____

Ph.D. Completed / Pursuing / Intend pursuing:
_____

Thesis Title / Proposed Research Area:
_____

9. Purpose for attending the course / likely skill improvement / professional responsibilities _____
   _____
   _____
   _____

10. Accommodation required   Yes / No

11. Accommodation and food would be arranged at IISc campus during the course (1-15 January 2020)

12. Course Fee: Rs 1000 (to be paid by demand draft, drawn in favor of 'Indian Institute of Science' payable at Bangalore) – to be **submitted on the intimation of selection**. This would be refunded to the candidates who attend all sessions, implement the project, write exams and successfully complete the course

I agree to abide by the rules of the GSDP courses. If selected, I shall participate in the course for the entire duration.

Affix Latest Photo	Signature Date: Place:

Intending participants may use the attached application form (or a photocopy of the same) in case candidates are from remote area with poor internet connectivity

Important Dates:
Deadline: Receiving completed application:
20th November 2019
Intimation of selection:
13th December 2019
(will be posted online at the Ministry's website (GSDP) and at **http://wgbis.ces.iisc.ernet.in/biodiversity**)

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GSDP @IISc
1-15 JANUARY 2020

Coordinator
Dr. T V Ramachandra
Centre for Ecological Sciences, ENVIS CENTRE,
INDIAN INSTITUIE OF SCIENCE
E Mail: tvr@iisc.ac.in; envis.ces@iisc.ac.in
Tel: 080-22933099 / 22933503

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ENVIS Division, The Ministry of Environment,
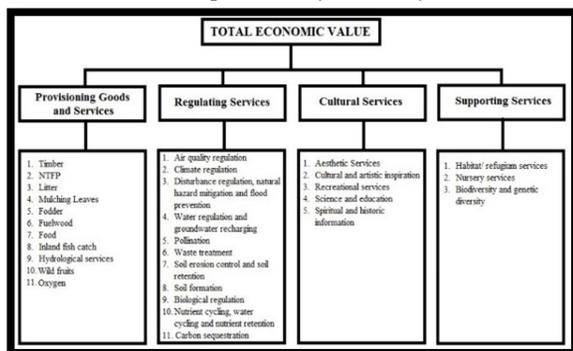Forests and Climate Change, GoI, NEW DELHI
http://envis.nic.in/

ENVIS CENTRE
CENTRE FOR ECOLOGICAL SCIENCES
Indian Institute of Science,
Bengaluru – 560 012, KARNATAKA
Website: http://wgbis.ces.iisc.ernet.in/energy/
http://wgbis.ces.iisc.ernet.in/biodiversity/
E Mail: envis.ces@iisc.ac.in;
emram.ces@courses.iisc.ac.in,

GSDP - BACKGROUND: Green skills contribute to preserving or restoring environmental quality for sustainable future and include jobs that protect ecosystems and biodiversity, reduce energy and minimize waste and pollution. In line with the Skill India Mission of Hon'ble Prime Minister, utilising the vast network and expertise of ENVIS Hubs/RPs, the Ministry of Environment, Forest & Climate Change (MoEF&CC) has taken up an initiative for skill development in the environment and forest sector to enable India's youth to get gainful employment and/or self-employment, popularly known as the **Green Skill Development Programme (GSDP)**. The programme endeavours to develop green skilled workers having technical knowledge and commitment to sustainable development, which will help in the attainment of the Nationally Determined Contributions (NDCs), Sustainable Development Goals (SDGs), National Biodiversity Targets (NBTs), as well as Waste Management Rules, GoI (2016).

GSDP Course @ENVIS (RP), IISc, Bangalore -Valuation of ecosystem goods and services

Forest ecosystems are critical habitats for diverse biological diversity and perform array of ecological services that provide food, water, shelter, aesthetic beauty, etc. Valuation of the services and goods provided by the forest ecosystem would aid in the micro level policy design for the conservation and sustainable management of ecosystems. Main objective of the course is to value the ecosystems goods and services. This involves assessment of total economic value (TEV) of the ecosystem considering provisioning, regulating, supporting and information services provided by the ecosystem.

Course Organization: The course will consist of lectures by IISc faculty, guest lectures and hands on sessions. **Session have 50% lectures and 50% hands on training (selected participants need to bring laptop) -** Duration: 15 days (1-15 January 2020),
Time: 8 30 am to 7 pm

Course Outline and Objectives: *The course provides an understanding of*

- the principles of ecosystem valuation with case studies
- improved knowledge of the activities covered in the course and their implications on environment;
- characteristics of factors that influence the environment and their adverse effects on environment;
- use of monitoring techniques and data processing in the affected environment; and
- the need to protect the environment from pollution and possible remedial techniques

Course Contents:

- Ecosystems, basic characteristics of ecosystems, Levels of Organisation: From Species to Ecosystems, Types of ecosystems - Introduction
- Forest Ecosystems: Importance, types of forests, functioning of forest ecosystem…
- Vegetation sampling techniques – field data collection
- Maps, cartography, Geographic information system
- Spatial data – Introduction, brief introduction to Remote sensing, GIS
- Remote sensing data classification - Assessment of different land uses
- Field Data collection – Quantification of biomass (transect based quadrat sampling)
- Carbon sequestration, quantification of carbon sequestered in the terrestrial biomass
- Understanding pollination services, seed dispersal services, groundwater recharge…
- Soil – types, characterization, soil degradation, conservation and management

- Watershed, flood plains, buffer zone – treatment and management
- Understanding vegetation, hydrology, ecology and biodiversity linkages
- Quantification of Ecosystem Goods and Services
- Valuation of Goods and Services
- Provisioning services, Regulating Services from Forest Ecosystem, Information services
- Field data collection – quantification
- Guest lectures and presentation of working group (participants),
- Waste management (mandatory)

Learners (GSDP participants) on successful completion of the courses will be able to:

- demonstrate an informed understanding of techniques for ecosystem monitoring (grid based approach), ecosystem condition assessment;
- describe basic ecosystem assessment techniques, and their applications in conservation
- prepare or co-ordinate ecosystem assessments;
- Carry out spatial analyses (vector and raster data);
- Implement land use land cover assessment;
- Identify natural resources important regions in a district based on the attribute data (compiled from field as well as secondary sources)
- Carryout valuation of ecosystem goods and services (select)

Skill Development

The course will empower the candidates in (i) field data collection – Grid based monitoring (chosen for NES), (ii) spatial analyses – mapping and collection of attribute information, (iii) remote sensing data analyses, (iv) quantification of ecosystem goods and select services, (v) valuation of ecosystem goods – provisioning services

Whom will the course benefit: GSDP aids in the capacity building of **unemployed youth (graduates – science, economics and engineering) and students pursuing PG /Ph.D, In-service working professionals** (forest department, biodiversity board and NGO's)

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