

Importance of Skilling India's Youth

India's youthful manpower, a result of the demographic dividend, need to be provided with skills and ability to tackle global challenges. The more we give importance to skill development the more competent youth will be. It is important to predict the possibilities of the future, and prepare for them today itself. We have to make India the skill capital of the world.

- **Shri Narendra Modi**,
Prime Minister of India

To protect the environmental right of our future generations, all of us have a green social responsibility. The fast evolving and emerging technologies in dynamic world to combat the menace of environmental degradation need to be complemented by specially trained and skilled manpower in various field at all levels. Imparting skill sets for greener transformation will generate employment opportunities and strengthen our resolve to conserve and preserve the priceless environment."

- **Dr. Harsh Vardhan**, Minister,
Environment, Forest and Climate Change

India's youth needed to be empowered with skill development with focussed training in their areas of interest. For instance, there is need for skill development at the grassroots to meet the challenges of hospitality and tourism industry in order to better harness India's tourism potential.

- **Dr. Mahesh Sharma**, Minister of State,
Environment, Forest and Climate Change

A huge gap exists between the need (demand) and availability (supply) of skill sets, both cognitive and practical, at various levels in the Environment, and Forest sectors in India. However, most of the vocational training programmes focus on mechanical/technical skills rather than 'soft' skills or 'green' skills. The Green Skill Development Programme (GSDP) aims to fill this gap. It enhances the employability of people in jobs that contribute to preserving or restoring the quality of the environment, while improving human well-being and social equity.

- **Shri C.K. Mishra**, Secretary,
M/o Environment, Forest and Climate Change

1. Background: India being the second most populous country in the world is bestowed with a large working population. India has advantage of reaping this demographic dividend. However, high drop-out rates from school coupled with poor vocational skills may hinder in reaping this dividend. There exists a demand-supply gap of skill sets, both cognitive and practical, at various levels in the Environment/ Forest sectors in India.

Green skilling is crucial for making a transition from energy and emissions – intensive economy to cleaner and greener production and service patterns. It also prepares people for green jobs that contribute to preserving or restoring the quality of the environment, while simultaneously improving social equity and enhancing overall quality of life.

Realizing the demand for green skilled youth, the Green Skill Development Programme (GSDP) has been conceptualised and developed in Ministry of Environment, Forest and Climate Change (MoEF&CC). MoEF&CC has been implementing a Central Sector Scheme titled ENVIS since 1982-83. ENVIS, by providing scientific, technical and semi- technical information on various environmental issues, has served in facilitating policy formulation and environment management at all levels of Government as well as in decision-making aimed at environment protection and its improvement for sustaining good quality of life for all living beings. The ENVIS is a decentralised network of 67 Centres, of which 32 Centres (or ENVIS Hubs), working on 'State/UT environment and related issues', are hosted by the Department of Environment, Pollution Control Boards etc., of respective State/UT Governments, and 35 thematic Centres (or ENVIS Resource Partners - RPs) are working on specific subject areas. These are located in offices under the Ministry, such as Botanical Survey of India (BSI), Zoological Survey of India (ZSI), Wildlife Institute of India (WII), Forest Survey of India (FSI), GB Pant Himalayan Institute of Environment and Development (GBPHIED) and Central Pollution Control Board (CPCB), and in notable organizations/institutions/Universities throughout the country.

Utilising the vast network and expertise of ENVIS Hubs/RPs, the Ministry for the first time, 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, called 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 (2016).

The GSDP has been formulated in consultation with the National Skill Development Agency (NSDA), the nodal agency for synergizing skill development initiatives in the country, under the Ministry of Skill Development & Entrepreneurship (MSDE). All skilling modules would be NSQF compliant. For more information on National Skill Qualification Framework (NSQF) and Common Norms please follow the link: <http://www.nsda.gov.in/nsqf.html>

2. Pilot Run: The first GSDP course was formulated for skilling Biodiversity Conservationists (**Basic Course: 3 months-Completed**) and Para-taxonomists (**Advanced Course: 3 months -Ongoing**) and run on pilot basis in **ten** select districts (covering nine bio-geographic regions). The pilot course received positive feedback from all stakeholders. For more information on Training Module and Success stories please follow the link: <https://goo.gl/PzUTvy>

3. Way Forward: With the success of the pilot programme, the next step has been to expand the scope of the programme by increasing the number of courses and centres imparting the training and thus take the skilling programme to an all India level. The future activities under GSDP will include process-based green skills that are in demand such as, monitoring and managing activities such as waste, energy efficiency, impact minimization and assessment, etc. Facilitating the employment/self-employment of the skilled manpower is major goal of GSDP.

List of courses currently offered along with the prospective employment opportunities and ENVIS Hubs/RPs and Institutions/ Entities imparting the courses is given overleaf. The list is not finite and will be increased/changed depending on the demand for the courses.

Master Trainers:

The list of the courses indicated herein would be carried out by the respective ENVIS Hubs/RPs and Institutions/Entities. To expand the reach of skill development programme, there is a requirement to train a pool of **Master Trainers** who can further train youth across the country. Hence, the Ministry would initially create a pool of master trainers in each of the above mentioned courses. As per the requirement of each skilling programme, Graduates in Science/Arts as well as school drop-outs would be trained to become master trainers.

These courses would commence from July, 2018 onwards across India. The Master Trainers would in turn help in training participants in the districts of various States/UTs and would form the backbone of the entire programme in the years to come. The focus of GSDP is on skilling school drop-outs. The frequency of conducting each programme in a year would depend on the total duration of each course which would vary from course to course and accordingly the number of skilled persons would increase. Duration of these courses ranges from 80 to 560 hours.

Project Mode: Skilling in Air/Water/Soil Pollution monitoring and management of STP / ETP / CETP operation and maintenance and waste management is proposed to be undertaken in project mode in specific stretches of rivers.

Collaborations:

The Ministry has held deliberations with various stakeholders and welcomes any collaboration/ participation/ partnership in the programme from national and international organisations/ institutes/ agencies etc. to build a strong network which can be utilised for green skilling under GSDP for sustainable conservation and management of our natural resources.

For any queries/feedback please feel free to contact us at:

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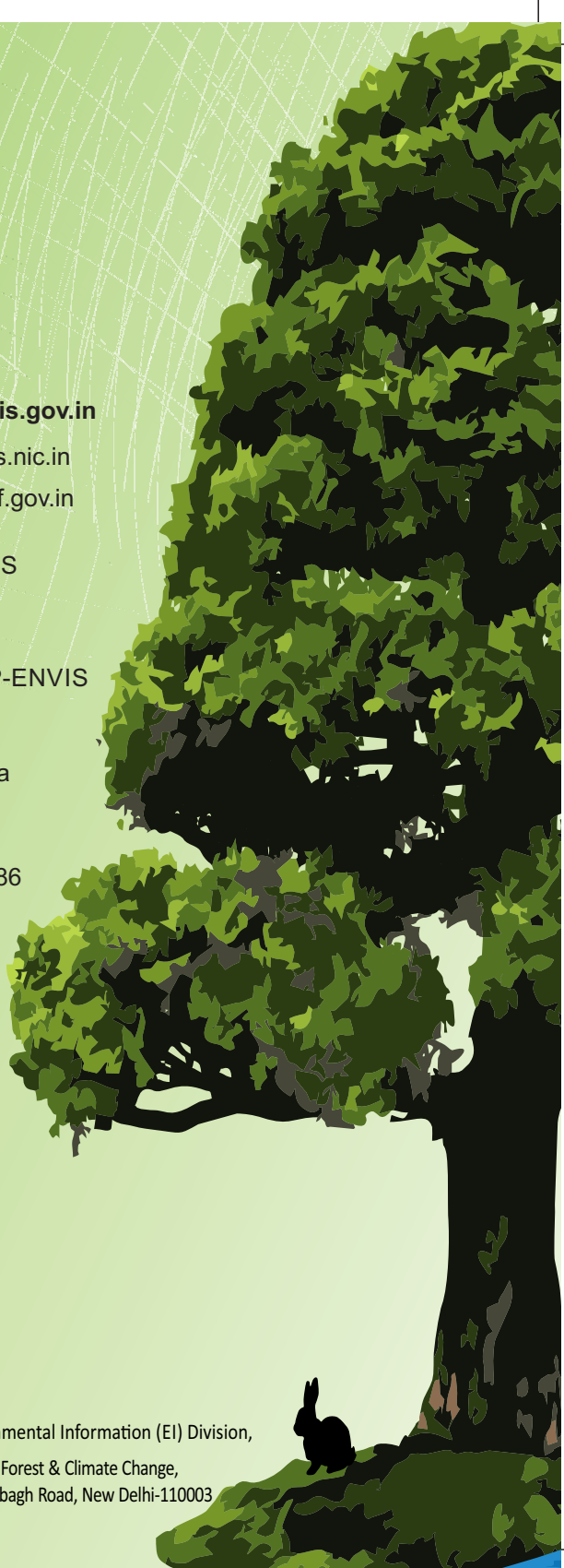
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Proposed Certificate Courses/Training programmes under GSDP for Master Trainers (MTs)/ Specialists to commence in July, 2018

SI No.	Title of Certificate Course with required Minimum Qualification	ENVIS Hubs/RPs and Institutions/Entities concerned	Prospective Employment Opportunities in
1.	Value addition & marketing of NTFPs (Plant Origin) (a) Lantana Furniture and Crafts (b) Coconut Shells & Fibre Handicrafts (c) Bamboo Crafts (d) NTFP Products / Medicinal Plants {(a,b,c) No minimum qualification, (d) Class 12th Pass}	1. AFRI, Jodhpur (d) 2. BNHS, Mumbai (c) 3. CSF, AVV, Coimbatore (a,d) 4. DoE&F, Itanagar (c,d) 5. DoE&F, Kavaratti (b) 6. FRI, Dehradun (c,d) 7. F&ED, Ranchi (c) 8. HFRI, Shimla (c) 9. IPIRTI, Bengaluru (c) 10. IWST, Bengaluru (d) 11. KSCSTE, TVM (c) 12. RFRI, Jorhat (c) 13. TFRI, Jabalpur (d)	Self-employment / Master Trainer
2.	Community based conservation of Mangroves Ecosystem {Class 10th Dropout}	1. CASMB, Parangipettai, Tamil Nadu 2. GEC, Gandhinagar 3. BSI, Pune	Govt./Nurseries/Forest Departments
3.	Value addition & marketing of NTFPs (Animal Origin) (a) Wild Bee Keeping and Processing (b) Lac & Tassar Cultivation {Class 10th Pass}	1. ASTEC, Guwahati (a) 2. IFP, Ranchi (b)	Self-employment / Master Trainer
4.	Nature Conservation & Livelihood: (a) River based - Ganga Prahari (b) Nature Interpretation (c) Eco-tourism (d) Scuba Diving for marine life conservation # {Class 10th pass}	1. CES, Odisha (c) 2. DoE&F, Kavaratti (d) 3. GBPNIHESD, Almora (b) 3. SCSTS, Gangtok (c) 4. WII, Dehradun (a, b)	Self-employment / Master Trainer / Forest Departments in States/UTs
5.	Quality Planting Material Producer {Class 10th pass}	IFGTB, Coimbatore	Self-employment / Master Trainer
6.	Sustain and Enhance Technical Knowledge in Solar Energy Systems {Class 12th dropout}	1. EPTRI, Hyderabad 2. TERI, Patna 3. Department of Environment – Chandigarh 4. DoEERS, J&K	Self-employment / Private Firms / Govt. bodies
7.	Propagation and Management of Bamboo {Class 12th Pass}	1. FRI, Dehradun 2. HFRI, Shimla 3. IFP, Ranchi 4. IWST, Bengaluru 5. KSCSTE, Thiruvananthapuram 6. RFRI, Jorhat 7. TFRI, Jabalpur 8. F&ED, Ranchi	Self-employment / Nurseries / Botanical Gardens / Master Trainer
8.	Management of Small Botanical Gardens {Class 12th Pass}	1. CPREEC, Chennai 2. FRI, Dehradun 3. F&ED, Ranchi 4. AFRI, Jodhpur 5. TFRI, Jabalpur 6. KSCSTE, Thiruvananthapuram	Self-employment/Nurseries/ Botanical Gardens/Households/ Corporates/ Govt./University campuses
9.	Plantation Techniques and Utilization of Renewable Energy in Arid Zone {Class 12th pass}	ICAR-CAZRI, Jodhpur	Self Employment / Research Institutions related to the theme
10.	Forest Fire Management {Class 12th pass}	DMI, Bhopal	Forest Departments
11.	River Dolphin Conservation {Class 12th pass}	ZSI, Patna	ZSI / Research Institutions related to the theme
12.	Forest Entomology & Pest Control {Graduate}	1. FRI, Dehradun 2. KSCSTE, Thiruvananthapuram 3. TFRI, Jabalpur	Pest Control Agencies/ Companies/ Forest Departments/ Research Institutions
13.	Valuation of Ecosystem Services and Green GDP {Graduate}	1. BNHS, Mumbai 2. EPTRI, Hyderabad 3. IISc, Bengaluru 4. KSCSTE, Thiruvananthapuram	GRIDSS/ Research Institutions etc.
14.	Water Budgeting & Auditing {Graduate}	1. ADRI, Patna 2. EPTRI, Hyderabad	Urban local bodies/ Panchayats in rural areas/ Industries/ Water treatment plants/ Research Institutions etc.
15.	Paralegal Practices : (a) Forestry Acts and Policy (b) Environmental Laws {Graduate}	1. ICFRE, Dehradun (a) 2. NEHU, Shillong (b) 3. NLSIU, Bengaluru (b)	Facilitation Centres in State Forest Departments/ Law Firms
16.	ETP/STP/CETP Operation and Maintenance {Science Graduate}	1. CECB, Raipur 2. CSIR-NEERI, Nagpur 3. EPTRI, Hyderabad 4. GCPC, Gandhinagar	ETP/STP/CETP Plants in industries/Municipal Corporations/ Councils/Boards
17.	Low Cost Sanitary Napkin Production {Class 10th pass}	IIHH, Delhi	Self-employment / Master Trainer / Private Firms / Govt. bodies

Only for residents of Lakshadweep.

SI No.	Title of Certificate Course with required Minimum Qualification	ENVIS Hubs/RPs and Institutions/Entities concerned	Prospective Employment Opportunities in
18.	Pollution Monitoring : Air and Water Pollution {Science Graduate/ Diploma in Engg.} Soil Pollution {Science Graduate/ Diploma in Engg.}	1. ADRI, Patna 2. CPCB, Delhi 3. EPTRI, Hyderabad 4. IIT-ISM, Dhanbad 5. IITM, Pune 6. MPCB, Aizawl 7. NPCB, Dimapur 8. Puducherry PCC 9. TSPCB, Agartala 10. UEPPCB, Dehradun 11. CPCB-RD, Bhopal 12. CPCB-RD, Bengaluru 13. CPCB-RD, Kolkata 14. CPCB-RD, Lucknow 15. CPCB-RD, Shillong 16. CPCB-RD, Vadodara 17. NBRI, Lucknow	CPCB/SPCB/ Municipal Corporations/ Councils
19.	Laboratory Technicians / Technical Assistants for electrical testing for environmental criteria {ITI (Electrician/Wireman)/ Diploma/Degree (Electrician/Wireman)}	CERC, Gujarat	Private firms/Govt. certifying institutions/bodies
20.	Emission Inventory {Graduate / Post Graduate / Engineering background}	1. IITM, Pune 2. ADRI, Patna	CPCB/SPCB/ Municipal Corporations/ Councils
21.	Para-Taxonomy [including Peoples Bio-diversity Register (PBR)] {Science Graduate only (with Bio Science)}	1. ASTEC, Guwahati 2. BNHS, Mumbai 3. BSI, Kolkata 4. BSI, Allahabad 5. BSI, Coimbatore 6. BSI, Dehradun 7. BSI, Itanagar 8. BSI, Jodhpur 9. BSI, Port Blair 10. BSI, Pune 11. CASMB, Parangipettai, Tamil Nadu 12. CES, Bhubaneswar 13. DESKU, Nadia, W. B. 14. DoE, Imphal 15. DoE&F, Itanagar 16. EPTRI, Hyderabad 17. GBPNIHESD, Almora 18. GEC, Gandhinagar 19. HIMCOSTE, Shimla 20. IOM, Chennai 21. ZSI, Kolkata 22. ZSI, Dehradun 23. ZSI, Itanagar 24. ZSI, Jodhpur 25. ZSI, Kozhikode 26. ZSI, Port Blair 27. ZSI, Pune	GRIDSS / BSI / ZSI / FRI / ICFRE / SACON / Zoos / wildlife sanctuaries/ national parks / biosphere reserves / Botanical Gardens/ Bird Sanctuaries/ Nurseries/ wetland sites/WCCB Regional Offices/ State Biodiversity Boards/ Biodiversity Management Committees
22.	Bird Identification and basic ornithology {Class 10th Dropout}	1. BNHS, Mumbai 2. SACON, Coimbatore	Industries / Master Trainer / Export & buying houses / e-NAM / Mandi Samitis
23.	Bird Migration and Migration study techniques {Graduate with basic knowledge of birds}	BNHS, Mumbai	
24.	Wildlife Management using Geospatial Techniques {Science Graduate}	WWF, Delhi	
25.	VRIKSH - Timber Legality Assessment Programme {Science Graduate}	NCCF, Noida	Industries / Master Trainer / Export & buying houses / e-NAM / Mandi Samitis
26.	Plant Tissue Culture Techniques and its Applications {Science Graduate}	1. BSI, Dehradun 2. BSI, Shillong 3. BSI, Yercaud 4. DESKU, Nadia, W. Bengal 5. EPTRI, Hyderabad 6. KSCSTE, TVM 7. TFRI, Jabalpur	Research Institutions related to the theme
27.	Waste Management: (Solid Waste, Biomedical Waste, Plastic Waste, E-Waste, Construction and Demolition Waste) {Science Graduate}	1. AFRI, Jodhpur 2. CPREEC, Chennai 3. CSIR-NEERI, Nagpur 4. DESKU, Nadia, W.Bengal 5. DzUM, Chennai 6. DoE, Tamil Nadu 7. EPTRI, Hyderabad 8. FRI, Dehradun 9. F&ED, Ranchi 10. IIHH, Delhi 11. KSCSTE, TVM 12. NEHU, Shillong 13. TCE, Madurai 14. TFRI, Jabalpur 15. TSPCB, Agartala	Municipal Corporations/ Councils
28.	Laboratory Assistant for Eco-friendly Food testing Laboratory {Science Graduate}	1. CERC, Gujarat 2. NIOH, Gujarat	Eco-friendly Food Testing Labs
29.	Environmental Impact Assessment {Science Graduate}	1. CES, Odisha 2. EPTRI, Hyderabad	Industries / Municipal Corporation / Councils / State Pollution Control Boards
30.	Cleaner Production Assessment {Science Graduate}	GCPC, Gujarat	Industries
31.	Greenbelt Development for Industries {Science Graduate}	NBRI, Lucknow	Self-employment / Private Firms / Govt. bodies
32.	City Environmental Surveyor {Science Graduate/ B.Tech (Env. Engg.) / B.Planning}	SPA, Delhi	Environmental Cell in States/ UTs/Development Authorities/ Municipal Corporations/ Councils

