

## REPORT

# **Training of vocational Trainer on Green Technical and Vocational Education and Training**



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NCVET

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# 1.Report

A Three-day training programme was conducted at Pss Central Institute of Vocational Education (NCERT) Shyamla Hills, Bhopal from 27-29 November 2019. About 14 participants from different states attended this programme. The training programme aimed to create awareness about different aspects of Green skill education. Programme was inaugurated by Dr. Rajesh P. Khambayat Joint director PSSCIVE Bhopal. Dr. Rajesh P. Khambayat Joint director PSSCIVE Bhopal welcomed all the participants and emphasized the need of Green skill training for the development of the country. During the inaugural session, Dr. Saurabh Prakash, Programme Coordinator, welcomed all the participants and informed the aim and objectives of the programme.

During the training programme, various topics related as per programme scheduled were discussed and trainees interacted on all the related the topics. Participants interacted on various activities of promoting Green Skill through vocational education programme in school, need identification of green skill for various green job, instructional Strategies technique, Developing instructional Media for Green Skill development, Assessment & certification of green skill and competencies. Participant demonstrated various Green skills and presented group work. During validity session, participants shared opinion about the programme. Certificates were distributed to the participants. Programme Coordinator proposed the Vote of thanks.





Glimpses of Programme



## 2. Background Paper

### **Training of vocational Trainer on Green Technical and vocational Education and training 27-29 November 2019**

#### **Rationale**

Technological and societal developments and growing concerns about climate change, environmental degradation, and scarcity of resources are changing the nature of work. These developments demand that TVET develop skills and provide knowledge to ease transitions to green economies and societies.

In light of the Sustainable Development Goals (SDGs), TVET underpins many of the proposed goals and the achievement of sustainable development. TVET is crucial in reorienting society to adopt the low-carbon mentality so essential to addressing climate change. It is also impossible to think of making gains in poverty reduction, job creation, and decent work provision without transforming TVET. For example, Goals 4, 6, and 8 of the SDGs are directly related to TVET, with many of the targets capable of being supported by a well-designed TVET system and targeted skills-development interventions.

Why TVET institutions must engage in the greening process?

TVET plays an important role in making transitions to a low-carbon economy and climate-resilient society. It is carried out through the traditional roles of TVET in preparing learners for the occupational fields and increasing their participation in the world of work. These traditional roles are facing new expectations:

- **TVET for educating and training individuals to transition to a sustainable society**

Human activities, as well as occupations in the workplace, need to be carried out in a way that is sustainable and environmentally friendly. Since many human activities in the past have not achieved this, there is a need to adapt the processes in personal consumption as well as in occupations that are carried over from the past, and to develop new sectors of activity to replace environmentally unfriendly alternatives. They are essential to create a more sustainable society: for instance, developing skills and promoting the study of technologies that lead to avoiding as far as possible the use of irreplaceable raw materials, recycling waste, minimizing energy use, and avoiding pollution of the environment. The opportunity to develop entrepreneurial learning through vocational education and training could also lead to the creation of sustainable enterprises and social enterprises that work for the common good of society. Many of these enterprises address more efficiently social, human and environmental concerns.

- **Making TVET input current and relevant for the ongoing labour market regulations**

There are a large number of TVET graduates working throughout the economy. Many employment sectors are regulated by standards covering their operations, and many jobs have defined skills standards. Individuals typically undertake TVET intending to obtain the skills level or qualifications needed for regulated occupations, or jobs for which standards of competence or level of skills are clearly established to perform the job. As well as regulations covering personnel qualifications, much economic activity is governed by regulations covering operations more widely (although to a degree that varies between countries and between sectors). Unfortunately, many existing regulations and standards date from an era before the need for sustainability was fully appreciated, and have not yet been fully updated to meet the requirements of transition to a green economy.

They may even help to maintain a 'business-as-usual' mode of operations, work processes and methods, when this is patently not sustainable: using raw materials, creating waste and emissions, to a degree that causes unnecessary harm to the environment.

- **Instilling consciousness, motivation to develop a green culture**

Staff and students in learning institutions may not have reached the point of understanding what needs to be changed to achieve sustainable development. Even when they appreciate the issues, they may not possess the motivation to be part of a bigger transformational agenda that is possible through a collective movement. It is first necessary to ensure that there is a collective appreciation of the changes in the economy and society that are needed to achieve sustainability. Then, it is necessary for them to act corresponding to these changes. Mobilizing collective action can be made by establishing green agendas as a norm in an institution. Factors preventing or slowing change can be addressed together with a common goal, an enhanced motivation, and collective action to demonstrate good practices. This paves the way for developing a new culture and guiding those involved so changes do take place.

#### **Why invest in greening TVET**

- Greening TVET helps production to advance to more environmentally-conscious practices;
- A 'green' worker is a more employable worker; a 'green' workforce will enhance the profitability of the enterprise;
- National governments need to seize the potential for job creation by providing skills needed in the new green sectors;
- Disadvantaged groups in the labour market (young people, women, persons with disabilities, rural communities, and other vulnerable groups) require targeted support to develop their potential knowledge and skills for green jobs.

What the greening of TVET institutions can achieve?

UNESCO-UNEVOC contributes to the fulfilment and monitoring of the SDGs by promoting the greening of TVET institutions. This is projected to help institutions create an institutional environment that makes it conducive for institutional stakeholders contribute to achieving the goals of the SDGs, namely SDG 4 (Quality Education); SDG 6 (Clean Water and Sanitation), and SDG 8 (Decent work and Economic Growth).

In the context of TVET, a 'whole-institution' approach to implement education for sustainable development would be ideal. Greening is used as a process of pursuing knowledge and practices with the aim to be more environmentally friendly and enhance decision-making and lifestyle in a more ecologically responsible manner, which can lead to environmental protection and sustainability of the natural resources for current and future generations. If adapted to the educational and training activities of an institution, it could lead to an incremental and systematic process of change. The greening of the TVET institution process invites actors of training and learning to engage in approaches that seek to develop knowledge, skills, and attitudes that can lead to more sustainable practices in the community, the workplace, and other settings where knowledge and skills could be applied. It can also lead to obtaining professional qualifications

or proofs of learning that reflect environment-friendly skills to perform tasks.

In the context of implementing 'UNESCO' Global Action Programme on ESD (GAP in ESD), UNESCO-UNEVOC promotes the implementation of Greening TVET. It has a broad aim of supporting institutional policies and capacities; transforming learning and training environments that can impact the immediate communities and their needs; and addressing the capacity needs of institutional leaders, principals, training managers, teachers, and trainers

The 'greening' process for TVET institutions.

How to green TVET institutions: a four-step guide for implementing approaches to sustainability in TVET:

**STEP 1: Understanding the process**

**STEP 2: Planning for the greening of TVET**

**STEP 3: Implementing an Institutional Green Plan**

**STEP 4: Monitoring and Assessment Strategies**

## **The Five Approaches to Sustainability**

### **Greening the campus**

*Aims to manage the campus in such a way that it could strengthen its operating mechanisms, adhering to the highest sustainability principles and practices that can reduce its ecological footprint.*

The term 'campus' refers initially to greening a broad range of physical features – buildings, landscape, maintenance procedures, and campus services. The initial goals are often to reduce the costs associated with resource usage such as energy, water, and waste, and to reduce and better manage the institution's GHG footprint. The savings achieved are then often used as the means for funding the overall greening plan within an institution.

The procedure involves adapting institutional operating goals and methods so as to improve the overall efficiency, conformity, and costs in running the institution. These economies may be achieved through adapting facilities to conform to new building standards (or code of practice) for energy efficiency, or enhancing the environmental conditions and aesthetics of the grounds while reducing water resource use.

As well as the buildings and their maintenance and procedures, other services such as food, procurement, and transportation are usually seen as integral parts of greening the campus. Greening also entails making the campus a better place to live and work, with good air quality and daylight to facilitate learning processes and improve learning outcomes, a safer place for the members of its community, and/or making the campus more accessible for students with disabilities. Greening the campus is all about creating an institution that can become a model of sustainable living and an inclusive laboratory of ideas, skills, and innovations for sustainable development. It also represents a place where sustainable, healthy, and safe conditions exist, which improves the opportunity for students – of all creed, religious beliefs, and gender – to learn technical skills and obtain the knowledge, skills, and attitudes that lead to formal qualifications, and help them lead a sustainable work and life.

Outcomes:

- Sustainability principles are applied in the institutional structures,

- philosophies and services, learning processes, and physical site;
- Resources are deployed to support an institutional green movement;
- Financial returns and status benefits for the institution through cost savings, improved facilities, and institutional development.

### **Greening the Curriculum and Training**

*Aims to integrate sustainability into the existing curriculum and training of an institution.*

As well as greening the campus, it is also crucial to address what is taught to the students in both institution-based and work-based settings. ‘greening the mind’ is facilitated through identifying the short-term skill needs and the changes over time that will prepare students to play a role in a dynamic and greening process of the economy. Correspondingly, it entails adapting relevant contents and training so that knowledge and skills are imparted that satisfy the needs of current structures, technologies, and job tasks of occupations in the labour market. It also involves ensuring that the process and outcomes of training are evident of the

acquisition of practical skills that can add value to sustainably performing the job in a more sustainable manner, and simulate this experience in real work-place setting.

In every discipline, there is an opportunity to contribute to a basic understanding of sustainability and its importance for the future. This greening of the curriculum should not be limited to environmental issues alone, but should also address social and economic aspects, and their skills implications. How learners progress through learning for sustainability can be supported effectively by career guidance and the development of upskilling programmes to promote the alignment of skills with the needs of the economy.

What is developed in the curriculum has expanded considerably over time. This Guide adapts ‘UNESCO’ definition of the curriculum. Properly oriented to sustainability contents, objectives, and outcomes, this defines it as an effective and organized programme of both theoretical and practical studies, the successful completion of which would lead to achieving educational goals attuned to SDGs.

Greening the curriculum and training means adapting training disciplines to sustainability concepts and practices in the curriculum used in formal TVET, as well as in non-formal or informal training/learning for young people and adults in a work-based context to enable them to acquire practical skills and participate in green transitions.

*Outcomes:*

- Environment-related contents and green skills development are part of an evolving TVET curriculum and training;
- Teachers and trainers are supported to be competent and develop confidence in delivering relevant contents on sustainability across disciplines;
- Students are equipped with knowledge, skills and competencies adapted to the needs of societies and economies, and that are valued in the world of work;
- Students are well informed and guided through the ongoing process of learning for sustainability.

### **Greening Research**

*Aims to apply sustainability in research philosophies, content, ethos and standards.*

Green research is, and must be, an integral component of the institutional culture. As well as investigating concepts, beliefs and theories on how to better manage the greening of operations, products, student/trainee/community

outcomes and the correction of unsustainable patterns of consumption and production, it stimulates the commitment of both teachers and students to carry out research on matters that contribute to discovering practical solutions to problems of either an academic or empirical nature.

Research involves the systematic collection of data that can support students, teachers, and communities in reaching where they want to be, establishing and accessing adequate labour market data and information about skills and skills forecasts that can inform decisions and direct learners to a just transition to decent work and life. Apart from identifying research themes, such matters as ethical principles and considerations for undertaking research procedures, and locating appropriate sources of information, are very much part of this process.

*Outcomes:*

- The institution implements sustainability plans and principles based on research data, and disseminates them;
- The institution proactively engages in collecting labour market information and data useful for students, graduates and the learning community;
- Teachers and students are engaged in projects that investigate applications of sustainability practices and develop solutions together;
- The institution applies standards of research ethics responsibly as part of the interdisciplinary implementation of research processes.

### **Greening the Community and the Workplace**

*Aims to stimulate institutions to engage with enterprises and the wider community in the institutional greening plan and programmes.*

Whereas the need for greening commerce has emerged as a top priority in the business world, there is a need to prepare students with the fundamentals of sustainability within the workplace in which they find employment and within communities where skills are valued as an integral part of local or community-based development. While greening the curriculum for work-based learning emphasizes what is taught to students or employees in a work-based setting, the 'greening of the workplace' focuses on what TVET education can contribute to influencing the greening of work environments or businesses. In simple terms, this means promoting practices that contribute to reducing the environmental impact of business practices and, where possible, jointly developing sustainability programmes and projects to address local issues.

Adapting greening to corporate structures and business development is as important as embedding sustainability in the operating norms of enterprises. Greening the community and the workplace cannot happen without development of local skills and resources that can grow sustainable local markets and enterprises.

*Outcomes:*

- The institutional community contributes to sustainable lifestyle, consumption, and production;
- The institutional community preserves the deep-rooted sustainable practices of local and indigenous communities;
- Sustainability projects involve school communities and partners;
- The institutional community develops networks of partners in the business community, local enterprises, and industries;
- The institutional community is empowered to influence others in the community and the workplace.

### **Greening Institutional Culture**

*Aims to embed sustainability into all the aspects of an institution's operations and programmes.*

It is the practices and culture on campus that set the tone and expectations of all those who work at and learn in the institution. The very ethos of the institution should correspond to the curriculum, the overall institutional greening plan (IGP), and other initiatives within this plan. This will reflect the institutional vision through hiring and promotion procedures, evaluation schemes, rewards and celebrations, and should also be present in the everyday behaviour of the managers, the teaching personnel, other workers, and students. This should eventually become part of the institution' branding and reputation, making it

### **Objectives**

On completion of the programme, the participants will be able to:

1. Understand the significance of Green TVET for Sustainable Development Goals 2030;
2. Elucidate different strategies and approaches for promoting green skill in vocational education;
3. Comprehend the models of developing curriculum for Green Skills occupation;
4. Develop instructional strategies and techniques for Green skills among vocational graduates;
5. Comprehend the methods of assessment & certification for green skills and competencies.

### **Content**

Green TVET, National Skills Qualifications Framework (NSQF), Competency Based Education & Training (CBET), National Occupation Standards (NOS), Competency Based Curriculum (CBC), Courseware, Competency Based Assessment, etc.

**Participants:** Key functionaries (Director, Joint Director, Deputy Director, Assistant Director, District, OSD, Education Officer, Principal, teachers, etc.)

**Duration:** 03 days (From 27 to 29 November 2019)

**Venue:** 5G, PSSCIVE, Bhopal

**Programme Coordinator:** Prof. Saurabh Prakash, Professor, Engineering and Technology Department, PSSCIVE, Shyamla Hills, Bhopal -462 013, Tel. 0755-704123, 09425301901, Email: [saurabh\\_p@yahoo.com](mailto:saurabh_p@yahoo.com)

## 3. Programm Schedule

### Training of Vocational Trainers on Green TVET Dates: 27 –29 November 2019

**Venue: Training Hall (7A), PSSCIVE, Bhopal**

	<b>Session 1 09:00 AM –</b>	<b>Session 2 11:30 AM</b>	<b>Session 3 02:00 PM –</b>	<b>Session 4 03:45 PM –</b>	
27.11.2019	Registration Inaugural and Pretest	Greening TVET: An Overview	Promoting Green skills through Vocational Education in Schools	<b>Syndicate Task 1</b> Identification of Major Challenges and Issues in promoting Greening TVET <b>(Presentation)</b>	
28.11.2019	MILY	Introduction to Clean & Green Technologies	Conducting need identification of Green Skills for various green jobs /occupations	Developing Model Curriculum for Green Skills Occupation <b>Syndicate Task 2</b> Develop	Instructional Strategies & Techniques for developing green skills among
29.11.2019	MILY	Developing Instructional Media for Green Skills Development	<b>Syndicate Task 3</b> Develop Instructional Media for Awareness on Green TVET Skills <b>(Presentation)</b>	Assessment & Certification of green skills and competencies	Open Discussion and Valedictory

**Tea Break: 11 to 11:15 am, 3:30 to 3:45 pm**

**Lunch: 1 to 2 pm**

**Programme Coordinator : Dr. Saurabh Prakash**  
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## 4. List of Resource Person

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## 5. List of Participants

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