



International
Labour
Organization

► Greening guidelines for TVET institutes



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► Introduction

'Greening' an institution is a method of modifying the institution's awareness, behaviors and activities with the goal of matching them up with the broader principle of sustainability - that is, economically, socially and environmentally responsible. Any aspect of the practices of an organization can be addressed through the greening process. Technical and Vocational Education and Training (TVET) institutions may also engage in greening through a holistic comprehensive framework that aims to improve awareness, expertise and behaviors that could contribute to more productive workplace and community practices. Greening a TVET institution as a whole will make young people active members of the green economy, resulting in increased human well-being and social justice, while reducing environmental risks and ecological scarcity. However, there are several steps, frameworks and guidelines established by the specialized agencies of the United Nations for greening a TVET institution and some of those frameworks and guidelines will be the primary focus of this report.



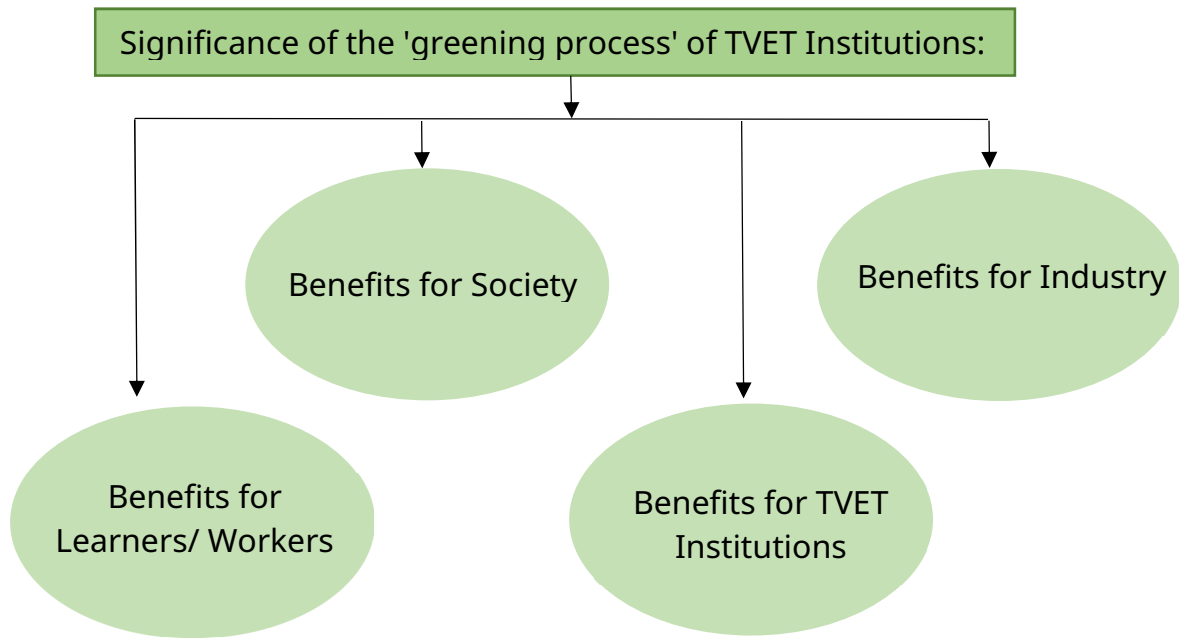


Figure 1: Significance of the 'greening process' of TVET Institutions

► Significance of the 'greening process' of TVET Institutions

The knowledge, skills and competencies acquired from TVET can help individuals contribute to the development of a green economy as well as practice sustainable actions in other areas of their life. Hence, greening TVET Institutions, benefits not only the workers/learners but also society as a whole. The four distinctive groups who can actually gain from such a transition include:

- **Benefits for Society**

To achieve sustainable development, it is vital to have a cultural transition that can be maintained by the employees with appropriate abilities. The living standards of the nation are likely to get better if the National Green Growth Action Plan is implemented, particularly concerning the limitation of air and water pollution. This

plan can be brought into action by competent workers who will be well trained with applied technologies. Moreover, new jobs will be created in a green economy and to acquire these jobs TVET will equip people with the appropriate skill requirements.

- **Benefits for Industry**

Greening the TVET institutions will not only strengthen one industry but the economy as a whole will be benefited by well-educated workers who can recognize the environmental demands coordinated in each field of job and will be trained in the related green skill sets. The working environments of the organizations will be better on the grounds that workers will be learning in their vocational training how to act accurately and how to maintain a

strategic distance from dangers and harms in the workplace.

- **Benefits for Learners/ Workers**

The incorporation of green skills in all training courses, as well as the provision of green technology specializations in conventional training courses, would improve graduates' work opportunities. In addition, the change of the working environment brought on by proper occupational actions and awareness of the requirements to be considered would decrease the risk of mistakes in the workplace and occupational hazards. On the other hand, if the teachers or the superiors value the commitment of

learners and workers towards greening activities, job satisfaction will increase.

- **Benefits for TVET Institutions**

TVET institutions themselves will be most fortunate to enjoy the benefits of the greening process. The reputation of a TVET institution is strengthened by being role-models for eco-friendliness. Greening can be a quality feature of TVET which means that the performance of vocational colleges will get better. In addition they can become strategic partners to develop sustainable development in the nation and act as a source of inspiration for other industries to bring changes in their business models.

► **What is ESD? Implementation of ESD in TVET Institutions**

Education for Sustainable Development (ESD) is a concept which implies that the world's existing education and training system should be utilized together with the public awareness system to implement sustainable development efficiently. Greening TVET can contribute to transforming learning and training to address the need for sustainable development. The United Nations motivates colleges, universities and communities to move forward with the ESD and the new SDGs. The Global Action Programme (GAP) also targets to accelerate and expand existing interventions in all stages and fields of education and training, precisely the TVET. However, according to *Agenda 21*, ESD comprises four thrusts of activities:

- Improve basic education
- Reorient existing education to address sustainable development
- Develop public understanding and awareness
- Training (to advance sustainability across all sectors)

Greening of TVET is firmly situated in the second and fourth spheres of activities

ESD can be implemented in TVET Institutions by a framework of Five Approaches and they are: Greening the campus, greening the curriculum and training, greening research, greening the community and workplace and greening the institutional culture.



1. GREENING THE CAMPUS

It seeks to encourage integrated campus management in order to improve operational sustainability frameworks. It is structured to ensure that sustainability standards are implemented; that resources are utilized; and that financial incentives and rewards for the organization are generated.



2. GREENING THE CURRICULUM AND TRAINING

It seeks to incorporate sustainability into current curricula and training. It seeks to align both the program and instruction with sustainability content and green skill sets. In the phase, teachers and trainers are exceedingly groomed with the skills required to provide appropriate content throughout field of studies or in a particular field of expertise.



3. GREENING RESEARCH

It seeks to encourage and incorporate sustainability in the fields of research theory, substance, ideology and principles. It is through this method that organizations can participate in the gathering and distribution of data that is valuable to the learning community. Actors at the institution aim to explore the implementation of sustainable methods and to build solutions collectively.



4. GREENING THE COMMUNITY AND WORKPLACE

It aims to co-develop and align sustainability strategies and programs with organizations and communities that can embrace common priorities and become the benchmark for sustainable workplace practices and sustainable lifestyles.



5. GREENING THE INSTITUTIONAL CULTURE

It seeks to integrate sustainability into all facets of the organization. Greening culture is where sustainable development could be an essential component of both the institution's strategies and plans, where the gains are conveyed by stakeholders and are apparent in a number

Figure 2: Five approaches to sustainability in TVET Institutions

Implementing ESD into TVET Institutions

1. Green Campus:

- Place notices above light switches to remind people to turn lights off if there is enough daylight or when lights are not being used.
- Do not use electricity-requiring decorations.
- To reflect the sun and heat outwards, use light colored curtains.
- When using air-conditioning systems, shut doors and windows.
- To take advantage of natural light, put the workspace closer to the windows.

2. Green Curriculum:

- Integrate green skills and environmental knowledge in curriculum.
- Capacity development of teachers and instructors.
- Practical studies on the regulation, installation and maintenance of wastewater treatment and drainage system equipment.
- Add new courses that focuses on renewable energy or resource efficiency.
- Enhance explorative learnings by means of appropriate facilities.

3. Green Research:

- Check the best technologies, equipment and processes to enhance building energy efficiency in order to reduce energy usage.
- Calculate and compare costs and monetary impact of, for example, various lighting systems or energy-saving processes in classrooms.
- Research how human commitment and attitudes can better be improved in order to conserve resources and / or to contribute to the growth of a green culture
- Test and compare the efficiency and efficacy of various forms of solar systems.

4. Green Community:

- Offer formal and / or informal training (on installation of solar heaters, operation of biogas plants etc.)
- Provide supporting projects to solve local problems (insertion of PV based lighting systems, improvement of water supply and / or waste water management).
- Provide awareness programmes for local business on sustainability topics.

5. Green Culture:

- Involve staff and students in improvement process.
- Initiate public relation activities to showcase green activities.
- Clean classrooms, workshops, and school yards once in a week by students.
- Plant trees around the school to create greener space.

► Greening TVET Institutions: A Systematic Procedure

According to Skills for Green Job (S4GJ) (2014), UNESCO and UNESCO-UNEVOC International Centre for TVET, the greening process of TVET Institutions consists of several steps and they comprehensively include:

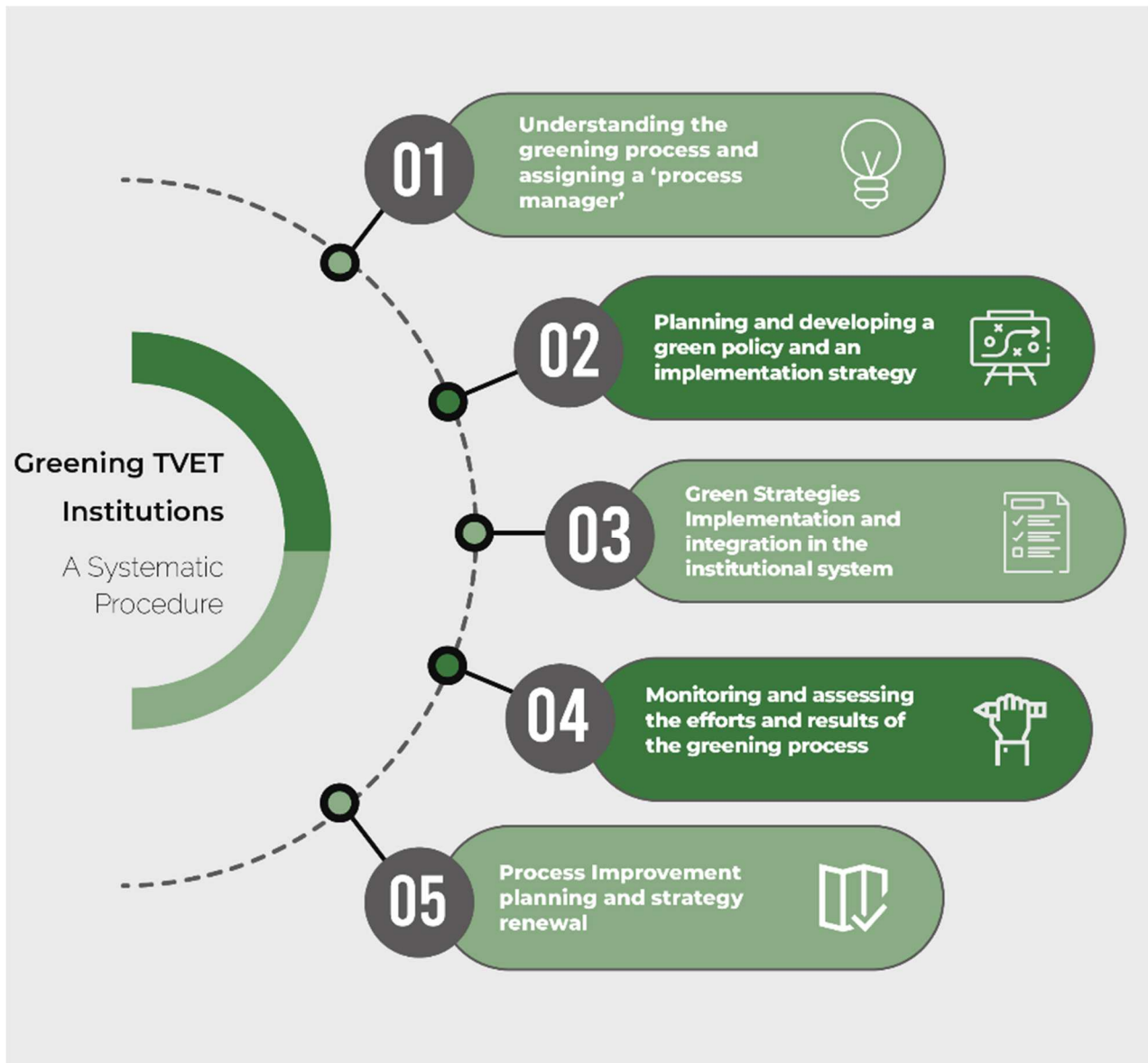


Figure 3: Greening TVET Institutions- A systematic procedure

- Understanding the greening process and assigning a 'process manager':

The Greening of TVET Institutions process encourages those interested in teaching and learning to participate in an institution-wide approach. The strategy, as a whole, boosts capacity-building skills that allow people to actively participate in green economies, sustainable and climate-resilient societies, and to undertake decent, lifetime working opportunities. Greening education and training is a method to integrate what may be termed 'institutional DNA' into the very ethos of the institution, to be conveyed to the immediate population of the institution and to be monitored and assessed over a period of time. Greening should not be an endpoint but rather a continuous and evolving process, as demands and possibilities arise within the organization, workplace and society at large. Like any other process, greening a TVET institution requires someone who takes the responsibility and controls and runs the process. This person is called the 'process manager'. For greening purposes, he or she is the ultimate contact person of the respective TVET organization. The suitable positions in the TVET for becoming a process manager on greening can be Marketing Expert, Facility Manager, Quality Manager, etc. who possesses skills like basic technical understanding, enthusiasm for the subject of greening, communication skills, sound knowledge of the greening TVET institution concept and many more.

In addition to the assignment of process manager, a green committee should be set up. All stakeholders should be embodied by the Green Committee; it is the central portal for introducing greening practices and it is positioned in the strategic level. The process manager assumes the tasks and responsibilities of the members of the committee. The timing of the meetings is dependent on demand; nevertheless, once every quarter, it should take place. Some of the tasks of the green committee are listed below:

- Ensure the participation of all school system partners in the decision-making process
- Integrate the greening initiative into the school growth plan
- Ensure recognition and "open doors"
- Guide and coordinate the greening process at school
- Assist the Process Manager and action teams

For the systemic implementation of green problems, a study of the direct and indirect environmental implications and a review of the environmental impacts of the TVET organization are required. The environmental review is critical to understanding the current environmental situation in the organization and lays the foundation for the greening program of TVET College. The context to which the assessment should refer to must be specified. It could be a whole institution, a premise or a workshop. It can also be possible

that it is concentrated on one topic such as electricity, water, waste, or on a variety of subjects. The greening process should focus on ecologically relevant environmental problems and where TVET has the ability to improve its output

- Planning and developing a green policy and an implementation strategy:

The transition of a whole organization into a stronger service for its students and communities demands planning and preparing with considerable insight. The planning represents **green agenda and tactic** that offers information on:

- targets,
- initiatives,
- time-lines, and
- obligations

If the TVET is at an early stage of greening, it should concentrate on a few relevant topics such as energy conservation or waste control. The organization should also understand how the efficiency of the school/college can be enhanced in relation to these topics.

- The strategies should be kept *rational*, in line with the technological facilities, budget, plans, school holidays, and graduation dates.
- Related fields of action need to be established, based on the findings of the environmental assessment.
- Concrete goals and development steps or programs must be inferred for the selected field of operation.
- Improvement prospects that are quickly introduced and incur little to no losses are of particular importance.

It is strongly advisable to provide comprehensive documentation of the individual interventions in terms of a map. Responsible people, projected expenses, and the final date will be reported alongside this very measure. Greening activities should be enforced or supervised by the respective accountable individuals or action teams.

- Green strategies implementation and integration in the institutional system:

This step focuses on developing an implementation strategy. If the existing conditions have been identified, goals have been set and a roadmap has been drawn up, the next step will be the development of a policy and the start of execution.

- TVET organizations must incorporate the Institutional Greening Plan (IGP) in a transparent and inclusive manner.
- A strong message is required to ensure that each faculty, department or unit is dedicated to a shared goal.
- Departmental duties should be delegated to individual employees or groups.
- To create momentum, the program should begin with a sequence of acts intended to deliver short-term milestones.
- Plans should be developed for achievements that are obviously apparent and depending on the required outcomes.
- Linkages and collaborations with other government initiatives should be created.

These step by step policies would save organizations from pursuing initiatives and distributing resources that often lead to dissatisfaction when there is a shortage of resources or skills within an organization. The allocation of investment is a critical step that is being pursued by all. Energy, water and waste management benefits are a focal point of focus for several initiatives. Tangible advantages can come from several minor activities distributed across the entire campus, and these gains can be reinvested in the cycle. Many massive physical investments, such as boilers and insulation, go unnoticed by many but can lead to major cutbacks in overhead expenses. The procurement of human capital is also a vital aspect of the operation. It needs attention and thought to pick the best faculty members to transmit messages to others to lead the preparation of other faculty members and to organize the programme.

- **Monitoring and assessing the efforts and results of the greening process:**

Guiding the continual process of transformation through monitoring and assessment is an essential component for greening an institution. This component follows a sequence of actions and they are:

- The reason for monitoring needs to be established
- The scope needing assessment should be clarified
- A framework of monitoring and assessment should be developed

The assessment of actual success in each sustainability strategy for TVET organizations allows for tracking progress on the basis of a collection of goals and predetermined performance measures. However, development in TVET greening is experimentally and numerically measurable. It is easier to calculate factors such as the number of classes and students, but other important aspects are not so easy to estimate and need to be qualitatively measured. Useful assistance may be offered by tools for measuring and tracking the development. They can be tailored to meet the level of progress required to be tracked and the intended results to be accomplished.

- **Process Improvement planning and strategy renewal:**

Even after a successful implementation of a strategy there is always a possibility of things going not in the predetermined direction and the objectives of the process get partially achieved. In such circumstances,

- The identified problems should be eliminated
- The greening process needs to be redesigned
- The greening strategy should be made suitable, sustainable, and effective.

It is necessary for senior management to be involved, since it is their job to evaluate greening practices in order to make sure their ongoing acceptability, sufficiency and success. In consideration of the audit findings, changing situations and the dedication to quality growth, the management analysis will discuss the potential needs for changing the green strategy, focus points, goals and practice.



Figure 4: TVET in the UN sustainable development goals, Part of the 2030 agenda for sustainable development

► Conclusion

It is not only sufficient to train professional skills but also to raise awareness of the environment and to encourage a shift in the mindset of all – teachers and students - TVET organizations must also become green. A significant number of individuals are prepared in TVET organizations to be promoters of greening who demonstrate and move forward their green skills to those in their own vocational and social groups.

Once a TVET institute adopts greening process and integrates it to their business model, it not only becomes a role model for eco-friendliness but also a real inspiration, an innovative provider of training and an acknowledged strategic partner for their region's sustainable growth. This is because of a number of reasons, thoroughly explained throughout this guideline, that a green TVET institution build a special corporate profile and systematically integrate green topics into vocational education and training programmes. While doing this, they are seeking to reduce their own campuses 'carbon footprint and at the same time teaching their pupils to do the same. Moreover, their integration of both internal and significant external partners into the greening process aids in developing a green economy. The way they enlighten their instructors, provide training for enterprises, and the unemployed through green projects, informal training sessions, technical assistance, etc. helps to improve the living standard of the societies.

However, it is not feasible to accomplish the greening of TVET organizations by a piecemeal or ad hoc strategy. Instead a systemic structure is required for the systematic transformation of TVET organizations to promote a green society and a green economy. And this structure can be unique for each institutions and the guidelines should be applied in accordance.