



unesco

International Centre for
Technical and Vocational
Education and Training

Greening TVET – meeting skill needs for a greener future (global perspective)

Presented by Ms. Kenneth Barrientos, Thematic Team Leader

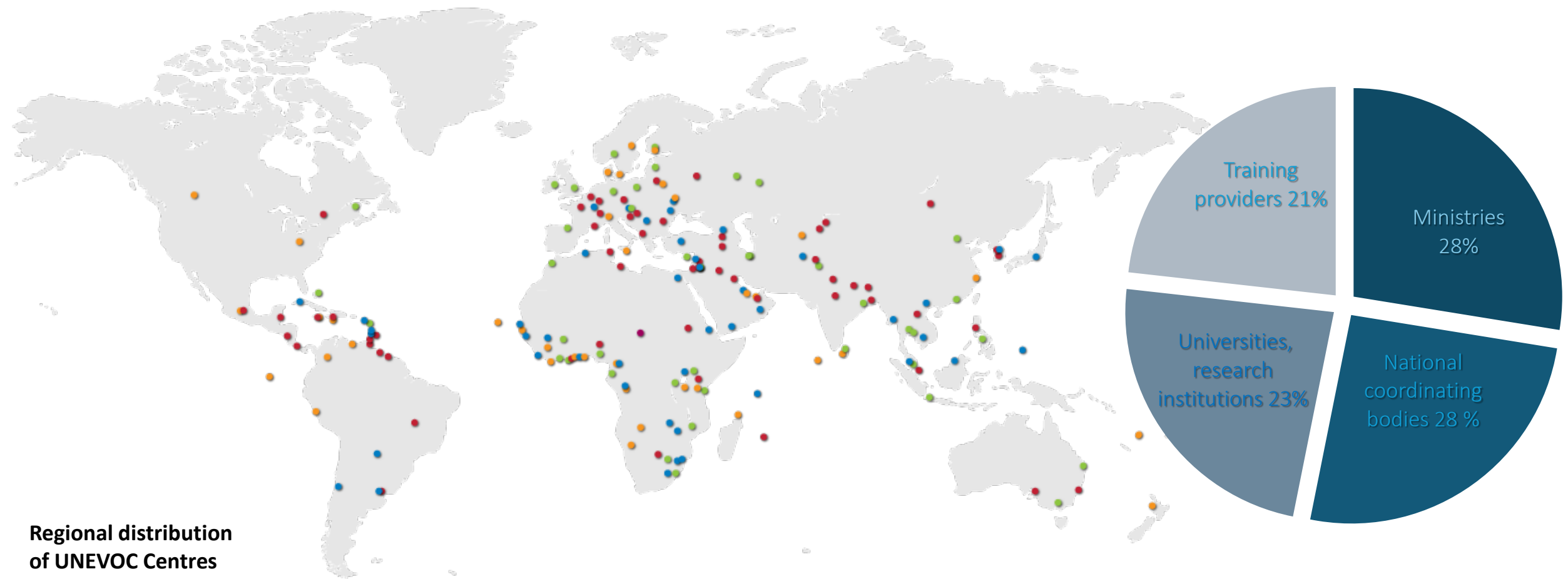
UNESCO-UNEVOC International Centre for TVET



EARLALL Virtual Exchange
SKYLA Smart Specialisation Skills Ecosystem
for the Twin Transition | 17 June 2025

© UNESCO-UNEVOC/Dimpalkumar Pancholi under CC BY-NC-SA 4.0 IGO

UNEVOC Network: 245 UNEVOC Centres in 152 countries



Regional distribution of UNEVOC Centres

- Africa: 62
- Arab States: 27
- Asia and the Pacific: 62
- Europe and North America: 55
- Latin America and the Caribbean: 39

Global reach of UNEVOC Network

- 66.7 million students
- 2.0 million teachers and trainers

Key challenges and opportunities

To address...



47%

Green skills in TVET strategy

Member States that have reported an increased emphasis on green skills and sustainable skills



45%

National curricula

Little reference to environmental themes in national education documents

To leverage...



68%

National TVET policies

Member States that introduced or adopted policies or practices to facilitate the greening of TVET systems in the last four years.



Practical guide

Meeting skill needs for the green transition Greening TVET for a greener future

Online portal [Greening TVET for a greener future](#)



What are the needs?

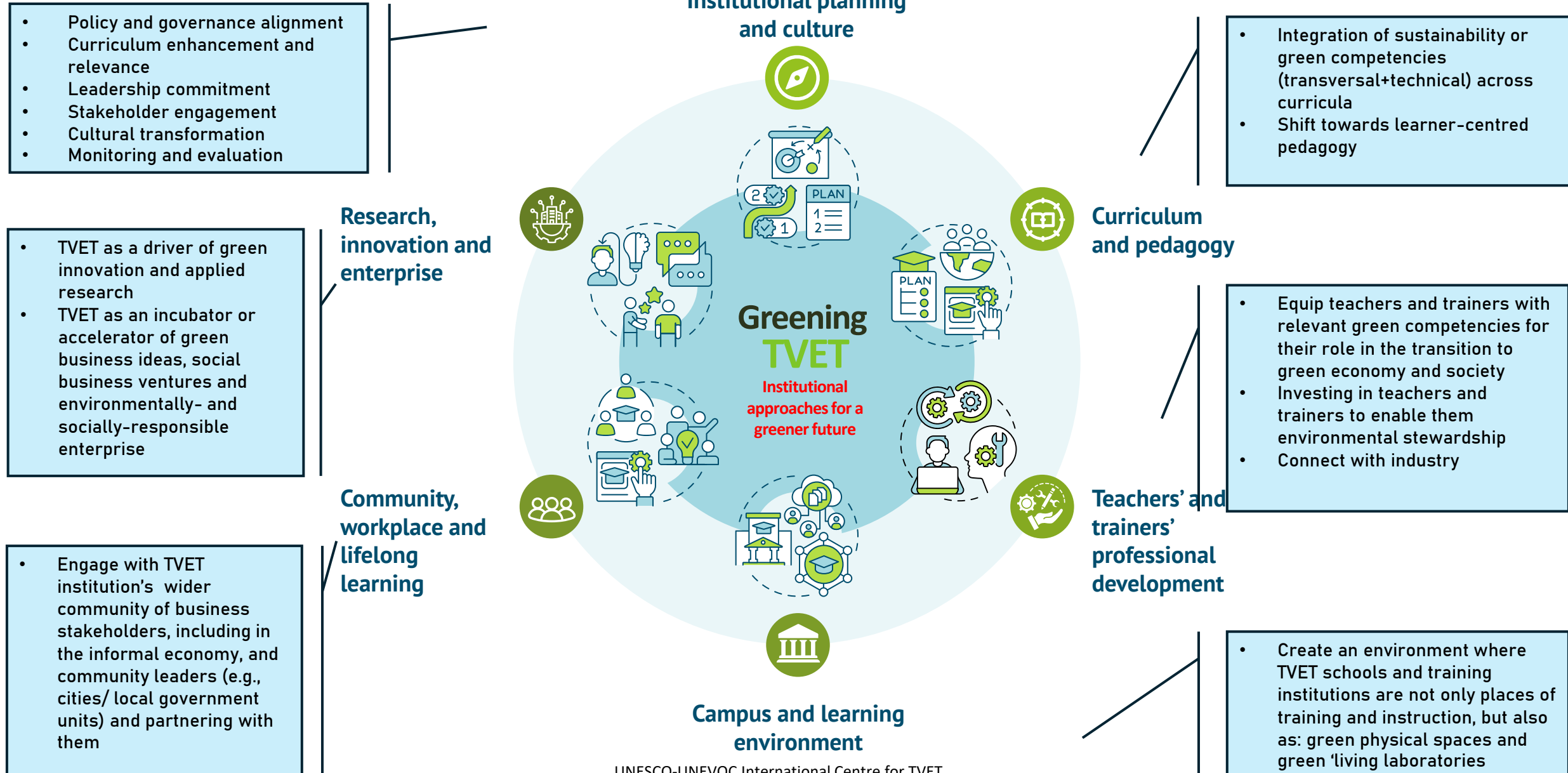
- adaption of SDGs in education and training
- national climate ambition and TVET alignment
- skills in every occupation and sector
- institutional approaches are the foundation for learning

What is the guide about?

- approaches and concept
- skills and competency requirements in sectors
- guidance about the different goals for managers and teachers
- policy enablers
- examples of implementation
- useful reading resources
- indicators for monitoring actions

Approaches for engaging institutions in the greening TVET process

LINK: [Greening TVET guide](#)



Greening TVET curricula and training

UNEVOC Technical Assistance
Review of existing programmes (various technical disciplines) and **development of new programmes**

Implementation partners: Mauritius Institute for Training and Development (MITD) – UNEVOC Center & Circulab France



Identified skills for integration, strengthening



Generic skills

- Sustainable Development
- Environment Fauna and Flora, Preservation
- Pollution: Types, Preventive Measures
- Renewable and Non-renewable Resources
- Use of Clean Energy Sources
- 5 R's, Etc.



Trade-specific skills

- Energy Saving Measures
- Use of Eco-friendly Materials
- Water Conservation
- Electric/Hybrid Vehicles
- Use of Refrigerants
- Alternatives to Use of Pesticides
- Organic Farming
- Disposal of Used Engine Oil



New green courses

- National certificate level 4 in sustainable agriculture
- National certificate level 5 in solar energy technology
- National diploma in renewable energy technology

TVET teacher professional development support

ISSUES

- Lack of TVET and climate policy coherence
- Unmet demand for qualified green workforce
- Outdated curricula and training
- Lack of collaboration and exchange with industry



UNEVOC's interventions

- Facilitated consultation and dialogues between ministry, stakeholders and social partners
- Mapping of skill and opportunity gaps in Thai colleges
- Green TVET roadmap development
- **Professional development for TVET educators**

Outputs

- ✓ OVEC Green TVET roadmap
- ✓ 45 strengthened leadership vision
- ✓ 60 OVEC leaders and educators built their capacity on green and inclusive TVET approach

Peer learning, stakeholder engagement and innovation – Asia, Europe, Africa, LAC

Bridging Innovation and Learning in TVET (BILT) project (phases 1-3) **(UNEVOC- BMBF/BIBB Germany)** provides a platform for policy learning and networking



Strengthen **BRIDGING** between regions and between institutions

- Thematic workshops, hosted in different regions
- Global conference 'Learning Forum' every two years (2025)



Foster **INNOVATION** and knowledge generation

- Joint development of publications, research analysis, scoping surveys
- Documentation of 'Innovation and Learning Practices'



Reinforce peer **LEARNING** and knowledge transfer

- Promotion of transferable, innovative practices and policies: Learning Labs and webinar series
- Matchmaking between interested institutions



unevoc.unesco.org/bilt

Implemented



with support of



and sponsored by





New Qualifications and Competencies

How can they be put into practice, ensuring future-oriented, attractive TVET career paths?

- **Identification** through suitable approaches and instruments;
- **Integration** into curricula and training regulations; and
- **Implementation** in teaching and training approaches.



Entrepreneurship

Unlocking the potential of innovative entrepreneurial activities and fostering entrepreneurial culture



Greening

Responding to new development paradigms for sustainability and reduced environmental impact



Digitalization

Providing a response to new skills demands, as technology has permeated the world of work and is changing the profile of jobs



Migration

Accelerating the integration of migrants into their host communities, and allowing them to become productive members of the workforce

BILT Expert Group – TVET for hospitality and tourism (2023)



SFUVET

SWISS FEDERAL UNIVERSITY
FOR VOCATIONAL EDUCATION
AND TRAINING

*Swiss excellence in vocational
education and training*



Thank you

UNESCO-UNEVOC & Cedefop thank:

The UNEVOC Network and experts from UNEVOC's partner institutes: Bojan Jovanovski (Austria) • Amy Proulx and Judi Varga-Toth (Canada) • Christina Boateng (Ghana) • Marlene Finlay (Grenada) • Margarita Pavlova (Hong Kong [People's Republic of China]) • Mustika Nuramalia Handayani (Indonesia) • Affero bin Ismail (Malaysia) • Louis Aquilina (Malta) • Sayadaly Maudarbocus and Chintamunnee Mithilacesing (Mauritius) • Emmanuel Osinem and Chukwunonso Chikwendu (Nigeria) • Michael Gayona and Rosanna Dureza (Philippines) • Katherina Tan (Singapore) • Janaka Jayalath (Sri Lanka) • Chris Long (Wales, UK) • Stelina Chatzichristou, Vlasios Korovilos and Jasper Van Loo (Cedefop) • Susanne Nielsen & GRETA Partners (European Training Foundation) • Ramon Iriarte (UNESCO) • Andrew McCoshan (Lead Contributor and Consultant) • Kenny Muscat • Aldrich Mejia (UNESCO-UNEVOC).

Learn more: www.unevoc.unesco.org



@unevoc



/unesco.unevoc.international



/company/unevoc/