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Brunei Darussalam



**giz** Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ) GmbH

**RECOTwin**

*“Building Green Skills, Creating Green Jobs”*

# Readiness of TVET Institutions for Greening in ASEAN

## An Assessment Tool and Preliminary Survey Findings

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2026 ASEAN Green Jobs Forum | 19–20 October 2026 | Manila, Philippines

# Anchored in ASEAN's own commitments

*GERI (Greening Education Readiness Index) directly supports three regional policy instruments*



## **ASEAN Declaration on Promoting Green Jobs for Equity and Inclusive Growth**

Part of the ASEAN Community's commitment to equitable green employment.



## **ASEAN Declaration on Human Resources Development for the Changing World of Work**

Prioritises coherence between labour, education, and economic policy on green skills and jobs.



## **ASEAN TVET Council Work Plan 2021- 2030**

Promoting research on new technologies, meeting the needs of the LM, harmonization of TVET systems, standards



## **The ASEAN Framework and Action Plan for a Just and Inclusive Transition to Green Jobs (2025–2030)**

A regional strategic roadmap designed to help member states prepare their workforces for the shift to a sustainable green economy



# ASEAN green-jobs evidence: the opportunity is larger than today's green jobs

**<1%**

**current green jobs**

Narrow task-based definition

**~14%**

**green talent hires**

Industry-sector hires, 2024\*

**~24%**

**green potential**

ASEAN unweighted average

**>50%**

**agriculture potential**

Largest sectoral opportunity

## Where green potential is concentrated

**Agriculture >50% • Mining & utilities 20% • Construction 16% • Manufacturing 15%**

## TVET implication

**Build green core competencies across programmes, while expanding modular upskilling and mid-career reskilling for the existing workforce.**

*\*LinkedIn evidence covers six ASEAN Member States and should be interpreted as indicative.*



# The missing link: are TVET institutions ready to respond?

GERI translates green-jobs and green-skills ambitions into a whole-institution readiness assessment

## BUILDING BLOCK 1 Learning & People

**P1** Greening Curriculum & Pedagogy

**P2** Greening Professional Development

## BUILDING BLOCK 2 Campus & Operations

**P3** Institutional Planning & Culture

**P4** Campus & Learning Environment

## BUILDING BLOCK 3 Community Engagement, Workplace Greening & Innovation

**P5** Community Engagement

**P6** Green Workplace Engagement

**P7** Applied Green Research & Innovation

The GERI Framework and Proposed GERI Assessment Tool can be found in the following link and QR code:

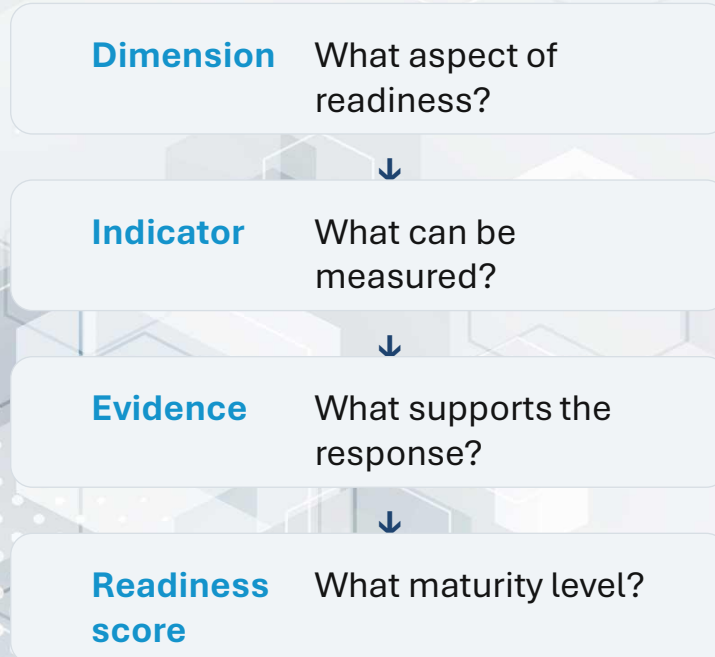
□ Link: [https://seameovoctechbn-my.sharepoint.com/:b:/g/personal/research\\_voctech\\_edu\\_bn/IQA\\_D\\_yRH5W\\_DQYmk4f1gURaSAZYkgzUPmGUhVgO3h4tUW6A?e=6cC5Wg](https://seameovoctechbn-my.sharepoint.com/:b:/g/personal/research_voctech_edu_bn/IQA_D_yRH5W_DQYmk4f1gURaSAZYkgzUPmGUhVgO3h4tUW6A?e=6cC5Wg)

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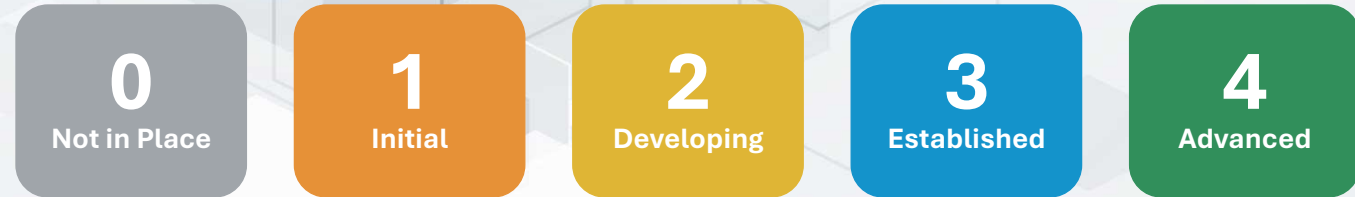


# How GERI measures readiness

## Assessment architecture



## GERI readiness scale



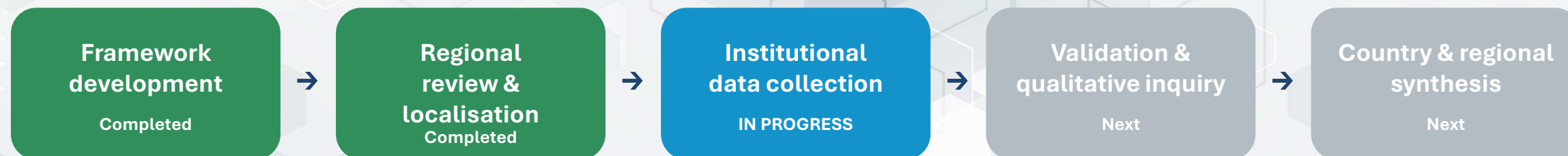
### Illustrative indicator: Percentage of programmes with explicit green content

- 0** No green content
- 1** Isolated / pilot
- 2** Integrated in core programme(s)
- 3** Mandatory across most departments
- 4** Institutionalised in >75% of programmes

Evidence-based scoring supports diagnosis, prioritisation and institutional improvement — not ranking.



# Methodology: A convergent mixed-methods design



## Institutional assessment (quantitative) (In progress)

Online GERI tool • evidence review •  
institutional respondents

## Qualitative validation

Interviews / FGDs • contextual  
interpretation • triangulation

## Teacher readiness

Complementary self-assessment on  
readiness to green curriculum

## STUDY DESIGN

# Sampling for depth and comparability

**88+**

Institutions total  
(8+ per country)

**11**

ASEAN Member Countries

**1**

GERI assessment  
per institution

*Institution mix per country: public and private, rural and urban, some training explicitly for green industries, some not.*

## QUALITATIVE STRAND — PER INSTITUTION



### 3–4 institutional representatives

Curriculum, campus operations, Head of institution



### 5–6 students

Learner perspective on green competencies



### 1–2 national policymakers

Policy-level context



### 1–2 industry representatives

Employer / green-economy perspective



# Teacher readiness is one part of institutional readiness

## GERI - Block 1 Learning & People

**Pillar 2: Greening  
Professional Development of  
Teachers & Trainers**

CPD opportunities

**Teacher self-assessed  
readiness**



## Existing regional baseline

### TVET Teachers' Readiness for Greening Curriculum

10 Southeast Asian countries  
1,760 total responses • 1,290 valid responses  
Self-assessment scale: 1–5

**This provides an early lens on one GERI dimension  
while institutional data collection continues.**



# Initial evidence: teacher readiness reveals capacity-building priorities

Regional teacher-readiness baseline - complementary evidence for GERI Block 1

**1,290**

valid responses

**10**

countries

**2.7–3.9**

country average  
competency range

## What the baseline suggests

Across assessed items, 54–65% of participants rated themselves at  $\leq 3$ ; about 19–26% rated themselves at  $\leq 2$ . The pattern signals a broad need to strengthen both pedagogical competence and professional engagement for greening TVET.

## Competencies needing attention

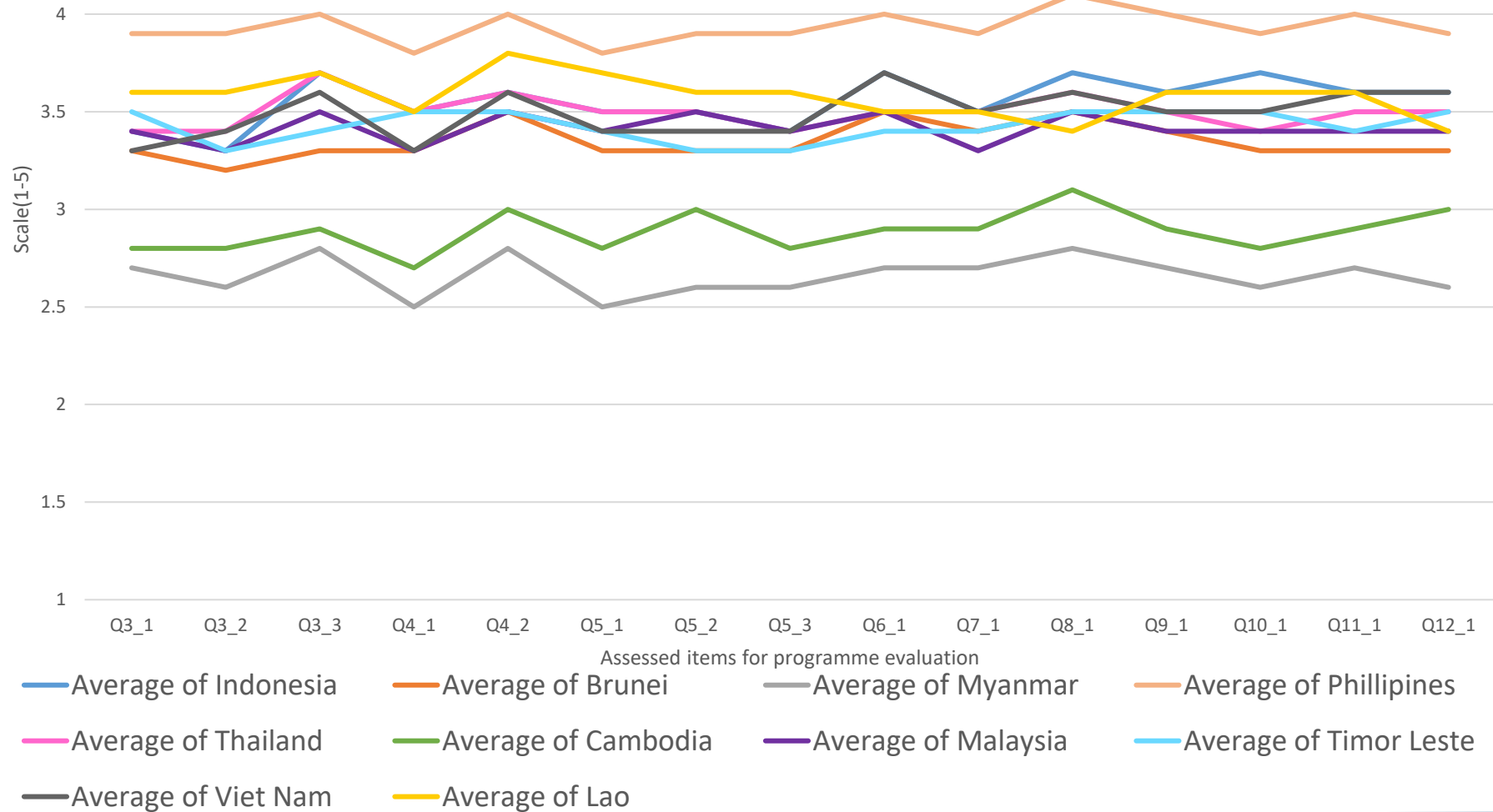
- 1 Sustainable-development concepts & generic green skills
- 2 Organising green content across subjects/modules
- 3 Assessing generic green competencies
- 4 Planning structured green learning activities
- 5 Professional learning needs & networks

Source: regional teacher-readiness study presented at the CPRN Summit; these are not yet the full institutional GERI findings.



# Green competencies of TVET teachers: ASEAN

Average level of competencies



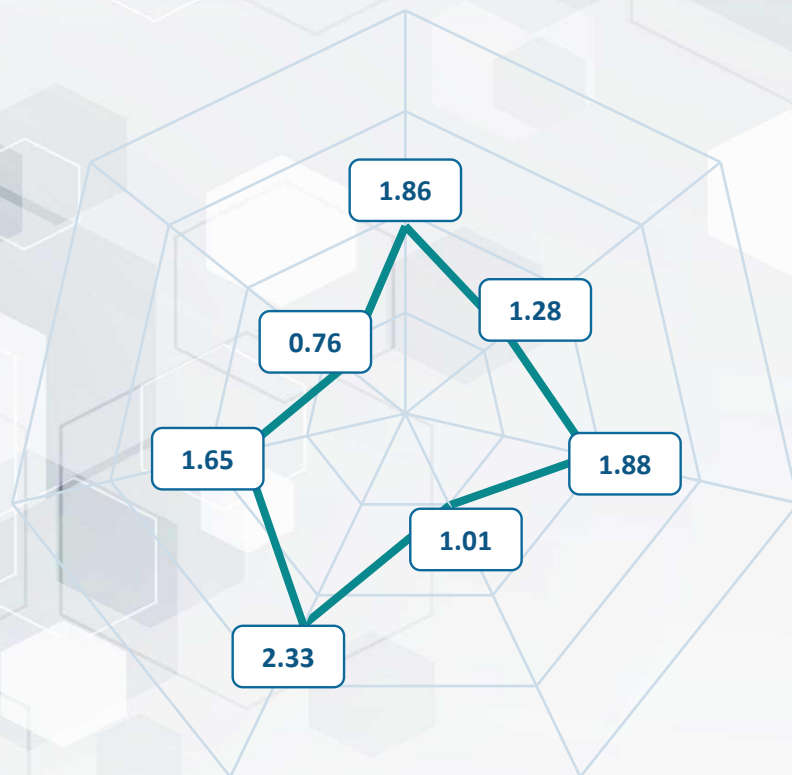
# GERI institutional responses

| Country     | Block 1 submissions | Block 2 submissions | Block 3 submissions | Notes                                                      |
|-------------|---------------------|---------------------|---------------------|------------------------------------------------------------|
| Brunei      | 6                   | 5                   | 7                   | Not validated                                              |
| Myanmar     | 67                  | 27                  | 19                  | Not validated                                              |
| Singapore   | 1                   | 1                   | 1                   | Not validated                                              |
| Philippines | 8 institutions      | 8 institutions      | 8 institutions      | Validated. Separate country report covering 8 institutions |



# GERI readiness radar | Philippines: observed pillar scores

Evidence-based example of the eventual regional radar format • 8 purposively selected TVET institutions



Curriculum & pedagogy 1.86

Professional development 1.28

Planning & culture 1.88

Campus & environment 1.01

**Community outreach 2.33**

Workplace engagement 1.65

Research & innovation 0.76

**Overall GERI: 1.53 (Initial)**

Scale: 0 (Not in Place) to 4 (Advanced)

# Philippines | Promising practices and gaps

Reported examples from eight participating institutions

## LEARNING & PEOPLE

Green learning activities exist; systematic curriculum integration, trainer development and assessment remain priorities.

## CAMPUS & OPERATIONS

Reuse of workshop materials, LED lighting, rainwater harvesting and a 12-kW solar PV installation.

## COMMUNITY & WORKPLACE

Coastal cleanups, tree planting, upcycling and livelihood outreach; industry links and outcome tracking need strengthening.

**From individual green activities to measurable, institution-wide implementation.**

# Philippines | Green skills being prepared through TVET

National TESDA standards + qualitative GERI evidence from eight institutions

## RENEWABLE ENERGY

Solar photovoltaic systems; energy efficiency and conservation

## SUSTAINABLE FOOD SYSTEMS

Pest management, hydroponics, vertical gardening and seaweed farming

## GREEN MOBILITY

Battery-electric vehicle servicing; hybrid-electric vehicle systems

## RESOURCE EFFICIENCY

Material reuse, waste segregation, recycling and greener workshop practices

## ENVIRONMENTAL MANAGEMENT

Carbon emissions and environmentally responsible workplace practices

**89 TESDA Training Regulations included green components (2023 baseline; not a current programme count).**

Sources: Philippines Initial GERI Country Report (2026); TESDA LMIR Green Economy (2023); TESDA Circulars (2023–24).

# Connecting Labour-Market Evidence with Institutional Readiness — Philippines

ASEAN green-skills demand → GERI evidence from 8 Philippine TVET institutions → Priority responses

## LABOUR-MARKET SIGNALS

Green competencies across jobs  
Resource efficiency, waste reduction,  
environmental compliance

Sector-specific technical shifts  
Agriculture, energy, construction,  
manufacturing and transport

Workplace application  
Practical green processes and  
changing employer requirements

## INSTITUTIONAL READINESS

Curriculum greening: 2.88  
Green competency assessment: 2.13

Industry-sector alignment: 2.50  
Teacher/trainer readiness: 0.56

Workplace engagement: 1.65  
Applied green research & innovation:  
0.76

## PRIORITY ACTIONS

Assess demonstrable green  
competencies, not only curriculum  
coverage

Upskill trainers; update equipment  
and sector-specific learning resources

Co-design with employers; expand  
workplace learning and applied  
innovation

**Key message: Green-jobs demand sets the direction; GERI identifies capacity gaps; targeted TVET reforms help bridge the two.**

Sources: Philippine GERI Country Report (2026), Pillars 1, 2, 6 and 7; ASEAN green-jobs supply–demand study (draft). | Limitation: Regional demand signals and 8 purposively selected institutions; no quantified skills mismatch.

# From Green-Jobs Demand to Green TVET Readiness

## 01 Green skills extend beyond new green jobs

Embed green competencies in existing programmes and expand workforce upskilling.

## 02 Curriculum change must be matched by delivery capacity

Strengthen trainers, practical assessment, industry partnerships and institutional systems.

## 03 Use GERI to target action—not to rank institutions

Diagnose readiness, prioritise investments and track institutional improvement.

**The green transition needs not only a skilled workforce, but TVET institutions capable of developing it.**



# Thank you

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