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**ADB Project TA-7879 REG:
Education and Skills for Inclusive
Growth and Green Jobs in Asia**



ADB Project TA-7879 REG: Education and Skills for Inclusive Growth and Green Jobs

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Indonesia's Commitment to environmental issues



- Indonesia is a party to several international environmental protection agreements, such as:
 - Biodiversity
 - Climate Change-Kyoto Protocol
 - Desertification
 - Endangered Species
 - Hazardous Wastes
 - Law of the Sea
 - Ozone Layer Protection
 - Ship Pollution
 - Tropical Timber 83, Tropical Timber 94

Voluntary Commitments

- The Government of Indonesia will reduce the carbon intensity of its economy through nationally funded initiatives which will cut 26 percent of greenhouse gases emission by 2020, while initiatives that receive international funding will target 41 percent emission reductions.



Environmental Policies



Regulation	Scope of Regulation
Law of the Republic of Indonesia No. 4/1982	Basic provisions of environmental management
Law of the Republic of Indonesia No.23/1997	Environmental Management Regulations
Law of the Republic of Indonesia No.32/2009	Environmental Protection and Management.
Presidential Regulation No. 61 / 2011	Reduction of greenhouse gas emissions

Energy Conservation Policies



Regulation	Scope of Regulation
Ministry of Energy and Mining Regulation No.100.K/48/M.PE/1995	National Master Plan for Energy Conservation
Presidential Regulation No. 5/2006	National Energy Policy
Law of the Republic of Indonesia No. 30 / 2007	National Energy Policy
Presidential Regulation No. 70 / 2009	Energy Conservation
Presidential Instruction No. 13 of 2011	Energy and water usage limit

Policy Integration: National Development Policies



- Law of the Republic of Indonesia No.17/2007 on the Long Term National Plan 2005-2025:
 - promotes green agenda through climate change adaptation for food security, the development of alternative energy and disaster management.
- The Masterplan for the Acceleration and Expansion of Economic Development of Indonesia (MP3EI), State Ministry of National Development and Planning
 - “ ... we are not talking about Sumatra, Kalimantan, Java and Papua. We are here to connect those islands into one ultimate economic engine”. (Expert on Green Economy and Green Jobs, Coordinating Ministry for Economic Affairs)

Policy Integration: Financial Policies



- Presidential Regulation No. 16/2012 on Public Capital Investment Plan
 - investors must follow the green economy policy in their investment plans.
- Presidential Regulation No. 41/2013 on Luxury Tax Reductions of Low Cost Green Car (LCGC)
 - 0% luxury tax for <1200cc & 20km/l
 - 50% luxury tax for hybrids with > 28km/l
 - 75% luxury tax for hybrids with 20-28km/l
- Ministerial of Finance Regulation No 101/PMK.04/2007 on Tax Omissions for Environmental Pollution Preventions

Implementation Stage: Environmental Protection Initiatives



Initiative	Initiator
National Emission Reduction Plan	National Government
National Action Plan for Climate Change	National Government
Indonesian Climate Change Trust Fund	National Government
Establishment of Energy Conservation Clearing House, Energy Award for companies	Ministry of Energy and Mineral Resources
Green Industry Awards	Ministry of Industry
REDD+ programme, Sustainable Management of Natural Forest, Sustainable Forest Management Industry, etc.	Ministry of Forestry
Green Development Pilot Project	State Ministry of National Development and Planning
Green Jobs Programme	Kutai Kertanegara Government
Kalimantan Green Growth Planning	Government of East Kalimantan NCCC, GGGI
Green School Program	Ministry of Religion
Green Building	Ministry of Public Works



“... we do not need to address new regulation ... we are an over regulated country with an over regulated framework. Any framework within industrial sectors are justifiable as long as it could be adopted and is applicable within the scope of the industry”.

(Indonesia Business Council for Sustainable Development)

NGO Green Jobs Training Activities



No	Sector	Types of Green Jobs Training Conducted
1	Energy	<ul style="list-style-type: none">• Technical trainings on installation, operation, and maintenance of micro hydro machine, Pico Hydro, Wind Hybrid Power Generation, and biogas reactor• Trainings on electrical installation for public facilitation and household that become beneficiaries of various alternative energy sources• Trainings on piping and modification of gas stoves
2	Construction	Trainings on the design and implementation of <i>sustainable construction</i>
3	Manufacturing	<ul style="list-style-type: none">• Trainings on construction and maintenance of liquid waste processing from industries and hospitals• Skills training on the manufacturing and modification of stoves for production processes

NGO Green Jobs Training Activities

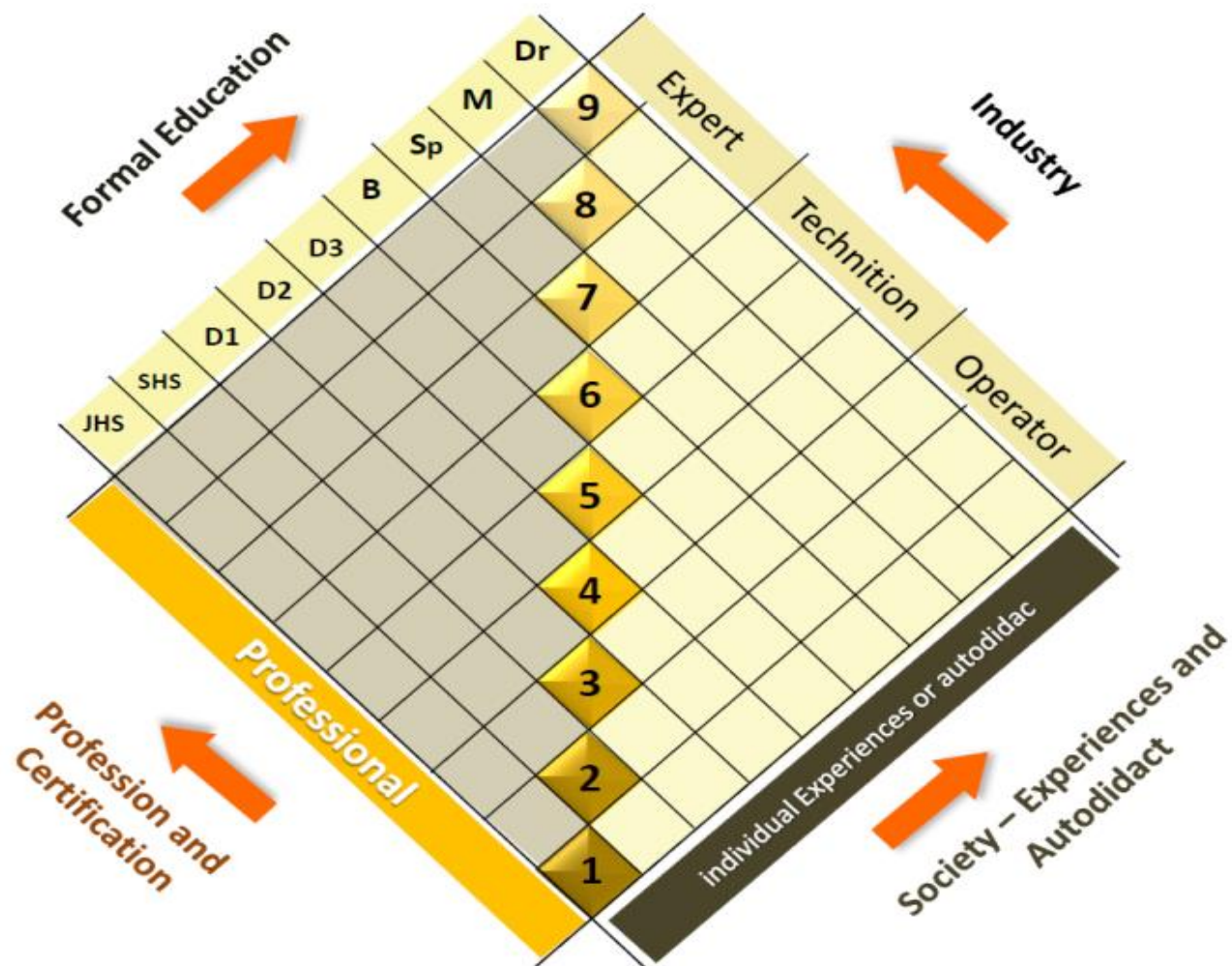


No	Sector	Types of Green Job Trainings Conducted
4	Transportation	<ul style="list-style-type: none">• Trainings on the production of bioethanol and biofuel for motorcycle and car fuels• Trainings for modifying vehicle engines, especially part of related with combustion• Trainings to produce fuel saving devices for engines
5	Hospitality and Tourism	<ul style="list-style-type: none">• Trainings on management of tourist destinations, especially ecotourism• Trainings for ecotourism guides• Skills of making souvenir that supports development of tourism spot• Trainings on forests and wildlife conservation• Skills of conducting wildlife conservation such as turtle• Trainings on coral reef conservation and recovery
6	Agriculture	<ul style="list-style-type: none">• Trainings on organic integrated farming• Trainings on planting and maintenance of hardwood plants• Trainings on crop seed breeding, especially local varieties, and herbal plants



TVET in Indonesia


National Qualifications Framework



TVET Institutions



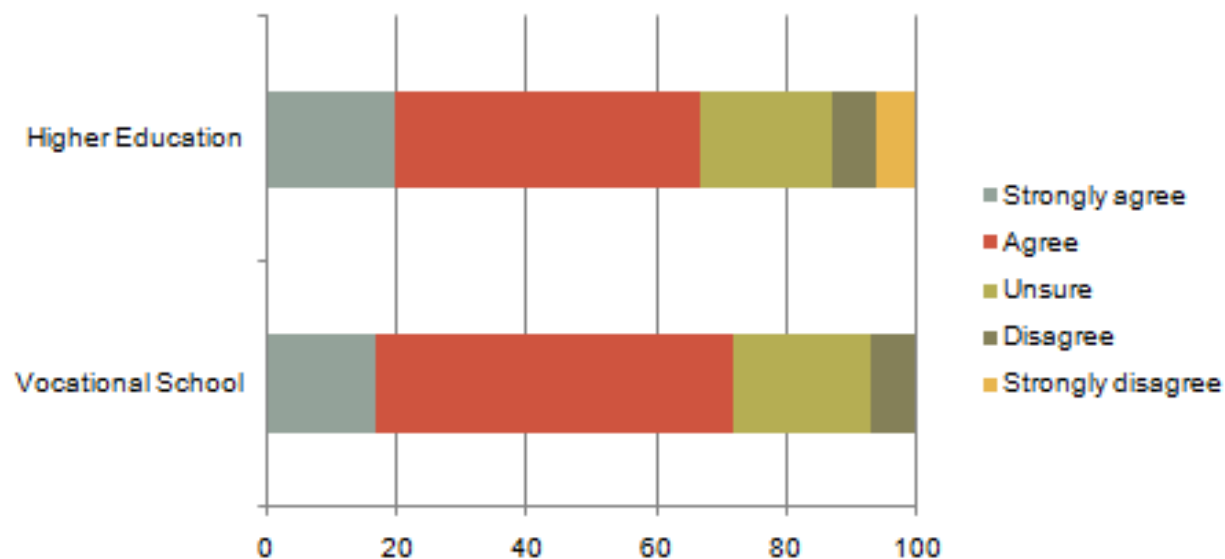
No	Ministry/ Department	Some of the Schemes, Programs, and Institutions having Provision for Vocational Education and Training
1.	Ministry of Education and Culture	SMKs—9,164 (26.41% public) Higher education—vocational training providers Polytechnics Universities (Total 3124 privately owned and 92 public HE institutions) SMK job expos
2.	Ministry of Industry	Vocational Secondary School in Industrial Technology—7 SMKs—9 Industrial Training Centre TVET institutions at the tertiary level—8
3.	Ministry of Agriculture	Vocational Secondary School in Agriculture and Development Agricultural Training Centre
4.	Ministry of Forestry	Vocational Forestry Secondary School—5
5.	Ministry of Religious Affairs	Islamic Vocational Secondary School
6.	Ministry of Manpower and Transmigration	Vocational training centers—260 SKKNI—Indonesian National Competency Standard
8.	Ministry of Energy and Mineral Resource	TVET institutions and a training center in electric power, new energy, and renewable energy—3 Administers a professional certification agency and an assessment center in energy audit
9.	Ministry of Tourism and Creative Economy	Hospitality and tourism academies and institutes—5
10.	Ministry of Marine Affairs and Fishery	SMKs—8 Academies—2 TVET at tertiary level—1

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- The curriculum of Vocational upper-secondary schools (SMKs), regardless of the ministerial affiliation, is determined by the MoEC's regulation concerning educational standards
 - School management is dictated by the 505 autonomous district governments
 - Successful mainstreaming of TVET: a 40:60 ratio between general and vocational upper-secondary education by 2015
 - From a total of 9,164 schools Vocational Secondary School in Indonesia, only 26,41% are public schools.
 - From a total of 3,216 higher education institutions in Indonesia, only 2.86% (92) are public institutions.

TVET and green skills



- Additional skills and competencies have been added into existing courses to meet green skills requirements



TVET Initiatives



- SMK (Upper Secondary Vocational Schools) have been embedding environmental protection practices in school subjects, such as recycling, water and energy conservation, and the usage of biopores.
- Tertiary education institutions are offering environment based programs, eg. Institute for Environmental Technology, Gadjah Mada Vocational School, etc.



“ ... we have contacted schools and higher education institutions to form partnerships to create green job opportunities. But unfortunately, **without knowing the exact definition of green jobs**, we are facing a great deal of problem in our implementation. So the only thing we could do is to promote this issue by discussing with school principals, students, and teacher on how to create a sustainable and long-lasting jobs that would help improving the quality of life much higher than the usual jobs”.

(Head of Learning, Directorate of Vocational Education, Ministry of Education and Culture)



Summary of Key Findings

Industry awareness on green skills



- Concept of green skills for all jobs is more widely understood than the concept of green jobs
- Companies with strong international linkages tend to be more appreciative and want to implement sustainable practices
- Paradox:
 - More than 50% of respondents in the construction sector, and over 40% of hospitality sector respondents agreed that a lack of skilled employees in climate change or environmental related jobs is detrimental to their businesses.
 - Less than 30% of respondents in all sectors agreed that they are currently employing new workers (or training workers) for green jobs.

Sustainable practices in the industry



- Less than 30% of businesses across sectors are using sustainable practices (such as recycling and energy-efficient products and services) in their work practices.
- More than 40% of businesses in the construction, hospitality, manufacturing, and energy sectors expect high standards of sustainable processes and infrastructure across their supply chains.

Poor engagement between industry and TVET institutions



- A large number of industry respondents agree on the importance of TVET work-based training of potential employees, but the level of engagement between businesses and TVET institutions is reported to be low.
- Less than 40% of respondents expressed satisfaction with the outputs from TVET institutions.

TVET institutions face funding constraints to implement green skilling



- Energy efficiency is recognized by 82% of SMKs and 74% of higher education vocational training providers as a driver toward changing programs and courses.
- A small number of partnerships with the private sector initially provided solutions, but these could not be sustained due to a lack of recurring funding.
- For example, Toyota installed oil recycling equipment at SMKN 26 Jakarta and conducted teacher training programs, but over time the equipment could not be maintained due to a lack of funds.



Recommendations

A paradigm shift needed in the skill development system to align with economic and environmental policies



- Laws on environmental protection and emission standards are taking shape in Indonesia
- Industry needs for environmentally sustainable skills are growing
- The education and skills development system needs a paradigm shift in order to align with these developments
- Key responsibility:
 - Agency for National Development Planning (BAPPENAS)
 - Ministry of Basic and Secondary Education and Culture
 - Ministry of Research, Technology, and Higher Education

Provide outcome-based incentives for industry (mainly SMEs) and TVET institutions



- Outcome-based incentives for SMEs to would be self-motivated to adopt greener practices
 - eg. tax breaks, subsidies, viability gap funding, indirect benefits (awards and public recognition), training equipment, training incentives, and international exposure visits.
- Outcome-based incentives for TVET institutions that initiate programs for green skill development
 - eg. additional budgetary support, technical assistance, and international industrial exposure
- Key responsibility:
 - Ministry of Finance, Ministry of Industry, Ministry of Trade, Ministry of Basic and Secondary Education and Culture, Ministry of Research, Technology, and Higher Education

Sustainable practices are a necessity, not an option, and need to be promoted as a business issue



- Most businesses fail to realize that sustainable practices and compliance with climate change mandates can actually solve the problems of increasing cost
- “Becoming green” should become a business issue and move higher on the priority list of action
- Larger companies can be role models and champions in advocating the benefits of adopting sustainable practices
- Key responsibility:
 - Large corporations such as Astra International, the Lippo Group, or public sector corporations such as Perusahaan Gas Negara, Perusahaan Listrik Negara, and Pertamina along with the Indonesian Chamber of Commerce and Industry (KADIN).

Foreign aid and investment agencies need to push green growth, green jobs, and green skills thru coordinated action



- ILO: Green Livelihood Access for Central Kalimantan's Inclusive Environmental Response to Climate Change (GLACIER)
- GIZ: Policy Advice for Environment and Climate Change (PAKLIM) program
- Conservation International: addressing hospitality and tourism sectors → should be synergized with other international initiatives
- Aid agencies: documentation and dissemination of good practices
- Multinational corporations: support models of innovation toward green practices and green education
- Key responsibility:
 - Aid agencies—ADB, ILO, GIZ, and the World Bank—along with KADIN and BAPPENAS.

Generic skills with progressive paths to specific skills need to be introduced into the curriculum



- The introduction of such skills may be targeted through school education, technical education, and higher (university) education.
- Research in higher education institutions may be encouraged toward newer industry practices and technologies that are environmentally sustainable
- Alignment with curriculum development, National Education Standards, and Indonesian National Qualifications Framework
- Ways to include green skills standards in the Indonesian National Standards need to be explored.
- Key responsibility:
 - Ministry of Basic and Secondary Education and Culture
 - Ministry of Research, Technology, and Higher Education

The large private training system and the government system need alignment and rationalization in standards and outcomes



- Vocational training by large private sector institutions in Indonesia is very important → reforms in the private sector can be pushed through by industry and employers.
- Parity in quality of training, incentives, governance systems, and industry relevance is required between government and private sector training institutions
- Key responsibility:
 - Ministry of National Education and Culture together with large private sector corporations

Green practices and sensitivity toward sustainability need to be promoted as a social issue



- Green skills development should not be limited to TVET institutions, but built into the larger ecosystem of education, workplaces, social interactions, and political debates.
- Sensitivity toward the environment and the importance of moving toward greener practices should be developed through social interaction and public communications.
- Key responsibility:
 - Ministry of Basic and Secondary Education and Culture
 - Ministry of Research, Technology, and Higher Education
 - Chamber of Trade and Commerce (KADIN)
 - Large media companies

The scope of green jobs, and green skills in the informal and rural sectors need to be expanded



- Most engagement on to sustainable growth is limited to the formal organized sector addressing urban issues
- Research and policy also need to generate evidence on the need and situation of environmentally sustainable jobs and skills with respect to work in the informal economy (eg. small-scale manufacturing, trading, and art and craftsmanship) and rural areas
- Key responsibility:
 - Multilateral agencies such as ADB, ILO and the World Bank along with research institutions and universities.



Thank you