

National Green Jobs Human Resource Development (NGJ HRD) Plan 2020 – 2030

Pathways for Building a Sustainable Workforce





International
Labour
Organization

NATIONAL GREEN JOBS HUMAN RESOURCE DEVELOPMENT PLAN 2020-2030

Pathways for Building a Sustainable Workforce

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NATIONAL GREEN JOBS HUMAN RESOURCE DEVELOPMENT PLAN 2020-2030
Pathways for Building a Sustainable Workforce

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I. Introduction

Climate change, labor markets, and the green transition

The interconnections between climate change, environmental issues, and labor conditions are especially pronounced in the Philippines. According to the 2023 World Risk Index¹, the country is the most disaster-prone in the world due to its geographical location. Approximately 60% of its land area is classified as “hazard-exposed,” and 74% of its population is vulnerable to the effects of these hazards (International Monetary Fund, 2023). A separate study by the World Bank (2021) ranks Metropolitan Manila (Metro Manila) as one of the most vulnerable cities globally, with an estimated 3.4 million residents at risk of flooding. More recently, in April and May 2024, record-breaking heat waves caused severe impacts across Asia, including the Philippines, where temperatures soared above 40°C for extended periods (World Weather Attribution, 2024). This extreme heat is particularly concerning as heatwaves are considered one of the deadliest types of extreme weather events. They significantly affect workers in agriculture, construction, and transport, leading to reduced income, decreased productivity, and increased health risks.

Box 1. Green economy, blue economy, and green growth definitions

- A **green economy** is an economy that results in improved human well-being and **social equity**, while significantly reducing environmental risks and ecological scarcities. In its simplest expression, a green economy can be thought of as one which is low carbon, resource efficient and socially inclusive.
- The concept of blue economy is a marine and coastal analogue to the green economy. The **blue economy supports specific measures to broaden the definition of ocean resources** – to acknowledge the fundamental, life-supporting benefits and services that are provided by marine and coastal ecosystems. The blue economy is understood to be part of the green economy but has its own specificities and areas of policy interest.
- **Green growth means fostering economic growth** and development while ensuring that **natural assets continue to provide** the resources and environmental services on which our well-being relies.

Source: United Nations Environment Programme, 2011 & Organisation for Economic Cooperation and Development [OECD], 2011

The transition to a greener economy and fostering green growth is therefore not merely an environmental imperative but an important step in safeguarding the Filipino workforce and ensuring sustainable economic development in the face of escalating climate challenges. This transition provides opportunities to promote environmental sustainability and social justice. If managed well, the green transition has the potential to provide opportunities for employment creation and sustainable economic growth

¹ The World Risk Index ranks 193 countries and territories in terms of risk of natural disasters or vulnerability to extreme weather events.

(International Labour Organization [ILO], 2013). However, without proper planning and policies, the transition risks displacing groups in vulnerable situations and exacerbating inequalities (ILO, 2018). The ILO predicts four types of change to jobs amid the green transition, which involves the inevitable shift in the skills required and tasks involved in many existing occupations.

Figure 1. Effects of the Green Transition on Jobs



Source: ILO, 2018

Defining green jobs

Globally, the term "green job" has no singular meaning, and more than one definition is usually cited in existing publications. Of these, two international organizations are commonly referenced:

Table 1. Green Jobs Definitions

Organization	Definition
International Labour Organization	Green jobs are decent jobs that contribute to preserve or restore the environment, be they in traditional sectors such as manufacturing and construction, or in new, emerging

	green sectors such as renewable energy and energy efficiency. Green jobs help: • Improve energy and raw materials efficiency • Limit greenhouse gas emissions • Minimize waste and pollution • Protect and restore ecosystems • Support adaptation to the effects of climate change
United Nations System of Environmental Economic Accounting	The Environmental Goods and Services Sector (EGSS) is defined as "areas of the economy engaged in producing goods and services for environmental protection purposes, as well as those engaged in conserving and maintaining natural resources." A "green job" in this context is a job engaged in any of these areas of the economy.

Source: ILO, 2016; Office for National Statistics, 2021

According to the 19th International Conference of Labour Statisticians (ICLS) Resolution adopted in 2013, green jobs refer to a subset of employment in the environmental sector that meets the requirements of decent work—employment providing adequate wages, safe working conditions, workers’ rights, social dialogue, and social protection schemes. This definition is further aligned with the System of Environmental-Economic Accounting (SEEA) classifications, which categorize employment into two broad groups: (i) environmental protection activities and (ii) resource management activities. Combining the ICLS and SEEA classifications results in four distinct types of “green jobs”:

1. Workers who use technology in the economic unit’s production process to protect the environment from pollution (environmental protection – process activities);
2. Workers involved in the production of technology or services for environmental protection consumed outside the producing economic unit (environmental protection – output activities);
3. Workers using technology in a process that improves the economic unit’s resource management (resource management – process activities); and
4. Workers producing goods or services that improve resource management, which are consumed outside the producing economic unit (resource management – output activities).

The ICLS classification of green jobs incorporates the dimensions of decent work, which can be measured using indicators from the ILO manual on Decent Work Indicators. This approach broadens the concept of green jobs beyond specific sectors. It acknowledges that **green jobs can potentially be created or sustained in nearly all sectors, provided that decent work components are present.**

Skills development as a green transition pathway

Sustainability transitions, to be inclusive, require a strong interaction between labor markets and skills development, since skills² are imperative for harnessing green jobs potential and ensuring decent work during the transition. The United Nations Industrial Development Organization's (UNIDO) Skills Index and the ILO's green skills for green jobs report further elaborate that the **nature of skills for green jobs is both technical (occupationally specific) and generic (core skills)**, which may be grouped into four clusters of work tasks:

- **Engineering and technical skills:** Engineering and technical skills encompass the practical and theoretical knowledge required to design, implement, and maintain sustainable technologies and infrastructure. This skill cluster focuses on the application of engineering principles to environmental challenges, requiring expertise in renewable energy systems, sustainable transportation, green building technologies, and eco-friendly industrial processes. Professionals must possess strong technology literacy, particularly in emerging green technologies, along with programming capabilities for developing innovative environmental solutions. These skills extend to understanding complex systems integration, including networks and cybersecurity protocols essential for managing smart grids and sustainable infrastructure.

➤ Technology literacy	Particularly for green technologies
➤ Programming	For developing green tech solutions
➤ Networks and cybersecurity	For smart grids and sustainable infrastructure

- **Science skills:** Science skills represent the fundamental scientific knowledge and analytical capabilities necessary for understanding and managing environmental systems and natural resources. This skill cluster demands a comprehensive understanding of environmental science, including ecosystem dynamics, climate science, and biodiversity conservation. Professionals must be proficient in ecological assessment and impact analysis, enabling them to evaluate the environmental consequences of various activities and develop evidence-based sustainable solutions. These skills are necessary across the entire value chain, from research and development to practical application, enabling professionals to make informed decisions about resource management and environmental protection strategies.

➤ Environmental science knowledge	Understanding ecosystems, climate change, and biodiversity
➤ Ecological assessment and impact analysis	For scientifically assessing environmental impacts, developing sustainable solutions,

² This HRD Plan uses “skills” as an overarching term that refers to the ability to carry out a mental or manual activity. Meanwhile, competency is defined as the ability to apply the knowledge, i.e., do what is specified as an expected training outcome.

- Geospatial analysis and remote sensing and conducting research to support green initiatives
- Data analysis and mathematical modelling For climate models and resource optimization

- **Operation management skills:** Operation management skills encompass the strategic and practical abilities needed to integrate sustainability into business operations and organizational processes. This skill cluster focuses on implementing and managing sustainable practices throughout the entire business ecosystem, from supply chain optimization to waste management. Professionals must possess expertise in life cycle assessment, enabling them to evaluate and improve the environmental impact of products and services throughout their entire lifecycle. Additionally, these workers must be adept at energy efficiency auditing and improvement, requiring a combination of technical knowledge and management capabilities, emphasizing the importance of balancing environmental considerations with operational efficiency and economic viability.

- Sustainable supply chain management Optimizing for minimal environmental impact
- Life cycle assessment of products and services To integrate sustainability into core business operations, reducing the environmental footprint while maintaining efficiency.
- Green procurement strategies and supplier evaluation
- Waste reduction and management techniques
- Energy efficiency auditing and improvement

- **Monitoring skills:** Monitoring skills comprise the technical and analytical capabilities required to assess, track, and optimize environmental performance across various systems and operations, focusing on the development and implementation of monitoring frameworks that ensure compliance with environmental regulations while identifying opportunities for improvement. Workers are required to be proficient in environmental impact assessment and reporting, enabling them to measure and analyze environmental performance metrics accurately. These skills require a broad understanding of macroeconomic principles to effectively integrate sustainability considerations into long-term infrastructure planning and development.

- Environmental impact assessment and reporting For measuring, analyzing, and reporting on environmental performance, ensuring compliance with regulations, and identifying areas for improvement in sustainability efforts
- Energy consumption tracking and analysis
- Environmental compliance auditing

Beyond technical expertise, a range of core (or soft) skills is essential across all sectors and occupations. These skills enable workers to understand environmental issues, analyze complex systems, and offer informed recommendations for green solutions. These core skills are presented in Table 2.

Table 2. Core Skills for Green Jobs

Core Skill	Description
Environmental awareness	This foundational skill involves a willingness to learn about and engage with sustainable development principles, which enables the “green mindset” required for roles focused on environmental protection and mitigation. ⇒ Sustainable and efficient resource usage ⇒ Adopting green technologies/practices
Adaptability and transferability	As green technologies and processes continuously evolve, workers need the ability to learn and apply new skills that will enable adjustments and equitable transitions to the changing demands of greening their jobs. ⇒ Flexibility and coordination ⇒ Adaptation to change
Teamwork	Effectively tackling environmental challenges requires collective, cross-functional efforts. Strong teamwork skills facilitate organizations to work collaboratively on their environmental footprint. ⇒ Assisting and supporting co-workers ⇒ Empathy and active listening ⇒ Giving and receiving feedback
Resilience	Resilience allows workers to navigate and see through these transformations, maintaining productivity and effectiveness.
Communication and negotiation	Communication and negotiation skills enable workers to drive the required changes amid promoting or implementing green initiatives, which involves persuading customers/colleagues. ⇒ Liaising, networking, and exchanging information ⇒ Speaking, writing, and language skills ⇒ Persuasion and negotiation
Entrepreneurial skills	These empower workers to innovate and create new green business models.

	⇒ Initiative ⇒ Creativity and problem-solving ⇒ Systems thinking ⇒ Analytical thinking
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This NGJ HRD Plan, therefore, operationally uses the term “green skills” when pertaining to the technical and core skills necessary in carrying out tasks in green occupations. In addition, this document anchors green skills on the definition of the OECD (2014), which explicitly mentions green skills as “skills needed in a low-carbon economy, that will be required in all sectors and at all levels in the workforce.”

Apart from categorizing technical and core skills for green jobs, the nature of change across the skills spectrum must be considered, as existing and emerging jobs require a range of skills across different occupational levels. Table 3 further outlines these requirements:

Table 3. Skill Levels and Occupational Examples

Low-skilled occupations	▪ These roles primarily experience generic changes, such as increased environmental awareness and simple adaptations to work procedures	Refuse/waste collectors and dumpers.
Medium-skilled occupations	▪ Workers must gain new green skills ▪ This category sees the emergence of some new green occupations and significant changes to existing ones in terms of technical skills and knowledge	New occupations: wind-turbine operators, solar-panel installers Changing occupations: roofers, technicians in heating, ventilation, air conditioning (HVAC), plumbers
High-skilled occupations	▪ Most new green occupations fall into this category, along with significant changes to some existing roles in terms of technical skills and knowledge ▪ Workers are critical in driving innovation, identifying opportunities, and creating strategies to address green challenges	New occupations: agricultural meteorologists, climate-change scientists, energy auditors, energy consultants, carbon-trading analysts Changing occupations: building facilities managers, architects, and engineers

Source: ILO, 2018

Equipping workers with green skills emerges as a fundamental intervention for an inclusive transition to environmental sustainability (OECD, 2017; ILO, 2015). First, skilling facilitates access to the new green jobs required by greener economies. Studies estimate that the net job creation from the global transition could reach 18 million by 2030, mostly in renewable energy, construction, agriculture, and forestry (ILO, 2018). Enhancing skills for employability will allow workers to access these emerging opportunities. Second, skills training enables livelihood security and social protection for those in carbon-intensive sectors that may be displaced by the low-carbon shift (ILO, 2015). For example, skilling programs for coal miners in Germany enabled their transition to green sectors like renewable energy (OECD, 2017). Third, skills development promotes inclusion by integrating women, youth, indigenous peoples, and other marginalized groups into the transition process (ILO, 2018).

Green skills development helps empower vulnerable segments of the workforce and provides an opportunity to promote inclusion amid the low-carbon shift (Healy & Barry, 2017). Enhancing access to skills training and green jobs for these groups can foster more equitable transitions. For example, green construction skills programs targeted at underprivileged youth in Canada enabled their entry into well-paying careers (The Conference Board of Canada, 2022). There is also evidence that low-carbon investments generate more employment opportunities for female workers (ILO, 2018).

The National Green Jobs Human Resource Development Roadmap

Pursuant to the Philippine Green Jobs Act of 2016 (Republic Act No. 10771), the Department of Labor and Employment (DOLE) has been tasked, in coordination with other government agencies, to formulate a National Green Jobs Human Resource Development (NGJ HRD) Plan on the development, enhancement, and utilization of the labor force, both in the private and public sectors.

The NGJ HRD Plan's objectives include the following: (i) to enable and sustain the transition into a green economy; (ii) to serve as a pathfinder in generating green jobs toward more employment and equal opportunities; and (iii) to promote social justice and workers' welfare. Among other components, the updated NGJ HRD Plan shall contain (i) data on labor supply and key employment generators; (ii) linking green job opportunities with private and public entities; (iii) situation and gap analysis; (iv) information on skill requirements of a green economy; and (v) programs, projects, activities, and various policies of other implementing agencies of the Philippine Green Jobs Act of 2016.

In 2020, the DOLE released the NGJ HRD Plan 2020-2030, which featured the Philippine labor situation, challenges, and current initiatives in the promotion of green jobs across various sectors, and, most importantly, the strategic action plan to promote green jobs in this critical decade of climate action. With the recent developments in both international and domestic policy related to green jobs and just transition, and with the perceived gaps in fully operationalizing the current plan, the updating of the NGJ HRD Plan 2020-2030 is urgently needed to provide direction to the promotion and creation of green jobs in the Philippines.

II. Framework

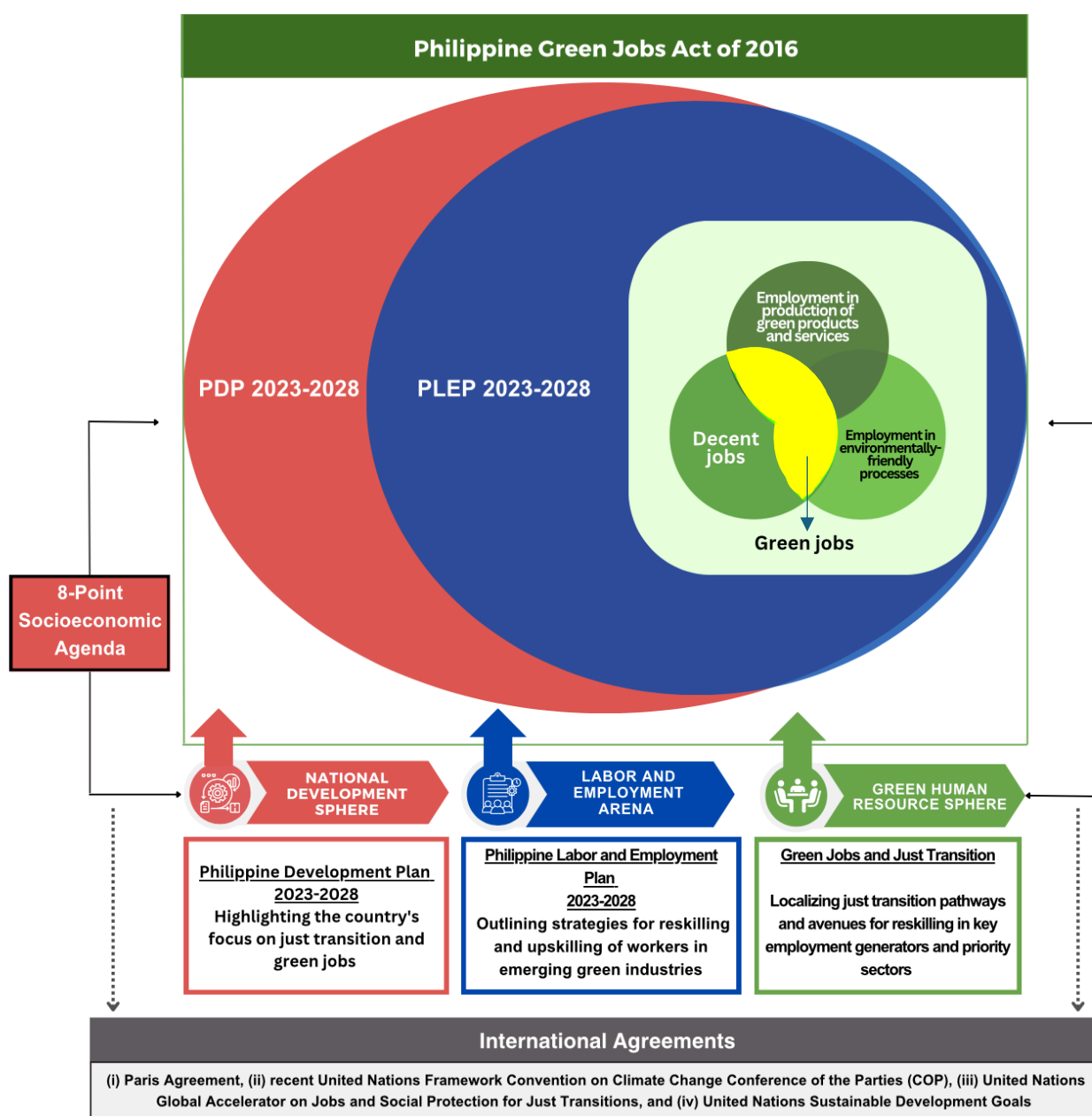
The NGJ HRD Plan Framework utilizes a three-pronged approach that includes Green Jobs, Green Skills, and Just Transition analyses. This framework guides the priority areas, target outcomes, key considerations, and strategic action plans for the updated NGJ HRD Plan 2020-2030, as well as its future revisions and sectoral HRD Plan developments. It integrates domestic national development plans and strategies with international commitments and policy trends, aligning with the Philippine socio-economic agenda for the medium term. The framework aims to balance country development priorities with a strong push for green jobs through a people-centered just transition.

The NGJ HRD Plan Framework is primarily based on the Philippine Green Jobs Act of 2016 and national development plans such as the Philippine Development Plan (PDP) 2023-2028 and the Philippine Labor and Employment Plan (PLEP) 2023-2028, while also considering international developments and commitments. Figure 2 provides a visual representation of the NGJ HRD Plan Framework.

National Development Plans form the core of the Framework, from which strategic actions for promoting green jobs are derived. The strategic actions in the NGJ HRD Plan align with the provisions of the Philippine Green Jobs Act of 2016 and the priority economic agenda in the PDP 2023-2028, as well as the priority areas and labor-specific outcomes in the PLEP 2023-2028.

On the other hand, international commitments and developments are considered in the operationalization of the NGJ HRD Plan's strategies, including specific action points and key indicators for monitoring and evaluation. This ensures that the NGJ HRD Plan aligns with the Philippines' commitments related to green jobs and prevailing principles of just transition. Incorporating these international aspects can potentially enhance the ambition for promoting green jobs in the country. For example, even though there is currently a gap in a comprehensive national policy on just transition, this consideration helps guide the NGJ HRD Plan in integrating just transition principles into its strategic actions.

Figure 2. National Green Jobs Human Resource Development Plan 2020-2030



The multi-layered and inclusive Framework reflects the Philippine government's commitment to implementing national laws and development plans related to green jobs while considering international trends in just transition.

The Philippine Green Jobs Act of 2016 and National Development Plans

The National development aspect of the NGJ HRD Plan Framework is premised on major development plans and legislation on green jobs, namely the (i) Philippine Green Jobs Act of 2016; (ii) Philippine Development Plan 2023-2028; and (ii) Philippine Labor and Employment Plan 2023-2028.

The Philippine Green Jobs Act of 2016 (Republic Act No. 10771) is a pioneering legislation that establishes a comprehensive framework for transitioning to an inclusive, sustainable, and climate-resilient green economy. As the first of its kind in Southeast Asia, the law adopts a holistic approach to systematically incentivize green jobs and enterprises, providing the regulatory incentives and coordination mechanisms needed to overcome barriers and scale up green jobs across all sectors. It outlines strategies for skills development, enterprise assistance, impact monitoring, and multi-stakeholder collaboration. It serves as a model for other countries seeking to put in place an enabling policy environment to maximize the potential of green jobs.

Notably, the Philippine Green Jobs Act reaffirms labor as a primary socio-economic force in advancing sustainable development, ensuring full protection for both local and overseas workers, whether organized or unorganized. It promotes productive employment and equal opportunities for all, while also supporting the right of individuals to a balanced and healthful ecology that aligns with the natural rhythm and harmony.

Building on these principles, the law provides a clear definition of green jobs as "employment that contributes to preserving or restoring the quality of the environment[.]" A significant aspect of this definition is its emphasis on decent work, highlighting the law's commitment to both environmental sustainability and workers' rights.

“Green jobs are decent jobs that are productive, respect the rights of workers, deliver a fair income, provide security in the workplace and social protection for families, and promote social dialogue.”

As such, in this document, the term ‘green job’ is used to signify **decent jobs** that (i) **contribute to preserving or restoring the environment**, be they in traditional or new, emerging green sectors, and (ii) directly contributes to—or indirectly supports the achievement of the country’s environmental and sustainable development goals.

The 8-Point Socioeconomic Agenda refers to the streamlined priority areas that the current administration seeks to achieve in the near-term and medium-term. Of these eight (8) points, three are relevant to Green Jobs and Just Transition—Agenda 4: Create More Jobs; Agenda 5: Create Quality Jobs; and Agenda 6: Create Green Jobs. Essentially, when integrated, the 8-Point Socioeconomic Agenda refers to the *creation of more quality green jobs*. Figure 3 enumerates the various strategies for each point.

Figure 3. Relevant 8-Point Socioeconomic Agenda to Green Jobs and Just Transition



Source: Authors' own illustration based on the 8-point Socioeconomic Agenda

Framed by the 8-Point Socioeconomic Agenda, the **PDP 2023-2028** provides the overarching policy framework and direction for national development, including advancing the green jobs agenda in the Philippines through systematic skills development and enterprise promotion. PDP Chapter 4, *Increasing Income-Earning Ability*, emphasizes the need to align employability and skills with emerging labor market demands, such as green jobs, and mandates the implementation of the NGJ HRD Plan to integrate green competencies into education and training programs. In addition, PDP Chapter 15, *Accelerate Climate Action and Strengthen Disaster Resilience*, outlines the development of the green and blue economy as a key strategy for job creation and supports the just transition of workers impacted by the shift toward a more sustainable and low-carbon economy. Table 4 details the strategies related to green jobs identified in PDP 2023-2028.

Table 4. Outcomes and Strategies related to Green Jobs and Just Transition in PDP 2023-2028

Chapter 4. Increasing Income-earning Ability

Outcome 1: Employability increased

- Align development objectives for basic, technical, and vocational education and training (TVET), and higher education based on labor market requirements (reference to green competencies)

Outcome 3: Shared labor market governance achieved

- Mainstream gender and green competencies
 - Intensify creating a **database of green jobs**
 - Implement the **Green Jobs Human Resource Development Plan**
 - Intensify the integration and mainstreaming of **green competencies** in TVET and education programs
 - Revisit the Philippine Qualifications Framework for proper integration of environmental sustainability and **green qualifications**
 - Place adequate levels of social protection to address the **just transition** of unskilled workers.

Chapter 15. Accelerate Climate Action and Strengthen Disaster Resilience

Outcome 2: Ecosystem resilience enhanced

- Promote and expand natural resource-based industries and enterprises
 - Promote the **green and blue economy** (i.e. sustainable management of natural resources, biodiversity-friendly enterprises, ecotourism, commercial forest plantations, marine-based industries, and enterprises) for more livelihood and economic opportunities
 - Develop and implement the **Green Jobs Assessment and Certification System and Guidelines**

Outcome 3: Low carbon economy transition enabled

- Bolster private sector investments in green development
 - Foster an enabling policy environment to leverage **private sector investments in green technologies** and circular business models
- Ensure just transition of workers affected by the structural changes toward a greener, more sustainable, and low-carbon economy
 - Prioritize the implementation of the **Green Jobs Human Resource Development Plan**
 - Provide **support and training opportunities** (e.g., retooling, upskilling, or reskilling on sustainable practices and processes) for workers and enterprises affected by the transition to a sustainable and green economy

Source: PDP 2023-2028

Given the PDP 2023-2028's priorities on resilience, green competitiveness, and just transition, the NGJ HRD Plan serves as a vehicle to translate these goals into practical educational and training programs, sectoral partnerships, and employment facilitation mechanisms, thereby contributing to the achievement of the PDP's objectives.

While the 8-Point Socioeconomic Agenda and the PDP 2023-2028 address broader national development goals, the **PLEP 2023-2028** focuses specifically on labor and employment aspects. The PLEP 2023-2028 prioritizes: (i) maximizing productive, remunerative, freely chosen, and sustainable work and employment opportunities; (ii) ensuring effective labor market governance and adherence to fundamental principles and rights at work, including international labor standards; and (iii) building equitable and inclusive protection for workers.

Table 5 enumerates the various strategies identified in the PLEP 2023-2028 that expressly relate to green jobs. It must be noted, however, that other strategies in the PLEP 2023-2028, while not expressly referring to green jobs and instead referring to broader livelihood aspects, may also be relevant in formulating the NGJ HRD Plan's strategic actions for skills and enterprise development, social dialogue, and just transition programs to unlock the potential of green jobs for vulnerable groups, including youth, women, and vulnerable groups, among others.

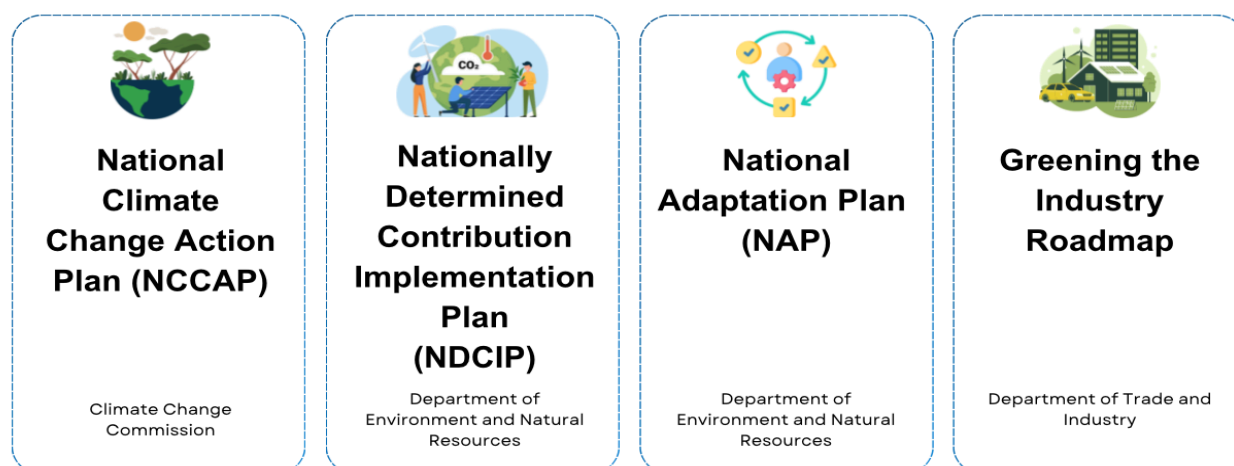
Table 5. Outcomes and Strategies Related to Green Jobs and Just Transition in PLEP 2023-2028

Priority 1: Maximizing productive, remunerative, freely chosen, and sustainable work and employment opportunities 1.1. Increased employability • Develop modern and responsive TVET, apprenticeships, basic and higher education, and professional development interventions aligned with emerging trends or demands from the industry, including green skills and green jobs. 1.3. Shared labor market governance • Map or forecast areas of industries to enable workers and employers to strategically adapt to the effects of technological change, climate change, green technologies, and situations of conflict. • Intensify advocacy support of government and social partners through skills development programs to promote a sustainable environment and just transition. • Mainstream gender and green competencies in training standards, modules, and curricula. 1.4. Enhanced enabling environment to promote the development of sustainable and resilient enterprises, particularly for MSMEs • Provide technical assistance and enhance capacity-building programs for MSMEs (e.g., emerging technologies), including toolkits to enhance the sustainability of MSMEs, social enterprises, and cooperatives, with a focus on facilitating access to finance, improving productivity, upgrading processes and technologies, and incorporating green and sustainable practices.
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Source: PLEP 2023-2028

While the three aforementioned documents serve as the core of the NGJ HRD Plan Framework, Figure 4 enumerates other existing national plans and strategies on climate change adaptation, mitigation, and sustainable development related to green jobs that may complement the Plan and vice versa.

Figure 4. Other Plans and Strategies Related to Green Jobs and Just Transition



- **National Climate Change Action Plan (NCCAP)** – The NCCAP of the Climate Change Commission outlines the country’s agenda and long-term programs and strategies for adaptation and mitigation, focusing on seven thematic priorities. Under its priority, *Climate-friendly industries and services*, the creation of green jobs is one of its focus areas, while “sustainable livelihood and jobs created from climate-smart industries and services” is an immediate outcome.
- **Nationally Determined Contribution Implementation Plan (NDCIP)** – The NDCIP of the Department of Environment and Natural Resources guides the country's short-term, medium-term, and long-term economic and investment planning in support of meeting the country’s nationally determined contributions (NDCs) target come 2030. Its six pillars include (i) delivering mitigation actions; (ii) advancing international cooperation; (iii) developing market-based actions; (iv) strengthening resilience and adaptive capacity; (v) cascading sub-national actions; and (vi) engaging the private sector.
- **National Adaptation Plan (NAP)** – The NAP of the Department of Environment and Natural Resources is the country’s “means of identifying medium- and long-term adaptation needs and developing and implementing strategies and programs to address those needs.” In the context of the creation and promotion of green jobs across key sectors and industries, these jobs and the skilling that they entail must be climate-resilient themselves.
- **Greening the Industry Roadmap** – This Roadmap, which is developed by the Department of Trade and Industry, charts a course for the Philippines' traditional sectors to become more environmentally sustainable and competitive; thus, creating opportunities for green skills development and green jobs promotion.

International Commitments and Developments

The international commitments and developments aspect of the NGJ HRD Plan Framework is based on major international agreements and guidelines on green jobs, namely (i) the Paris Agreement; (ii) the recent decisions of the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP); (iii) the United Nations Sustainable Development Goals; and (iv) the United Nations Global Accelerator on Jobs and Social Protection for Just Transitions, among others.

The Paris Agreement is a legally binding international treaty on climate change, adopted by 196 Parties, including the Philippines, in COP 21 (2015). Its overarching goal is to hold “the increase in the global average temperature to well below 2°C above pre-industrial levels” and pursue efforts “to limit the temperature increase to 1.5°C above pre-industrial levels.” More particularly on green jobs and just transition, the Agreement in its Preamble states “taking into account the imperatives of a just transition of the workforce and the creation of *decent work* and *quality jobs* in accordance with nationally defined development priorities”.

Established through the Paris Agreement, NDCs are a tool that countries use to communicate their intended climate action to reduce greenhouse gas emissions, including transitioning to low-carbon growth pathways, to reach the goals of the Paris Agreement. The Philippines communicated its NDCs to the UNFCCC Secretariat in 2021, which contained one provision related to Green Jobs and Just Transition: “The Philippines, in line with its national security policy and its sustainable development aspirations and solidarity with the ASEAN Member States, shall endeavor to peak its emissions by 2030 in the context of accelerating the *just transition* of its sectors into a *green economy* and the delivery of *green jobs and other benefits* of a climate and disaster-resilient and low carbon development to its people, among others.”

In the succeeding years, the theme of just transition emerged as a critical issue in international climate negotiations. Table 6 summarizes the evolution of just transition as a concept that tackles the creation of decent work and quality jobs through specific workforce components.

Table 6. Summary of Green Jobs and Just Transition Outcomes in COP 26, 27, and 28

Event and Outcome	Summary of Decision
COP 26: Glasgow Climate Pact (paragraph 52, 2021)	The decision recognizes the need to “ensure just transitions that promote sustainable development and eradication of poverty, and the creation of decent work and quality jobs [...] [.]”
COP 27: Sharm el-Sheikh Implementation Plan	The decision emphasizes that “just and equitable transition encompasses pathways that include energy, socioeconomic, workforce, and other dimensions, all of which must be based on

(paragraphs 50-53, 2022)	nationally defined development priorities[.]” It shall also include social protection and social solidarity in mitigating potential impacts associated with the transition. Further, a work program on just transition for the discussion of pathways to achieving the goals of the Paris Agreement was established.
COP 28: United Arab Emirates Just Transition Work Programme (2023)	The decision recognizes that “just transitions are for all countries[.]” Among other elements, it has been decided that the Work Programme shall include: (i) just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities, including through social dialogue, social protection, and the recognition of labor rights; (ii) inclusive and participatory approaches to just transitions that leave no one behind; (iii) pathways that include energy, socioeconomic, workforce and other dimensions, all of which must be based on nationally defined development priorities and include social protection to mitigate potential impacts associated with the transition; and (iv) opportunities, challenges and barriers relating to sustainable development and poverty eradication.

Source: UNFCCC

In articulating its strategic action plan, the NGJ HRD Plan considers the international commitments made by the Philippines under the Paris Agreement, COPs, and NDCs, ensuring that these are supported by the Plan. However, it is important to note that green jobs, human resource development, and just transition are just a few of many components of the country’s broader climate commitments.

In 2015, the ILO adopted the ***Guidelines for a just transition towards environmentally sustainable economies and societies for all*** after convening a tripartite meeting of experts composed of representatives from government, employers’ groups, and trade unions. These guidelines are “meant to provide non-binding practical orientation to Governments and social partners with some specific options on how to formulate, implement and monitor the policy framework, in accordance with national circumstances and priorities.” The guiding principles listed in the document may be summarized in the following manner: (i) Social dialogue; (ii) Fundamental principles and rights of work; (iii) Gender equality; (iv) Enabling economic environment for transition; (v) Decent jobs; (vi) Differentiated/Country-specific response; and (vii) International cooperation. Currently, nearly nine years after the guidelines were adopted, it remains the *only* international organization-sanctioned document that comprehensively discusses just transition from a policy perspective, which makes it nonetheless authoritative as a source of strategy in formulating the NGJ HRD Plan.

The NGJ HRD Plan applies these guidelines in its strategic action plan through its emphasis on social dialogue, skills development, social protection, and active labor market policies.

The United Nations Sustainable Development Goals (SDGs) serve as an important foundation for the NGJ HRD Plan Framework. As emphasized by the ILO, green jobs and the promotion of the green economy have become the key drivers for achieving an economic and social development that is also environmentally sustainable. The alignment of the NGJ HRD Plan objectives and strategies to the SDGs aims to contribute to the broader global effort of environmental protection, economic development, and social equity. The following SDG targets³ were explicitly identified and linked to green jobs by the ILO:

- SDG 8.4 – Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- SDG 11 – Make cities and human settlements inclusive, safe, resilient, and sustainable
- SDG 12 – Ensure sustainable consumption and production patterns
- SDG 13 – Take urgent action to combat climate change and its impacts
- SDG 14 – Conserve and sustainably use the oceans, seas, and marine resources for sustainable development
- SDG 15 – Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss

The UN Global Accelerator on Jobs and Social Protection for Just Transitions, launched in September 2021, represents another key initiative that aims to fast-track the creation of decent jobs, particularly in green, digital, and care economies, while extending social protection to marginalized populations. The Global Accelerator's objectives, evidently aligned with the PDP 2023-2028 and PLEP 2023-2028, dovetail with the NGJ HRD Plan by supporting the implementation of national development strategies and reinforcing the importance of social policies for sustainable development and just transitions.

The Philippines, as one of 15 pathfinder countries, has joined this initiative in May 2024 to facilitate equitable transitions towards the achievement of the SDGs by fostering a job-rich economic recovery and expanding social protection in sectors such as construction and transport.

³ International Labour Organization. <https://www.ilo.org/resource/relevant-sdg-targets-related-environment-and-green-jobs>

III. Scoping Philippine Green Initiatives

Greening initiatives refer to various actions, programs, and projects led by stakeholders (e.g., government, private sector, civil society) that have the goal of mainstreaming sustainability and low-carbon practices and processes in various aspects of society. To an extent, greening initiatives contribute to the development of a green economy.

For the purposes of the NGJ HRD Plan, there is no strict criterion for determining which are “greening initiatives.” Instead, a broad approach to greening initiatives is adopted in so far as they affect the creation and promotion of green jobs. The NGJ HRD Plan includes a scoping of greening initiatives, because the Plan recognizes the potential of generating green jobs and ensuring a just transition as a result of or in the process of doing these initiatives. There are greening initiatives that are particularly geared toward the creation of green jobs. However, this is not always the case. While a greening initiative does not directly aim to create green jobs, the effects of such a greening initiative may still aid in the promotion of green jobs. For example, a national policy that provides incentives to renewable energy sector investments could drive the growth of renewable energy projects, which subsequently would create green jobs. Thus, greening initiatives may *directly* or *indirectly* lead to the creation of green jobs.

In this Section, greening initiatives from various sectors are listed to gauge the space for green jobs. Such space may be driven by public policy and national development plans, labor market demand, and induced transition to a low-carbon and green economy, among others. However, the efficacy or the impact of such initiatives in green jobs generation is not individually analyzed at this point.

Public Sector

The public sector has the greatest potential in setting the policy and regulatory environment for a green economy. Through public policy, public spending, and prioritization of areas of development, the public sector can lead the trend in green transformation. Once the public sector has committed to making the landscape for the green economy predictable, other sectors are then encouraged to participate in such greening. For example, private sector investments and private sector-led projects are expected to follow.

From a green jobs and just transition perspective, the inclusion of greening initiatives in various national development plans, which are later translated into outcomes and strategies, signals the government’s intention to expand the creation of green jobs as a near-term and medium-term agenda. Moreover, the just transition aspect of such public sector greening initiatives must also be considered because it is incumbent upon the government to ensure that the transition to a low-carbon economy and systems is just and equitable.

Key green initiatives include the integration of green components in the PDP 2023-2028, TESDA's Greening the TVET Program and Green TVET Journal, the National Solid Waste Management Program for a World Without Waste, and the Career Information System (CIS) by the DOLE-Bureau of Local Employment, among others.⁴

Local Government Units (LGUs) play a crucial role in driving grassroots-level environmental initiatives. Programs such as La Union's "Search for the Cleanest, Safest, and Greenest LGU" and Davao City's "Lunhaw Awards" incentivize local communities to adopt greener practices. Isabela City's "From Tree to Classroom" project creatively addresses waste management by repurposing fallen trees into school furniture, demonstrating how LGUs can innovate to meet local environmental and social needs.⁵

Private Sector

The private sector's greening initiatives are generally voluntarily implemented, whether because of realignment of internal strategies or business models, participation in demand-generation incentives from the government, or consumer demand for more sustainable goods, services, and processes. For the most part, the private sector usually follows the lead of the government in integrating new practices, especially when there are regulatory implications, which emphasizes the significance of the government's anticipatory action and agenda-setting. For others that are more proactive, innovation is the most effective driver of private sector involvement in greening the economy.

Moreover, when a business voluntarily incorporates environmental responsibility into its these businesses' methods of conducting business, it not only supports environmental protection and climate change resilience but also promotes positive public relations and the reputation of a brand.

From a Green Jobs and Just Transition perspective, the role of the private sector in green jobs generation cannot be overlooked. While the government can set the priority agenda and policy environment that would enable the promotion of green jobs, its capacity to maximize livelihood and employment opportunities in the green sector is limited. Whether it is business or civil society, the capacity for jumpstarting green jobs through financing green technologies and for mainstreaming the demand for green skills through public advocacy is unmatched. Through proper incentive mechanisms and a healthy investment environment, the government can complement the potential of private sector greening initiatives. It goes without saying that just transition must be integrated into each of these private-led initiatives.

Notably, large corporations⁶, have also made strides in integrating sustainability into their operations. San Miguel Corporation (SMC) has led high-impact projects like the Tullahan River Cleanup and the "Water For All" initiative, which aim to reduce

⁴ A complete list of the green initiatives, its description, and the assigned lead agency/implementer are detailed in Annex 1, Table 33.

⁵ See the inventory of green initiatives of LGUs in Annex 1, Table 34.

⁶ See the inventory of green initiatives of businesses in Annex 1, Table 35.

pollution and improve water resource management. Meanwhile, Globe Fintech Innovations Inc.'s GCash app includes the GForest initiative, allowing users to contribute to reforestation efforts through their financial transactions. These corporate-led initiatives reflect a growing trend towards corporate social responsibility and investments in green practices that align with global sustainability goals.

For the civil society⁷, the Philippine Green Building Council's Building for Ecologically Responsive Design Excellence (BERDE) Program is an important green initiative, establishing a national green building rating system to encourage eco-friendly construction practices. Greenpeace Philippines' campaigns, such as "Climate Justice for All" and "Ban Foreign Waste," focus on policy advocacy, pushing for stronger environmental protections and sustainable practices at both the national and community levels.

⁷ See the inventory of green initiatives of civil society organizations in Annex 1, Table 36.

IV. Methodology

Rationale and prioritization of pilot sectors

The selection of the six pilot sectors—renewable energy, construction, manufacturing, sustainable agriculture, sustainable tourism, and transport—was based on a prioritization process that considered three primary criteria: **green jobs growth potential** due to ongoing sustainability transitions, **employment creation**, and **high-emitter sectors** with significant decarbonization potential as outlined in the country’s NDCs. These pilot sectors, collectively referred to in this Plan as “key employment growth sectors” (KEGs), are major industry groups with the greatest potential to generate employment and absorb a significant portion of the workforce in the coming years.

Figure 5. Key Employment Growth Sectors with Potential for Green Jobs

					
Renewable energy	Construction	Manufacturing	Transport	Sustainable agriculture	Ecotourism
Within the green economy, RE stands out as a pivotal sector requiring massive workforce skilling and reskilling.	Philippine Green Building Code and Philippine Construction Industry Roadmap – sustainability is a key thrust.	Greening the Philippine Manufacturing Roadmap – integrates green economic development in the sector.	High carbon emissions emitter (14%) – DOTR Public Utility Vehicle Modernization Program – low emission mobility.	Philippine Agriculture and Fisheries Modernization Plan – prioritized sustainability and resilience as main objectives.	National Ecotourism Strategy and Action Plan and Ecotourism Roadmap – expand and promote sustainable tourism.

Research design and data sources

The research design combined quantitative labor market analysis, qualitative stakeholder engagement, youth perspectives, and collaborative planning to develop the NGJ HRD Plan.

- The quantitative component involved an in-depth analysis of labor market information, including macro-level employment data, industry growth projections, and relevant policies to establish labor market trends, informing the planning process (Creswell & Creswell, 2017). Administrative data from the Professional Regulations Commission (labor supply data), the Philippine Statistics Authority (labor force surveys), the Technical Education and Skills Development Authority (training regulations, certifications, green TVET), and Commission on Higher Education (degree programs and graduates) were utilized to supplement the labor market analysis.

- Labor demand for green jobs analysis involved web scraping of vacancies in the country's top job application sites/portals such as Jobstreet, Kalibrr, and Indeed. Data was also culled from existing networks of digital labor market intermediaries to supplement the findings.
- In addition, a youth survey was administered to better understand the aspirations, concerns, and skills development needs of the younger generation, who will be important in driving the green economy forward.
- To complement the quantitative insights, the research also incorporated a qualitative strand through stakeholder consultations with a diverse range of stakeholders, including government agencies responsible for implementing the Philippine Green Jobs Act of 2016, industry players, employers, unions, training providers, academe, development partners, and civil society organizations. These consultations captured the on-the-ground realities, challenges, and perspectives of those directly involved in the green transition.

The combination of quantitative labor market analysis and qualitative stakeholder engagement allowed for methodological triangulation, strengthening the reliability and validity of the findings (Creswell & Creswell, 2017). The participatory planning approach, which involved multi-stakeholder validation workshops, also ensured that the resulting NGJ HRD Plan were comprehensive, evidence-based, and aligned with the needs of diverse stakeholder groups. The research design for this project also benefited from the technical support and expertise provided by the ILO. As early as January 2024, the Institute for Labor Studies' project team conducted scoping activities alongside the ILO to define the objectives, scope, and implementation strategy for the NGJ HRD Plan development.

By integrating both quantitative and qualitative insights, strategies that are grounded in empirical evidence while also reflecting the diverse perspectives and needs of the key stakeholders were developed.

Key engagements

Multi-Stakeholder Consultations (March 18-19, 2024)⁸: The multi-stakeholder consultations gathered around 200 participants in a span of two days representing a diverse set of stakeholders. This includes representatives from national government agencies overseeing policies and programs related to labor, environment, energy, and economic development. The academe, research, and training institutions provided perspectives from education and training sectors. Employers' associations and industry groups of the identified KEGs voiced private sector views. Workers' groups, labor unions, and youth representatives relayed sentiments that ensure that workers' rights, decent work considerations, and future workforce aspirations are factored into the discussions.

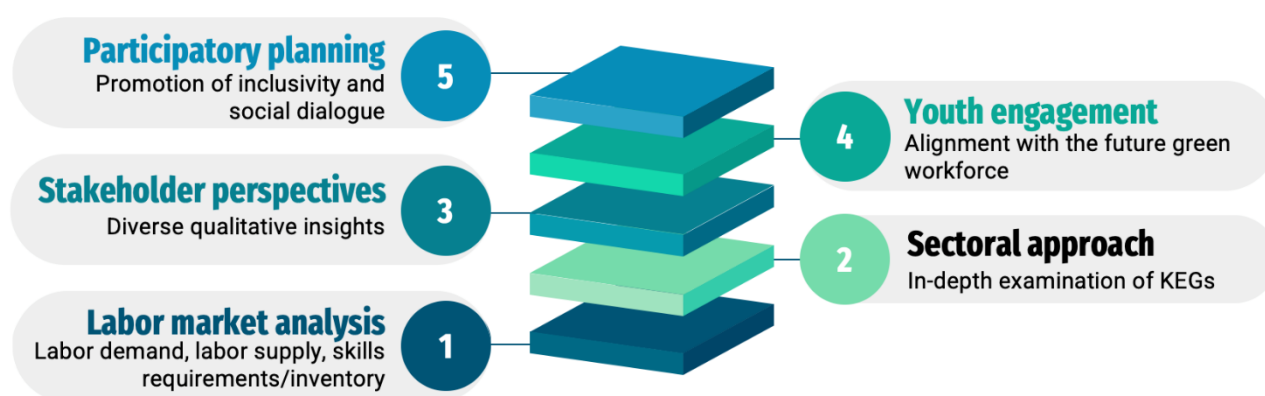
⁸ See Annex 2 for the complete list of attendees.

The participant mix was rounded out by development partners, international organizations, and other sectoral stakeholders from renewable energy, ecotourism, agriculture, construction, manufacturing, and transport industries undergoing green economic transitions.

Presentation of the draft updated NGJ HRD Plan to the DOLE TWG-GJ⁹ (April 29, 2024): The Technical Working Group on Green Jobs (TWG-GJ) under the DOLE was convened to review the draft Plan and ensure alignment with the government's green jobs agenda. Chaired by the DOLE's Employment and Human Resource Development Cluster, the TWG consultation helped streamline the identified goals and strategies.

Operational framework

Figure 6. NGJ HRD Plan Operational Framework



The interconnected building blocks in Figure 6 represent the operational framework of the NGJ HRD Plan. These elements ensure the NGJ HRD Plan is comprehensive, evidence-based, inclusive, and responsive to the stakeholders and end-users of the document. The labor market analysis provides the quantitative foundation, while the sectoral approach, stakeholder engagement, youth involvement, and participatory planning processes enrich the plan, guiding the research and planning toward a just and sustainable transition.

⁹ The DOLE TWG Members include the Bureau of Local Employment, Bureau of Working Conditions, Bureau of Workers with Special Concerns, National Wages and Productivity Commission, Technical Education and Skills Development Authority, and the Institute for Labor Studies.

V. Philippine Human Resources

Recent labor market trends

Labor force expansion and participation. The labor force experienced expansion between May 2023 and May 2024, with a year-on-year growth of 1.1% and an increase of 544,000 workers. Notably, the monthly increase from April to May 2024 was more substantial, adding 575,000 workers. While the labor force participation rate (LFPR) showed a slight year-on-year decline from 65.3% in May 2023 to 64.8% in May 2024, there was a month-on-month improvement from 64.1% in April 2024 to 64.8% in May 2024, indicating a recent positive trend in workforce engagement. The gender gap in labor force participation remains significant, with males at 75.1% and females at only 54.4% in May 2024.

Unemployment and underemployment trends. The unemployment picture presents a slightly positive trend, with the rate decreasing from 4.3% in May 2023 to 4.1% in May 2024. However, the absolute number of unemployed persons (2.11 million) in May 2024 was higher than in April 2024 (2.04 million) despite a year-on-year declining trend from 2.17 million in May 2023, which suggests some month-to-month volatility.

An improvement can be observed in the country's underemployment situation, with the rate dropping from 11.7% in May 2023 to 9.9% in May 2024, representing 846,000 less unemployed workers over the past year, and an even larger decline of 2.22 million compared to the month prior (4.7% decrement).

Table 7. Key Employment Indicators: May 2023, April 2024, and May 2024

Indicator	May 2023	April 2024	May 2024	Increment (Decrement)		Growth Rate	
				May 2023 – May 2024	April 2024 – May 2024	May 2023 – May 2024	April 2024 – May 2024
Population 15 years old and over	77,170	78,617	78,635	1,465	18	1.9	0.0
Male 15 years old and over	38,377	39,478	39,446	669	(32)		
Female 15 years old and over	38,393	39,140	39,189	797	50		
Labor force	50,428	50,396	50,972	544	575	1.1	1.1
Male	29,287	29,591	29,637	350	46		
Female	21,141	20,805	21,335	193	530		
Labor force participation rate	65.3	64.1	64.8	(0.5)	0.7	(0.8)	1.1
Male	75.5	75.0	75.1	(0.4)	0.2		
Female	55.1	53.2	54.4	(0.6)	1.3		
Not in the labor force	26,742	28,221	27,663	922	-558	3.4	(2.0)
Employed	48,260	48,355	48,865	605	510	1.3	1.1

Male	28,116	28,354	28,438	323	84		
Female	20,145	20,001	20,427	282	426		
Employment rate	95.7	96.0	95.9	0.2	(0.1)	0.2	(0.1)
Male	96.0	95.8	96.0	0.0	0.1		
Female	95.3	96.1	95.7	0.5	(0.4)		
Unemployed	2,167	2,041	2,106	-61	65	(2.8)	3.2
Male	1,171	1,237	1,199	28	(38)		
Female	996	804	907	(89)	103		
Unemployment rate	4.3	4.0	4.1	(0.2)	0.1	(3.9)	2.0
Male	4.0	4.2	4.0	0.0	(0.1)		
Female	4.7	3.9	4.3	(0.5)	0.4		
Underemployed	5,661	7,037	4,815	(846)	(2,222)	(14.9)	(31.6)
Male	3,762	4,529	3,131	(631)	(1,398)		
Female	1,899	2,508	1,684	(215)	(824)		
Underemployment rate	11.7	14.6	9.9	(1.9)	(4.7)	(16)	(32.3)
Male	13.4	16.0	11.0	(2.4)	(5.0)		
Female	9.4	12.5	8.2	(1.2)	(4.3)		

Source: Philippine Statistics Authority, Labor Force Survey

The employment situation shows modest improvements. The number of employed individuals increased by 605,000 (1.3% growth) year-on-year and by 510,000 from April to May 2024, which indicates the gradual expansion of job opportunities, albeit not keeping pace with the growth of the working-age population. The employment rate also remained relatively stable at 95.9% in May 2024, slightly higher than the previous year (95.7%) but marginally lower than April 2024 (96%). Employment of female workers saw a slight increase, with around 20.4 million employed workers in May 2024 compared to 20.1 million the year prior.

Shifts in sectoral employment, occupation structure, and employment status. The services sector remains the country's highest employer, accounting for 60.1% of employment or 29.3 million in May 2024. Meanwhile, significant changes were observed across various sub-sectors: (i) construction, administrative services, and manufacturing saw the largest increases in employment, (ii) agriculture and forestry, fishing, and aquaculture experienced substantial declines, suggesting an ongoing shift away from primary sector employment, and (iii) the public sector showed growth, particularly in public administration and defense. Analyzing the broader employment landscape reveals additional structural changes in the labor market for the following occupations:

- Elementary occupations are the largest employment sector but show a slight decline from 30.2% in May 2023 to 28% in May 2024.
- Service and sales workers saw a modest increase from 22.3% to 23.9% over the year, indicating continued growth in the service sector.
- Plant and machine operators and assemblers saw noteworthy growth from 7.7% to 9%, potentially indicating increased industrialization or technological adoption.

During the same reference period, there has been a minor shift toward formal employment as the proportion of wage and salary workers continually increased from 60.6% in 2023 to 63.0% in 2024, further disaggregated into those working for private establishments (48.7% of total wage and salary workers), workers in government or government corporations (9.6%), and workers in private householders (4.4%) in May 2024.

Unpaid family workers decreased from 9.1% to 7.3%, suggesting a reduction in informal, family-based work arrangements, while self-employment slightly declined at 23.9% in May 2024. Meanwhile, there was a small decrease in workers classified as employers in their family-operated farm or business, from 2.1% to 1.7%, which indicates challenges for micro, small, and medium enterprises (MSMEs).

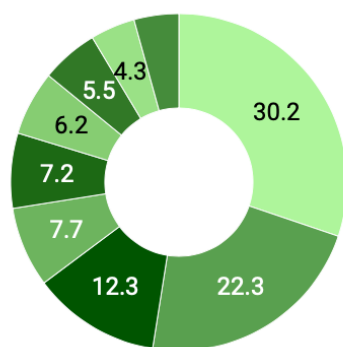
Informal employment estimates. Informal employment is a pervasive issue in the labor market, with significant implications for workers' rights, social protection, and overall economic development. The concept of informal employment extends beyond just the informal sector, encompassing all individuals with informal jobs across various sectors, including employees in informal arrangements, own-account workers in informal enterprises, employers with informal businesses, and unpaid family workers.

Estimates suggest that informal employment comprises over 70% of total employment and about one-third of the country's GDP (Cabegin, 2022). Recent data highlights the persistence of informal employment, with IBON estimating that in 2023, the number of individuals in informal work increased by 483,000, rising from 19.9 million to 20.4 million, which represents 42.2% of the total employed workforce. Considering irregular workers in private establishments, IBON estimates that this number could potentially reach 34.7 million, or 72% of total employment.

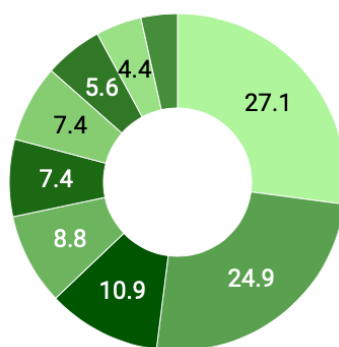
Recent trends show growth in sectors associated with informal and precarious work. For instance, there were increases in self-employed workers and unpaid family workers, as well as in sectors known for temporary, irregular, and low-paying work.

Figure 7.Employment by Major Occupation Group and Class of Worker (May 2023, April 2024, and May 2024)

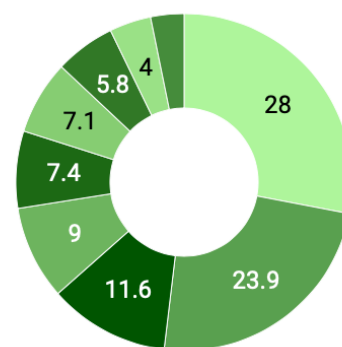
■ Elementary occupations
 ■ Service and sales workers
 ■ Skills agricultural, forestry, and fishery workers
■ Plant and machine operators and assemblers
 ■ Clerical support workers
■ Craft and related trades workers
 ■ Professionals
 ■ Technicians and associates
 ■ Other



May 2023



April 2024



May 2024

	May 2023	April 2024	May 2024
Wage and salary workers	60.6%	63.6%	63.0%
Self-employed or without any paid employee	28.1%	27.9%	27.9%
Worked without pay in own family-operated farm or business (Unpaid family worker)	9.1%	6.5%	7.3%
Employer in own family-operated farm or business	2.1%	2.1%	1.7%

Source: Philippine Statistics Authority, Labor Force Survey

Table 8. Employment by Economic Sector (May 2023, April 2024, and May 2024)

Sector	May 2023		April 2024		May 2024		May 2023 – May 2024	April 2024 – May 2024
	Percent share	No.	Percent share	No.	Percent share	No.	Increment (Decrement)	
Agriculture	24.3	11,725	20.3	9,798	20.8	10,166	(1,559)	369
Agriculture and forestry	85.1	9,979	85.3	8,353	88.2	8,963	(1,016)	610
Fishing and aquaculture	14.9	1,746	14.7	1,444	11.8	1,203	(543)	(241)
Industry	16.9	8,153	18.3	8,844	19.1	9,335	1,182	491
Mining and quarrying	2.3	185	2.8	244	2.6	242	57	(2)
Manufacturing	42.9	3,499	42.3	3,738	41.2	3,846	347	107
Electricity, gas, steam, and air conditioning supply	1.1	86	0.8	70	0.8	75	(11)	5

Water supply, sewerage, waste management, and remediation activities	0.5	39	1.1	93	0.9	83	45	(10)
Construction	53.3	4,344	53.1	4,698	54.5	5,089	745	391
Services	58.8	28,382	61.4	29,714	60.1	29,364	982	(350)
Wholesale and retail trade; repair of motor vehicles and motorcycles	35.8	10,155	34.1	10,144	34.4	10,109	(46)	(35)
Transportation and storage	12.1	3,434	12.6	3,754	12.7	3,727	292	(28)
Accommodation and food service activities	7.6	2,166	9.3	2,754	8.3	2,432	266	(322)
Information and communication	1.4	392	1.5	441	1.5	444	52	3
Financial and insurance activities	2.4	688	2.2	652	2.4	692	5	40
Real estate activities	1.1	321	0.8	230	0.6	169	(152)	(61)
Professional, scientific, and technical activities	1.3	374	1.3	391	1.0	290	(83)	(101)
Administrative and support service activities	7.2	2,051	8.6	2,557	8.2	2,422	371	(135)
Public administration and defense; compulsory social security	10.1	2,857	9.5	2,824	10.7	3,133	276	309
Education	5.2	1,486	5.3	1,581	5.8	1,696	210	116
Human health and social work activities	2.6	734	2.4	727	2.4	703	(31)	(24)
Arts, entertainment, and recreation	2.3	653	1.7	511	1.6	475	(178)	(36)
Other service activities	10.8	3,070	10.6	3,145	10.5	3,071	1	(74)
Activities of extraterritorial organizations and bodies	0.0	2	0.0	3	-	-	(2)	(3)

Source: Philippine Statistics Authority, Labor Force Survey

Youth labor market dynamics. As shown in Table 9, the youth labor market situation in the Philippines shows concerning trends over the past year. The youth labor force (ages 15-24) experienced a significant decline, decreasing by 5% (340,000 individuals) from May 2023 to May 2024. This trend was also reflected in the youth labor force participation rate, which fell from 33.8% to 32.2% over the same period. However, despite this overall decline, there was a positive trend in new youth entrants to the labor force, increasing by 37.2% year-on-year, representing around 555,000 youth workers. In spite of this, it can

be observed that this was not enough to offset the larger exodus from the youth labor force, as evidenced by the 2.5% increase (336,000) in those not in the labor force from May 2023 to May 2024.

In addition, the number of employed youth decreased by 5.5% (338,000) year-on-year, with the youth employment rate declining slightly from 89.4% to 88.8%. The youth unemployment rate also increased from 10.6% to 11.2% over the same period, indicating growing difficulties for young people in securing jobs. On a more positive note, youth underemployment saw a slight improvement, as the underemployment rate decreased from 11.0% to 10.2% year-on-year, along with a substantial drop from 13.8% in April 2024. This trend may suggest that while fewer youth are employed overall, those who are employed are finding more adequate work.

Table 9. Youth Labor Market Indicators (May 2023, April 2024, and May 2024)

Indicator	May 2023	April 2024	May 2024	Increment (Decrement)		Growth Rate	
				May 2023 – May 2024	April 2024 – May 2024	May 2023 – May 2024	April 2024 – May 2024
Youth population 15-24 years old	20,151	20,154	20,147	(4)	(7)	0.0	0.0
Youth labor force	6,819	6,561	6,479	(340)	(82)	(5.0)	(1.3)
Youth labor force participation rate	33.8	32.6	32.2	(1.7)	(0.4)	(5.0)	(1.2)
New youth entrants to the labor force	404	624	555	150	(69)	37.2	(11.1)
Employed youth	6,094	5,874	5,756	(338)	(117)	(5.5)	(2.0)
Youth employment rate	89.4	89.5	88.8	(0.5)	(0.7)	(0.6)	(0.8)
Underemployed youth	669	811	589	(80)	(222)	(12.0)	(27.4)
Youth underemployment rate	11.0	13.8	10.2	(0.8)	(3.6)	(6.8)	(25.9)
Unemployed youth	725	688	723	(2)	35	(0.3)	5.1
Youth unemployment rate	10.6	10.5	11.2	0.5	0.7	4.9	6.4
Youth not in the labor force	13,331	13,592	13,668	336	76	2.5	0.6

Source: Philippine Statistics Authority, Labor Force Survey

Labor demand for green jobs

Transitioning economic activities to "green" practices will not only help protect the environment but also create opportunities for new industries and improved jobs. The ILO estimates that the green economy alone could generate 24 million new jobs worldwide by 2030. However, the demand for green skills is outpacing the supply, with job postings requiring these skills growing at an annual rate of 8% over the past five years, while the share of green talent has only increased by 6% during the same period.

In an article from the World Economic Forum, Kimbrough (2021) highlights that some of the fastest-growing green jobs are in fields such as ecosystem management, environmental policy, and sustainable procurement. Further, green skills are increasingly in demand in sectors like energy and mining, as well as in healthcare, agriculture, transportation, construction, and manufacturing.

Currently, there are no systematic efforts to identify and collect data on green jobs. Standards for assessing and certifying such green jobs, in line with incentives offered under the Philippine Green Jobs Act, are still pending approval at the time of writing. Despite the lack of formal certification and systematic data collection, approximations can be used for planning purposes. Insights can be gleaned from top vacancies listed on digital labor market platforms and labor market information reports generated by the Bureau of Local Employment (BLE) in collaboration with DOLE Regional Offices. These sources provide a preliminary understanding of the current green job landscape.

Table 10 presents occupations identified as heavily utilizing green skills, based on consultations conducted by the BLE with DOLE Regional Offices for the *Regional JobsFit Labor Market Information Report*. These green occupations span various sectors, including agriculture, construction, energy, environmental protection, and waste management. They require a range of skills, including technical expertise in engineering, science, and operations management, as well as core skills such as environmental awareness, adaptability, teamwork, and communication.

Table 10. Identified Green Occupations and their Skills Levels

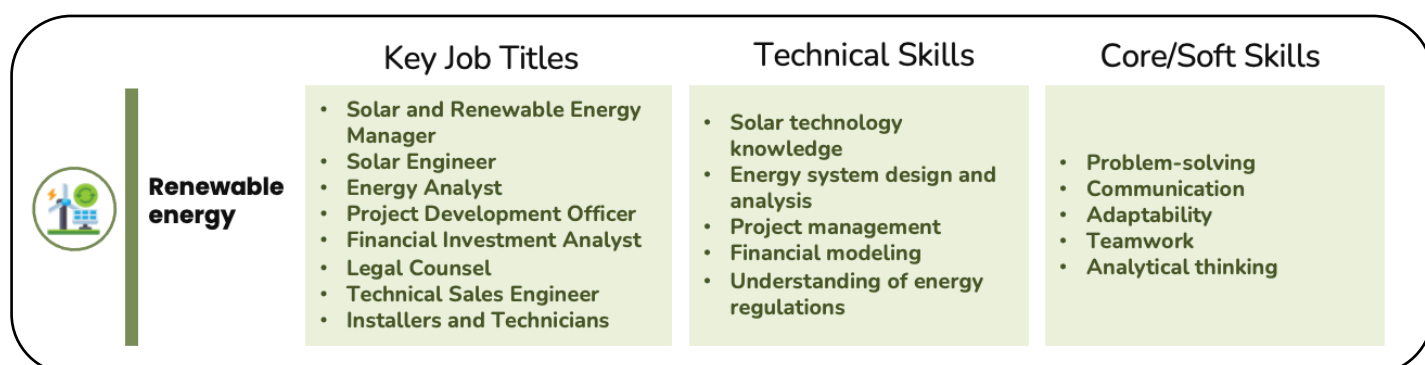
Skills Level	Occupation
Low-skilled occupations	Farm Laborer, Tree Planter
Medium-skilled occupations	Carpenter, Electrician, HVAC Technician, Forester, Forest Ranger, Forest Technician I, Forest Technician II, Pollution Control Officer, Pollution Control Safety Officer, Agricultural Technician
High-skilled occupations	Agriculturist, Civil Engineer, Construction Manager, Engineer (Renewable Energy), Engineer for Solar Energy, Engineer/Build-Back-Better, Environment, Health, and Safety Officers, Facilities Engineer, Environmental Officer, Environmental Planner, Emission Testing Solar Power Installation, Greenhouse Manager, Mining Engineer, Occupational Safety & Health Officer, Photovoltaic Systems, PV Systems Engineer / PV Systems Service Technician, PV Systems Installer, Renewable Energy Officer, Safety Engineer, Safety Officer, Solar Panel Installer, Solar Technician, Solid Waste Management Officer

Sectoral opportunities for green jobs

In terms of reflecting sectoral opportunities for green jobs, this section analyzes the labor demand for green jobs posted in the country's top job portals, aligned with the required technical and generic (soft) skills based on the provided job descriptions. These opportunities generally reflect green jobs opportunities spanning technical, managerial, and operational functions, where many require specialized sectoral expertise.

The renewable energy sector appears to be a major driver of green job creation, driven by the government's push towards sustainable energy sources. Increasing investments in solar, wind, geothermal, and hydropower projects, along with the government's target to increase renewable energy share in the power generation mix to 35% by 2030 and 50% by 2040, are likely to create opportunities for both skilled and semi-skilled workers, including women. There is growing demand for off-grid and microgrid solutions, especially in rural and island communities, and opportunities are emerging in energy storage systems and smart grid technologies. New jobs may emerge in renewable energy systems design, installation, operation, and maintenance, while existing jobs will require upskilling to work with evolving renewable technologies and expansion.

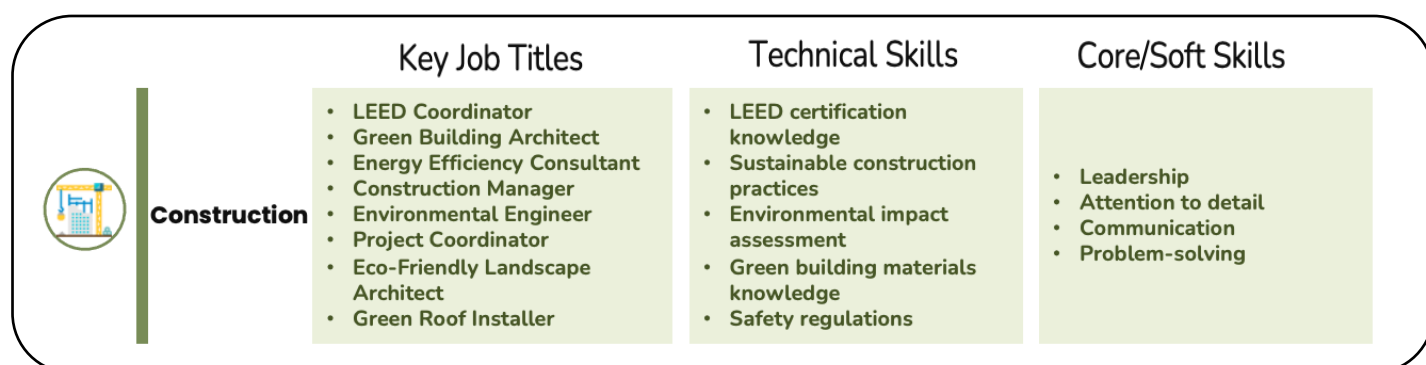
Figure 8. Labor Demand for Green Jobs: Renewable Energy



However, the "greenness" of jobs in this sector depends on ensuring fair labor practices, especially in manufacturing and installation roles. Attention must be paid to occupational safety, fair wages, and gender equality to maximize the sector's potential for decent green job creation.

Meanwhile, **the construction industry** is embracing sustainability through increasing adoption of green building standards (e.g., BERDE, LEED), government initiatives promoting energy-efficient buildings and infrastructure, and climate-resilient construction in response to natural disasters. These are creating opportunities for green jobs across the construction value chain, from architects and engineers specializing in sustainable design to skilled workers trained in green construction techniques. Companies are also seeking professionals to oversee construction projects with a focus on environmental compliance, energy efficiency, and waste management.

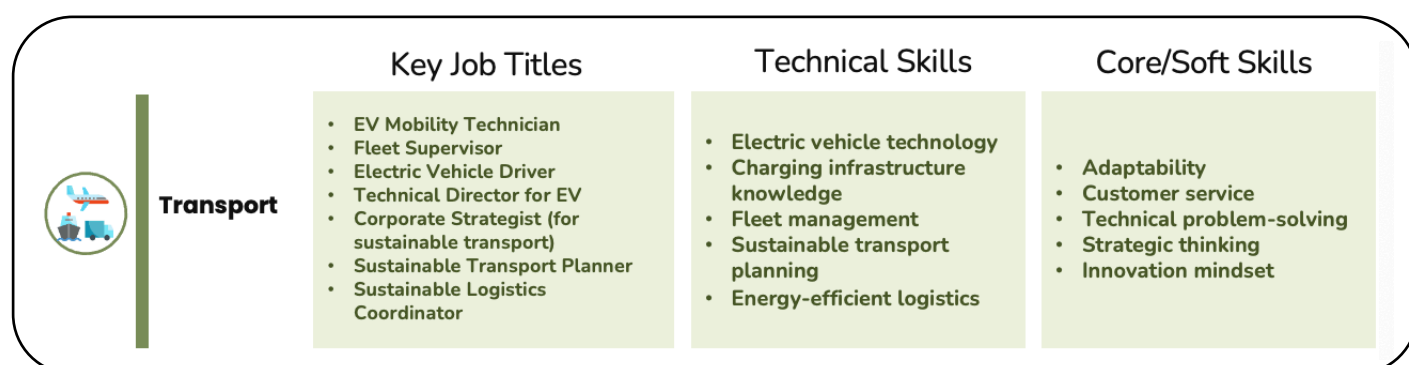
Figure 9. Labor Demand for Green Jobs: Construction Sector



The sector is expected to transform existing construction jobs into sustainable construction methods and increase demand for workers skilled in installing and maintaining energy-efficient systems. However, greening shifts could also potentially reduce demand for traditional construction methods that are less environmentally friendly, which warrants upskilling to mitigate displacement and other decent work deficits. In addition, laborers in the construction industry generally receive lower pay and have hazardous working conditions. The gender imbalance in the sector is also apparent, as women are underrepresented in on-site roles and may be excluded from green job opportunities. To ensure the "greenness" of jobs in this sector, efforts must focus on improving working conditions, formalizing employment, ensuring fair wages, and promoting gender equality alongside the adoption of sustainable construction practices.

As the Philippines transitions toward electric and sustainable mobility, the **transport sector** exhibits growing demand for jobs. Government initiatives to improve public transit systems, promote sustainable urban planning and transit-oriented development, and modernization may create green job opportunities, particularly in electric vehicle manufacturing, maintenance, and charging infrastructure development. These greening shifts are also likely to transform existing roles in vehicle maintenance to focus on electric and hybrid technologies and increase demand for roles in sustainable urban planning and transit system management.

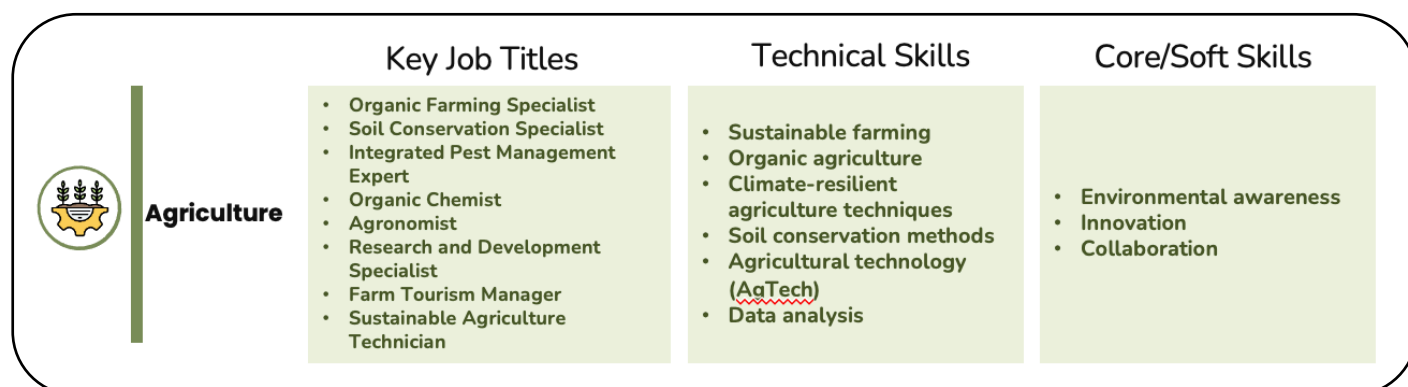
Figure 10. Labor Demand for Green Jobs: Transport Sector



However, some traditional automotive jobs may diminish, necessitating retraining programs. Further, sustainability transitions that lack legitimate social dialogue with

workers may create decent work deficits and diminish the representation of vulnerable groups who may experience displacement. At present, drivers and transport workers earn low wages, experience challenging working conditions, and lack social protection due to the sector's informality.

Figure 11. Labor Demand for Green Jobs: Agriculture Sector

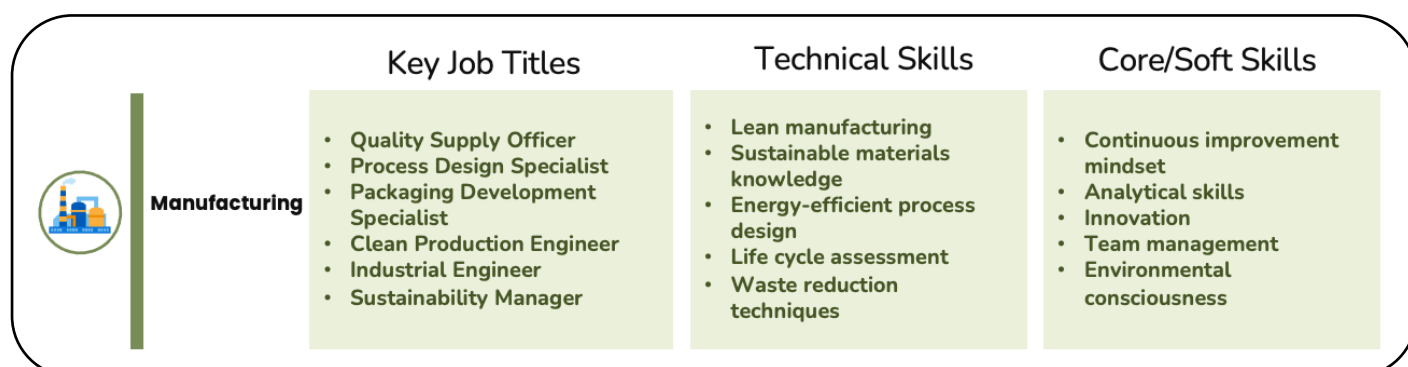


The agricultural sector is evolving and creating opportunities for agronomists, farm managers, agricultural engineers, and quality control specialists. The sector reflects the growing demand for organic and sustainably produced food, adoption of climate-smart agriculture techniques to improve resilience, increasing use of precision agriculture technologies, and ramped-up government initiatives promoting sustainable farming practices. Such transitions are also creating opportunities for green jobs for farmers themselves, transforming existing farming jobs through training in sustainable agricultural practices. However, these shifts may also potentially reduce demand for roles associated with chemical-intensive farming methods and risk affecting traditional jobs in the sector that fail to adapt to greening.

To realize the green jobs potential in the sector, decent work deficits such as generally low wages, particularly for small-scale farmers and agricultural laborers, and lack of social protections and precarious work conditions due to physical strain and heat stress must be addressed.

Manufacturing companies are also investing in green processes and technologies, driving demand for quality engineers, production supervisors, and environmental health and safety specialists. Existing manufacturing jobs may be transformed through training in sustainable production methods, and new roles may be created in sustainable product design, clean technology implementation, and environmental compliance. However, the green transition may also potentially reduce demand for jobs associated with highly polluting or resource-intensive production methods. Wages in the manufacturing sector vary widely, with some skilled positions well-paid but many factory workers earning low wages.

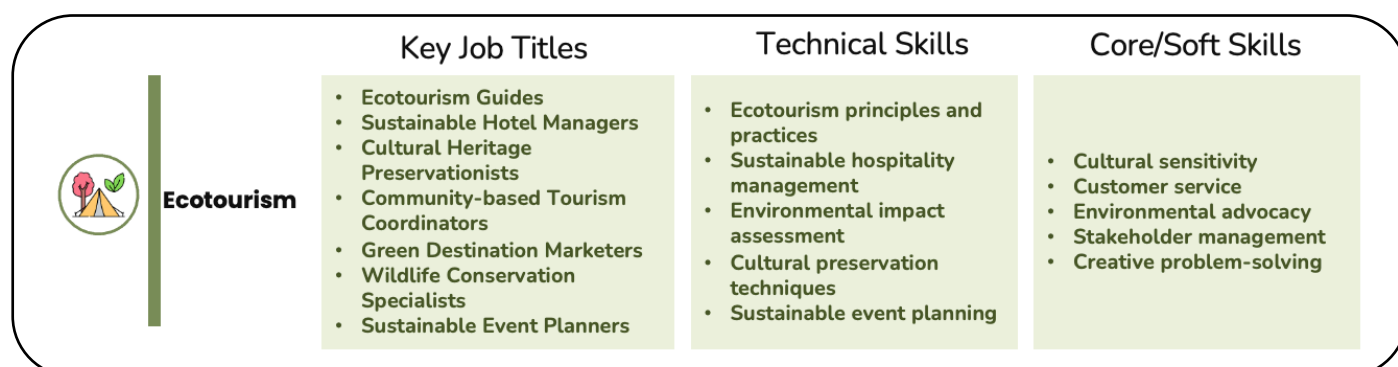
Figure 12. Labor Demand for Green Jobs: Manufacturing Sector



The **ecotourism sector** in the Philippines is growing, driven by increasing global demand for sustainable travel experiences, government initiatives to promote sustainable tourism development, and growing awareness of the need to protect natural and cultural heritage. These trends are creating green job opportunities in areas such as eco-lodge management, sustainable tour guiding, and conservation work. The growth of ecotourism is likely to create new jobs in sustainable accommodation management, eco-tour guiding, and conservation. Existing tourism roles will transform to incorporate sustainability principles. There will be increased demand for roles in environmental education and cultural heritage preservation. However, jobs in less sustainable forms of mass tourism may see reduced demand.

Seasonal work is common in the sector, and employment can be informal, often lacking full benefits and social protection. To maximize the potential for green job creation, efforts should focus on ensuring fair wages, reducing seasonality where possible, providing training and career development opportunities, and maintaining high standards of sustainability in tourism operations.

Figure 13. Labor Demand for Green Jobs: Ecotourism Sector



Cross-cutting green jobs opportunities

Aside from sectoral opportunities, data from job sites reveal three key categories of cross-cutting green jobs opportunities that are increasingly in demand across multiple sectors:

- 1) **Environmental compliance and regulation positions**, including environmental officers and compliance liaisons, represent an important area where organizations need expertise to manage complex regulatory frameworks and ensure adherence to environmental standards.
- 2) **Sustainability and Environmental, Social, and Governance (ESG) roles**—such as sustainability managers and ESG officers—reflect the private sector’s shift toward integrating sustainability into core operations and strategic planning. These professionals develop and implement sustainability initiatives while ensuring transparent reporting on environmental and social impacts.
- 3) **Health, Safety, and Environment (HSE) positions, including HSE managers, QHSE (Quality, Health, Safety, and Environment) managers, and environmental health and safety officers** are becoming essential for maintaining workplace safety while minimizing environmental impacts.

These cross-cutting roles share a common requirement for interdisciplinary knowledge spanning environmental science, regulatory compliance, business operations, and stakeholder management. The consistent demand for these positions indicates employers’ growing recognition that environmental expertise must be integrated throughout organizational structures to achieve sustainability goals and maintain competitive advantage in an increasingly eco-conscious marketplace. The existence of these green jobs opportunities further highlights the green job creation potential of the sustainability and low-carbon economy transition, which also increases the demand for green skills.

Box 2: Opportunities for Women in the Green Economy Transition

- Women play in driving and benefiting from the transition towards a green economy and sustainable development in the Philippines.
- Women are entrepreneurs and owners of green MSMEs, contributing to the adoption of green technologies and eco-friendly practices. They also serve as vital educators, raising awareness and disseminating knowledge on environmental conservation. In the agricultural sector, women contribute as workers and employees in value-adding, packaging, and other critical roles within organizations, associations, and cooperatives.
- Women assume leadership roles as community leaders, resource managers, and custodians of indigenous knowledge systems. They contribute to sustainable resource management and biodiversity conservation, shaping local and regional sustainable development initiatives. In STEM fields, women are increasingly engaged as scientists, researchers, and advocates for innovative sustainable solutions.

Source: Philippine Commission on Women

Labor supply for green jobs

In terms of the labor supply of registered professionals from the Professional Regulation Commission (PRC) related to the KEGs and considered green-oriented professions, a consistent growth trend has been observed across several job categories from 2019 to 2024.

As shown in Figure 14, civil engineers show the most significant expansion, with the number of registered professionals increasing from 10,074 in 2019 to a projected 12,067 by 2024, a growth of nearly 20%. Similarly, the number of registered agricultural and biosystems engineers is projected to grow by over 70%, from 606 in 2019 to 1,104 by 2024. The data also reveals significant growth in other green-oriented professions, such as environmental planners (from 2,029 in 2019 to 2,368 by 2024) and geodetic engineers (from 504 in 2019 to 2,170 by 2024). These professionals play crucial roles in areas like environmental impact assessment, renewable energy project planning, and climate change adaptation.

Figure 14. Registered Professions in the Identified KEGs

	Profession	2019	2020	2021	2022	2023	2024	TOTAL
1	Civil engineer	10,074	438	1,565	6,869	13,501	12,067	44,514
2	Mechanical engineer	5,486	1,277	314	4,079	5,927	4,776	21,859
3	Registered eletrical engineer	4,965	111	1,528	4,186	4,959	3,526	19,275
4	Architect	3,529	1,261	569	4,246	4,944	1,912	16,461
5	Agriculturist	4,215	1,338	615	820	3,631	3,010	13,629
6	Reigistered master electrician	4,863	353	1,296	2,455	2,561	962	12,490
7	Electornics technician	3,530	257	606	1,782	1,604	1,901	9,680
8	Master plumber	1,162	595	34	2,336	3,402	1,472	9,001
9	Electronics engineer	3,713	205	597	1,528	1,330	1,567	8,940
10	Chemical technician	2,300	152	796	1,878	476	2,037	7,639
11	Chemical engineer	1,116	217	295	849	1,033	791	4,301
12	Forester	1,122	189	383	362	1,361	428	3,845
13	Agricultural and biosystems engineer	606	155	466	698	675	104	2,704
14	Real estate broker	270	37	13	582	579	1,052	2,533
15	Fisheries technologist	621	164	199	558	412	455	2,409
16	Environmental planner	2,029	62	22	119	125	11	2,368
17	Geodetic engineer	504	21	3	785	614	243	2,170
18	Veterinarian	523	3	566	619	213	5	1,929
19	Chemist	492	20	112	273	42	582	1,521
20	Real estate appraiser	215	33	135	249	512	143	1,287
21	Aeronautical engineer	331	12	1	104	341	403	1,192
22	Sanitary engineer	187	65	152	142	272	215	1,033
23	Professional electrical engineer	323	92	138	247	198	25	1,023
24	Mining engineer	322	4	197	227	214	51	1,015
25	Geologist	249	49	63	94	217	87	759
26	Interior designer	215	2	0	253	195	16	681
27	Professional mechanical engineer	10	4	0	122	304	139	579
28	Certified plant mechanic	97	39	28	158	126	86	534
29	Real estate consultant	42	54	0	280	20	4	400
30	Professional electronics engineer	98	5	0	141	89	38	371
31	Metallurgical engineer	63	8	43	36	40	1	191
32	Landscape architect	41	0	0	59	74	3	177
33	Naval architect	82	6	33	41	0	8	170
34	Metallurgical plant foreman	4	0	1	2	2	1	10

Source: PRC

Sectoral analysis further highlights the green job labor supply expansion emerging in specific industries. The construction sector, for instance, is expected to see a substantial increase in the number of civil engineers, architects, and sanitary engineers, reflecting the focus on sustainable building practices and infrastructure. In the agriculture and food production sectors, the growing number of agricultural and biosystems engineers, as well as veterinarians, indicates the demand for professionals equipped with skills in sustainable farming, precision agriculture, and food systems resilience. The renewable energy and utility sectors also show a rising trend in the number of registered electrical engineers and technicians, in line with the country's ambitious targets for the clean energy transition.

Table 11. Labor Supply Analysis per KEGS

Construction	On the labor supply side, technical vocational education, and training (TVET) institutions assessed and certified around 107,000 individuals in construction-related courses in the second quarter of 2023 alone. Higher education has also produced a steady stream of graduates, with over 87,000 earning degrees in engineering and technology fields in 2018-2019. The regions producing the highest number of these graduates include Regions 12, NCR, 7, 3, and 4-A.
Transportation	TVET institutions provide training across automotive, logistics, and other transportation-related programs. In 2022, over 200,000 students enrolled or graduated from these courses. Universities also produce a steady pipeline of graduates from engineering, maritime, and technology disciplines relevant to transportation roles.
Manufacturing	TVET institutions and higher education institutions contribute to a steady pipeline of graduates prepared for careers in manufacturing. In 2022 alone, over 155,000 students completed TVET programs related to manufacturing, including fields such as electrical/electronics, processed foods, and garments. Universities also produce a significant annual number of graduates in business, engineering, and technical services trades, who are well-equipped to join the manufacturing workforce.
Renewable Energy	According to data from the CHED, various undergraduate and graduate programs provide pathways for students to pursue careers in the renewable energy sector, covering diverse fields from engineering, natural sciences, environmental studies, resource management, and business administration. From the academic year (AY) 2020-2021 to 2022-2023, a total of 3,754,262 graduates from the fields of Environmental Science, Environmental Planning/Management, Environmental and Sanitary Engineering, Chemistry, Agriculture, Forestry, Electrical Technology,

	Geology, Physics, Civil Engineering, Materials Science and Engineering, and Industrial Technology, and other related fields would have more likely be involved in the renewable energy sector. Data from TESDA shows an increasing number of enrollees, graduates, and certifications issued from 2018 to 2022 in renewable energy-related courses. PV Systems Installation NC II enrollees grew from 392 in 2018 to 2,715 in 2022, while graduates increased to 2,865 in 2022 from just 339 in 2018. Meanwhile, graduates of the Solar Powered Irrigation System (SPIS) Operation and Maintenance Level II grew to 350, indicating expanded interest in technical skills training for occupations in solar installation and maintenance. According to the Professional Regulation Commission (PRC), there is a steadily increasing labor supply for key occupations that support the renewable energy sector in the Philippines. From 2019 to 2023, the total number of registered professionals in identified renewable energy-related fields grew from 608,567 to 681,363, representing an increase of around 72,000 professionals. The data indicates that engineering fields account for most of the current talent pipeline for renewable energy in the country. Emerging fields like data analytics, instrumentation and control, geospatial analysis, and business development have limited representation.
Ecotourism	The labor supply pipeline includes over 114,000 TVET graduates in hotel/restaurant services in the first half of 2023. Universities also produce large numbers of business, services trade, and related graduates annually who can work across tourism businesses.
Agriculture	On the supply side, over 89,000 TVET students graduated from agriculture-related training courses in 2022. Universities across the country produced around 16,000 graduates in 2018-2019 from agriculture, forestry, and fisheries disciplines.

Greening the Philippine Labor Supply

Greening TVET

TESDA plays a strategic role in supporting the transition to a green economy and sustainable development in the Philippines. It focuses on equipping the workforce with green skills, integrating environmental sustainability into education programs, promoting green technologies and practices, and collaborating with stakeholders to enhance overall sustainability capacity. To this end, TESDA has developed 102 training regulations (TRs) that include green competency components as of August 2024. A

closer inspection reveals the key classifications of the green components integrated, as detailed in Table 13:

- *Environmental Protection and Resource Efficiency.* Many of the qualifications include competencies related to exercising efficient and effective sustainable practices in the workplace. This includes identifying resource utilization efficiency, determining causes of inefficiency, and promoting the use of environmentally friendly methods and technologies. Examples can be found in sectors like Agriculture, Forestry and Fishery, Automotive and Land Transportation, and Metals and Engineering.
- *Waste Management and Recycling.* The training regulations encourage the adoption of the 3R principles (Reduce, Reuse, Recycle) across multiple sectors. This is evident in the emphasis on proper disposal of hazardous materials, managing secondary storage for biogas, and promoting recycling of packaging materials in the food processing industry.
- *Safety and Environmental Compliance.* A strong focus on occupational safety and health (OSH) regulations, as well as compliance with environmental standards and laws, is woven throughout the training regulations. This includes adherence to the Code of Good Beekeeping Practices, the Clean Air Act, and the Code on Sanitation of the Philippines, among others.
- *Sustainable Materials and Technologies.* The qualifications encourage the use of eco-friendly materials, such as vegetable-based or synthetic dielectric fluids in the Metals and Engineering sector, and the selection of sustainable mold materials and efficient design parameters. There is also an emphasis on the adoption of modern, energy-efficient technologies and digital solutions to enhance sustainability.

While the overarching themes of environmental protection, resource efficiency, and sustainable practices are present across many sectors, the specific green competency components developed are noticeably tailored to the unique needs and characteristics of each industry. For example, the tourism sector emphasizes eco-friendly tour itineraries and responsible tourism behaviors, while the health sector incorporates sustainable practices in caregiving and the proper disposal of medical waste. As of writing, TESDA continues to integrate green skills into the basic competencies of TRs to ensure its application in the industry.

Table 12. TESDA Training Regulations with Green Competency Components

Sector	Qualifications Title	Green Competency Component
Agriculture Forestry and Fishery	Aquaculture (Grow-out Operation) NC II	Includes competencies related to exercising efficient and effective sustainable practices in the workplace, such as identifying resource utilization efficiency and determining causes of inefficiency.
	Aquaculture (Hatchery Operation) NC II	
	Aquaculture (Tilapia Culture) NC II	Emphasizes environmentally friendly methods and technologies, promoting resource efficiency and environmental protection. It includes discussions on environmental protection targets and encourages practices that raise awareness of environmental issues.
	Bamboo Processing (Engineered Bamboo) NC II	
	Beekeeping NC II	Emphasizes environmental protection and resource efficiency, incorporating safety and health measures aligned with the Code of Good Beekeeping Practices.
	Pressurized Irrigation System Installation and Maintenance NC II	Emphasizes the importance of ecological solid waste management and the responsible use of resources in the installation and maintenance of pressurized irrigation systems.
	Rubber Production NC II	The "budding operation" in rubber production involves grafting a high-quality rubber tree bud onto a rootstock to enhance yield and quality sustainably. Proper tool maintenance and safety practices are essential for successful implementation.
Automotive & Land Transportation	Agricultural Machinery Servicing (4-Wheel Tractor) NC II	Promotes the 3Rs (Reduce, Reuse, Recycle), safety measures, including the use of personal protective equipment (PPE) and adherence to occupational health and safety standards.
	Biogas Plant Installation NC III	Biogas plant installation involves using an inoculant to enhance anaerobic digestion, converting organic waste into renewable energy while promoting effective waste management. The training also covers the management of secondary storage for biogas to ensure safe handling of the produced gas.
	Automotive Body Repairing NC II	Promotes eco-friendly practices by encouraging the use of low-VOC materials and minimizing waste during repairs. It also emphasizes proper disposal of hazardous materials and adherence to environmental safety standards.
	Automotive Painting NC II	Emphasizes safety and environmental requirements, including proper handling, storage, and disposal of paint materials to minimize waste and environmental impact.
	Automotive Servicing (Chassis Repair) NC II	Emphasizes waste management, the 3Rs (Reduce, Reuse, Recycle), and the application of safety practices in automotive servicing.
	Automotive Servicing (Electrical Repair) NC II	
	Automotive Servicing (Engine Repair) NC II	Promotes the installation of devices that enhance fuel efficiency and reduce emissions by controlling vehicle speed.
	Speed Limitation Device Servicing NC II	

Sector	Qualifications Title	Green Competency Component
Construction	Carpentry NC II	Emphasizes the use of Personal Protective Equipment (PPE) and adherence to safety and environmental regulations, promoting sustainable practices in the carpentry sector.
	Carpentry NC III	
	Heavy Equipment Operation (Crawler Crane) NC III	
	Heavy Equipment Operation (Forklift) NC II	
	Heavy Equipment Operation (Hydraulic Excavator) NC II	Promotes the use of eco-friendly lubricants and cleaning materials during heavy equipment maintenance, reducing harmful environmental impacts. It also emphasizes the importance of proper waste disposal and management of oil and fuel leaks to prevent soil and water contamination during heavy equipment operation.
	Heavy Equipment Operation (Overhead and Gantry Crane) NC III	
	Heavy Equipment Operation (Rigid On-Highway Dump Truck) NC II	
	Heavy Equipment Operation (Rough Terrain Crane) NC III	
	Heavy Equipment Operation (Tower Crane) NC III	
	Heavy Equipment Operation (Truck Mounted Crane) NC III	
Creative Sector	Masonry NC I	Incorporates eco-friendly practices by promoting the use of sustainable masonry materials and efficient mixing techniques that minimize waste.
	Masonry NC II	
	Masonry NC III	
	Pipefitting (Metallic) NC II	Emphasizing the use of sustainable materials and techniques, such as selecting eco-friendly piping options and minimizing waste during installation.
	Scaffolding Works NC II (Supported Type Scaffold)	Incorporates the Green Building Concept, emphasizing sustainable practices such as the 3R (Reduce, Reuse, Recycle) and 5S (Sort, Set in order, Shine, Standardize, Sustain) principles in scaffolding and tile works.
	Tile Setting NC II	
Creative Sector	Audio Production Services NC I	Emphasizes the use of proper packing materials for fragile audio equipment to prevent damage, thereby reducing the need for replacements and waste.
	Film and Video Postproduction NC III	Encourages the use of digital media literacy, which can reduce waste associated with physical materials in the postproduction process.
	Handloom Weaving (Upright) NC II	Promotes sustainability by emphasizing waste management practices based on environmental regulations and the application of good housekeeping principles (5S). It encourages the use of eco-friendly materials and techniques, such as hand sewing and trimming, which reduce reliance on energy-intensive machinery.
	Lighting for Live Performances NC II	Emphasizes cost-effective operations and efficient resource utilization, which are key components of environmentally sustainable practices.
Electrical & Electronics	Mobile Phones and Handheld Gadgets Servicing NC III	Promotes environmentally friendly practices by emphasizing the proper disposal and recycling of electronic waste generated during servicing. It encourages the use of energy-efficient tools and equipment, as well as the implementation of safe handling procedures for hazardous materials.

Sector	Qualifications Title	Green Competency Component
Heating, Ventilation, Airconditioning & Refrigeration	Commercial Air-conditioning Installation and Servicing NC III	Emphasizes environmentally friendly practices, such as proper refrigerant recovery and recycling procedures, which minimize harmful emissions. Additionally, adherence to product standards and regulations, like RA 11058, ensures compliance with safety and environmental protection measures.
	Commercial Refrigeration Installation and Servicing NC III	
	Land-Based Transport Mobile Air-conditioning (MAC) NC II	Incorporates "green" practices by emphasizing the use of environmentally friendly refrigerants and promoting energy-efficient servicing techniques.
	RAC Servicing (DomRAC) NC II	Includes training on identifying environmental corrective actions and promoting environmental awareness among trainees. Additionally, adherence to Philippine Environmental Standards and Clean Air Act regulations further supports its "green" initiative.
Human Health/Health Care	Assistive Rehabilitation Technology Services (Orthotics) NC II	Promotes awareness of environmental impacts and encourages trainees to adopt eco-friendly practices in their work settings. Additionally, the curriculum includes training on Occupational Safety and Health (OSH) regulations, ensuring that environmental considerations are integrated into the delivery of orthotic, prosthetics, and wheelchair services.
	Assistive Rehabilitation Technology Services (Prosthetics) NC II	
	Assistive Rehabilitation Technology Services (Wheelchair) NC II	
	Barangay Health Services NC II	Incorporates green technology and environmental practices into its curriculum design, emphasizing the importance of sustainable health practices. It includes a Contextual Learning Matrix (CLM) that addresses health issues related to the environment, promoting awareness and education on environmental health.
	Caregiving (Clients with Special Needs) NC II	
	Caregiving (Elderly) NC II	
	Caregiving (Grade Schooler to Adolescent) NC II	Emphasizes the importance of sanitation and hygiene, as outlined in the Code on Sanitation of the Philippines (PD 856), ensuring that caregiving practices contribute to a clean and safe environment. Additionally, the curriculum encourages the use of sustainable materials and practices in caregiving to promote environmental responsibility.
	Caregiving (Newborn to Pre-Schooler) NC II	
	Community Nutrition Services NC II	Promotes positive nutrition behaviors and sustainable practices within community nutrition programs.
	Contact Tracing NC II	Promotes public health practices, such as social distancing and the use of personal protective equipment (PPE). Encourages the use of technology for data recording and reporting, which can streamline processes and reduce paper waste.
	Dental Hygiene Level IV	Includes guidelines for proper disposal of dental waste, such as amalgam and other hazardous materials, to prevent pollution.
	Emergency Medical Services NC III	Emphasizes the knowledge of environmental hazards, identifying high risk situations that may affect the safety of the ambulance and its passengers.

Sector	Qualifications Title	Green Competency Component
Information & Communication Technology	Programming (Java) NC III	Encourages the use of object-oriented programming concepts that can lead to more sustainable software development by enhancing code reusability and maintainability.
Logistics	Multimodal Transport Operations and Logistics (Sea freight Import) Services NC II	Emphasizes the importance of familiarizing trainees with workplace safety and security policies, which includes adherence to environmental safety protocols in multimodal transport operations. It encourages the use of modern technology to enhance efficiency and reduce the ecological footprint of logistics services.
	Multimodal Transport Operations and Logistics (Sea freight Import) Services NC III Multimodal Transport Operations and Logistics (Seafreight Import) Services NC IV	
	Warehousing Services NC III	Emphasizes sustainable practices within warehousing operations, such as efficient resource management, waste reduction, and adherence to environmental regulations. It encourages the use of controlled systems for managing stock, which can include considerations for energy efficiency and minimizing environmental impact.
	Warehousing Services NC IV	
Metals & Engineering	5-Axis CNC Machine Operation NC III	Incorporates advanced machining techniques that optimize material usage by allowing complex geometries to be produced with minimal waste.
	CNC Electric Discharge Machine (EDM) Wire Cut Operation NC III	Incorporates good housekeeping practices following the 5S methodology, which promotes efficiency and reduces waste.
	Die Designing NC IV	Promotes sustainability by emphasizing the use of efficient design practices that minimize material waste and energy consumption during the die manufacturing process. It encourages the adoption of modern technologies and methods, such as CAD software, which can optimize designs for resource efficiency.
	Electric Discharge Machine (EDM) Sinking Operation NC II	Includes the use of dielectric fluids that are environmentally friendly, such as vegetable-based or full synthetic options, which reduce harmful emissions and waste. The training also emphasizes proper handling and disposal of eroded metal particles and dielectric fluids to minimize environmental impact.
	Machining NC I	Emphasizes environmental policies by ensuring that hazardous and non-hazardous materials are stored and disposed of according to environmental regulations. It also incorporates Occupational Safety and Health (OSH) rules related to noise and air pollution, promoting safe practices in machining operations.
	Manual Metal Arc Welding (MMAW) NC I Manual Metal Arc Welding (MMAW) NC II Manual Metal Arc Welding (MMAW) NC III Manual Metal Arc Welding (MMAW) NC IV	Promotes the use of energy-efficient welding techniques and equipment that reduce energy consumption. It also encourages the selection of eco-friendly filler materials and fluxes that minimize harmful emissions during the welding process.
	Mold Designing NC IV	Selection of eco-friendly mold materials and efficient design parameters that minimize waste during production. It includes training on optimizing mold flow and cooling systems to reduce energy consumption and enhance resource efficiency.
	Mold Making NC III	Encouraging the use of eco-friendly materials and chemicals in the mold-making process, reducing harmful emissions during production.
Processed Food & Beverages	Food Processing NC I	Use of eco-friendly materials and sustainable practices in food processing, such as proper waste management and recycling of packaging materials. It emphasizes the importance of cleaning and sanitizing equipment using environmentally safe products to reduce chemical waste.

Sector	Qualifications Title	Green Competency Component
	Beauty Care (Nail Care) Services NC II Beauty Care (Nail Enhancement Technology) Services NC III Beauty Care (Skin Care) Services NC II Domestic Work NC II Hairdressing NC II Hairdressing NC III Microinsurance Services (Mutual Benefit) NC II Public Employment Services NC IV Real Estate Services NC II	Promotes the use of eco-friendly products and materials in beauty care services, encouraging practitioners to select sustainable options that minimize environmental impact. It emphasizes proper waste management practices, such as recycling and safe disposal of beauty product containers, which helps reduce landfill waste. Includes training on maintaining workplace hygiene standards and minimizing environmental disturbances during cleaning and maintenance tasks. Use of eco-friendly products and proper waste disposal in accordance with OSH policies. It also encourages the use of Personal Protective Equipment (PPE) to ensure a safe and sustainable salon environment. Encourages the use of technology in training delivery, reducing the need for physical resources, and supports data gathering for evaluating services, which can lead to more efficient and environmentally friendly operations. Emphasizes the importance of compliance with occupational safety and health (OSH) legal requirements, ensuring a safe and healthy workplace while protecting the environment. Sustainable property management and compliance with environmental legislation. It encourages the use of technology to enhance efficiency and reduce environmental impact in real estate operations.
Tourism (Hotel & Restaurant)	Food Production (Professional Cookery) NC III Food Production (Professional Cookery) NC IV Front Office Services NC III Front Office Services NC IV Housekeeping NC III Housekeeping NC IV Tour Guiding Services NC III Tour Packaging (FIT AD HOC DOMESTIC) Services NC II Travel Services NC II	Emphasizes the quality of a safe and hygienic workplace, use of suitable equipment (PPE), and responsible use of chemicals for equipment. Emphasizes workplace safety and sustainable practices in training delivery. It encourages efficient resource use and environmentally responsible behaviors among trainees, promoting a sustainable workforce in the hospitality industry. Encourages trainees to apply Hazard Analysis Critical Control Point (HACCP) principles to ensure safe and sustainable housekeeping operations. Promotes eco-friendly practices by encouraging tour guides to develop itineraries that highlight local conservation efforts and sustainable attractions. It also emphasizes the importance of educating clients on responsible tourism behaviors, such as minimizing waste and respecting local ecosystems during tours. Specific practices such as designing itineraries that prioritize eco-friendly accommodations and transportation options, thereby reducing the carbon footprint of tours. Promotes sustainability by incorporating eco-friendly practices in travel arrangements, such as recommending sustainable transportation options, eco-friendly accommodations, and responsible tourism activities.

Source: TESDA Qualification and Standard (QSO)

Under TESDA Circular No. 058-2018, the following implementing guidelines were released for greening the TVET system:

Establishing the Green TVET Framework. The circular establishes the Philippines' Greening TVET Framework, which is aligned with the UNESCO-UNEVOC's whole-of-institution approach covering five key components: 1) Green Jobs/Skills; 2) Green Policies; 3) Green Competency Standards/Training Regulations; 4) Green Institutional Culture; and 5) Green Community.

1. **Green jobs and skills.** A key focus of the framework is on identifying and prioritizing the green jobs needed in key economic sectors, as well as the corresponding green skills required. TESDA is tasked to engage with industry, workers' representatives, and other stakeholders to determine the evolving green jobs and skills needs. This includes revising existing TRs to integrate green skills and competencies, making green training opportunities accessible, and assisting MSMEs in skills upgrading and anticipating green occupational profiles.
2. **Green Policies.** TESDA outlines various policy measures to institutionalize green practices within the organization and its partners. This includes issuing and disseminating green policies, aligning green targets in planning and performance monitoring, prioritizing the development of green TRs, and establishing incentive mechanisms for green TVET implementers. Securing external financing and budget allocations for greening initiatives is also emphasized.
3. **Green competency standards/TRs.** A central component is the greening of all existing and new Training Regulations, with a focus on qualifications related to green jobs. This involves incorporating green concepts and principles into competency-based curricula, learning materials, and assessment tools. Capacity building for internal staff and external partners is crucial to ensure the effective development and delivery of green-oriented TVET programs.
4. **Green institutional culture.** TESDA promotes the integration of green culture and practices within the organization and its partner institutions by incorporating green values in the organizational vision and mission, integrating green concepts into quality management systems, and prioritizing the use of organic and environmentally-friendly materials.
5. **Green community.** TESDA is tasked to lead in benchmarking strategies with model green institutions, collaborate with partners that promote sustainability, and conduct practical training programs and exhibits on green technologies within communities. Appointing "Green Champions" to coordinate linkages and monitor green initiatives is also recommended.

Greening the curriculum

According to the Department of Education (DepEd), basic education is essential for cultivating environmental awareness, sustainable values, and green skills among students. As they noted in our consultation, "Basic education plays an important role in shaping the future generation's values, attitudes, and skills toward a sustainable and green economy." This includes integrating environmental topics into the curriculum, promoting conservation and respect for nature, and developing practical skills through activities such as recycling projects and school gardens.

Existing Initiatives and Policies. DepEd has implemented several policies and programs aimed at promoting environmental education and sustainability, such as the National Environmental Awareness and Education Act, the Eco-Schools Program, and the *Brigada Eskwela* program. Additionally, DepEd has specific initiatives related to technical-vocational education and training that incorporate green technologies and sustainable practices, as well as teacher training workshops to enhance educators' knowledge and skills in delivering environmental education. As one DepEd official stated, "DepEd upholds its commitment to curriculum integration and increased learner participation through the establishment of the Youth for Environment in Schools Organization (DO 93, s. 2011). This organization organizes activities that advocate for environmental awareness and action."

Environmental Education and Sustainability Integration. Environmental education and sustainability awareness are integrated into the K-12 curriculum through various means, including the incorporation of relevant topics in Science and Social Studies, project-based learning initiatives, and extracurricular activities led by the Youth for Environment in Schools (YES) Organization. As they highlighted, "The Enhanced Basic Education Act of 2013 or the K-12 Act strengthened curriculum integration of key climate change concepts across grade level. DRRM and CCA concepts are integrated from kinder to junior high school subject areas such as Health, Science, Araling Panlipunan and Edukasyon sa Pagpapakatao." Through technical-vocational tracks, specialized programs, and extracurricular activities, students also develop green technical skills, as well as values and competencies such as critical thinking, problem-solving, and a sense of responsibility towards the environment.

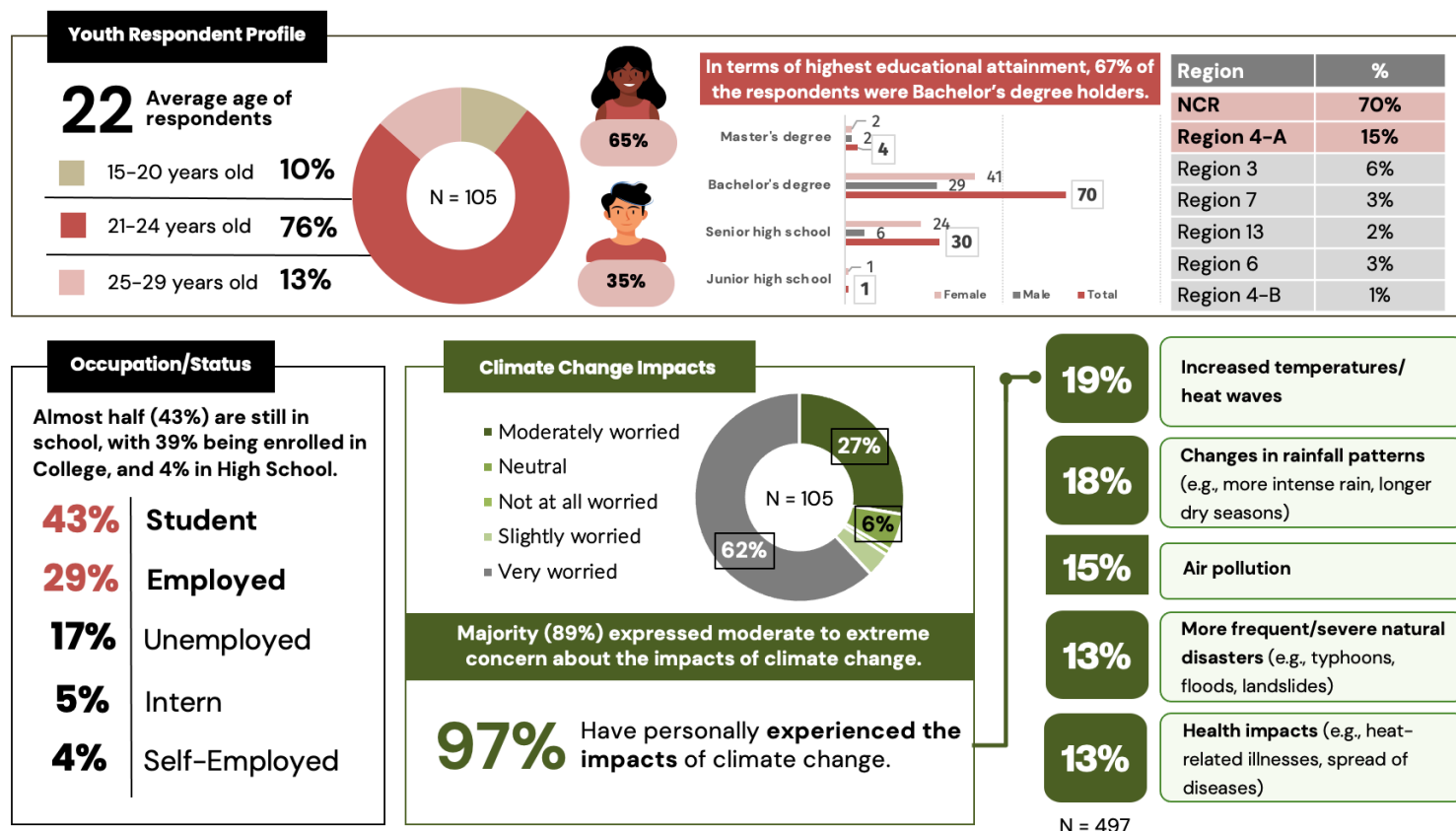
Teacher Capacity and Institutional Readiness. DepEd acknowledges several key challenges in building teacher capacity and upgrading facilities for green skills training delivery. These include a lack of resources in terms of space, limited expertise and resources for teachers, and the need for continuous training and capacity-building programs. As they stated, "Many teachers may have limited knowledge on green economy and sustainability topics. Schools might also lack funding to provide the necessary training and professional development for teachers." In addition, "The two main challenges when upgrading facilities for green skills training delivery would be financial resources and infrastructure limitations." To enhance the readiness of public schools and educational institutions, DepEd highlights the need for financial support, professional development for educators, and the development and distribution of comprehensive teaching materials on green skills and sustainability.

Youth perspectives on green jobs, skills, and the green economy transition

To gain perspectives into the willingness and capacity of young people to engage in and contribute to the green economy, the youth was engaged through an online survey¹⁰. The objective is to ensure that the NGJ HRD Plan is responsive to the needs and aspirations of the youth—a sector representing a significant portion of the current and future labor force who will be at the forefront of accessing and creating green jobs.

Respondents' profile. The demographic profile shows a young respondent base with an average age of 22 years old, predominantly in the 21-24 year age range (76%). This age group represents individuals who are either in the latter stages of their education or in the early stages of their careers, making their perspectives particularly relevant for human resource development planning. In terms of educational attainment, the majority (67%) hold Bachelor's degrees, with a few having advanced to master's level (2%). Most reside in the National Capital Region¹¹ (NCR) (70%) and CALABARZON (15%).

Figure 15. Youth Survey Results: Demographic Profile and Climate Change Impacts



The occupational status of the respondents are diverse, with 43% still in school, 29% employed, and 17% unemployed. This offers a balanced perspective, capturing the

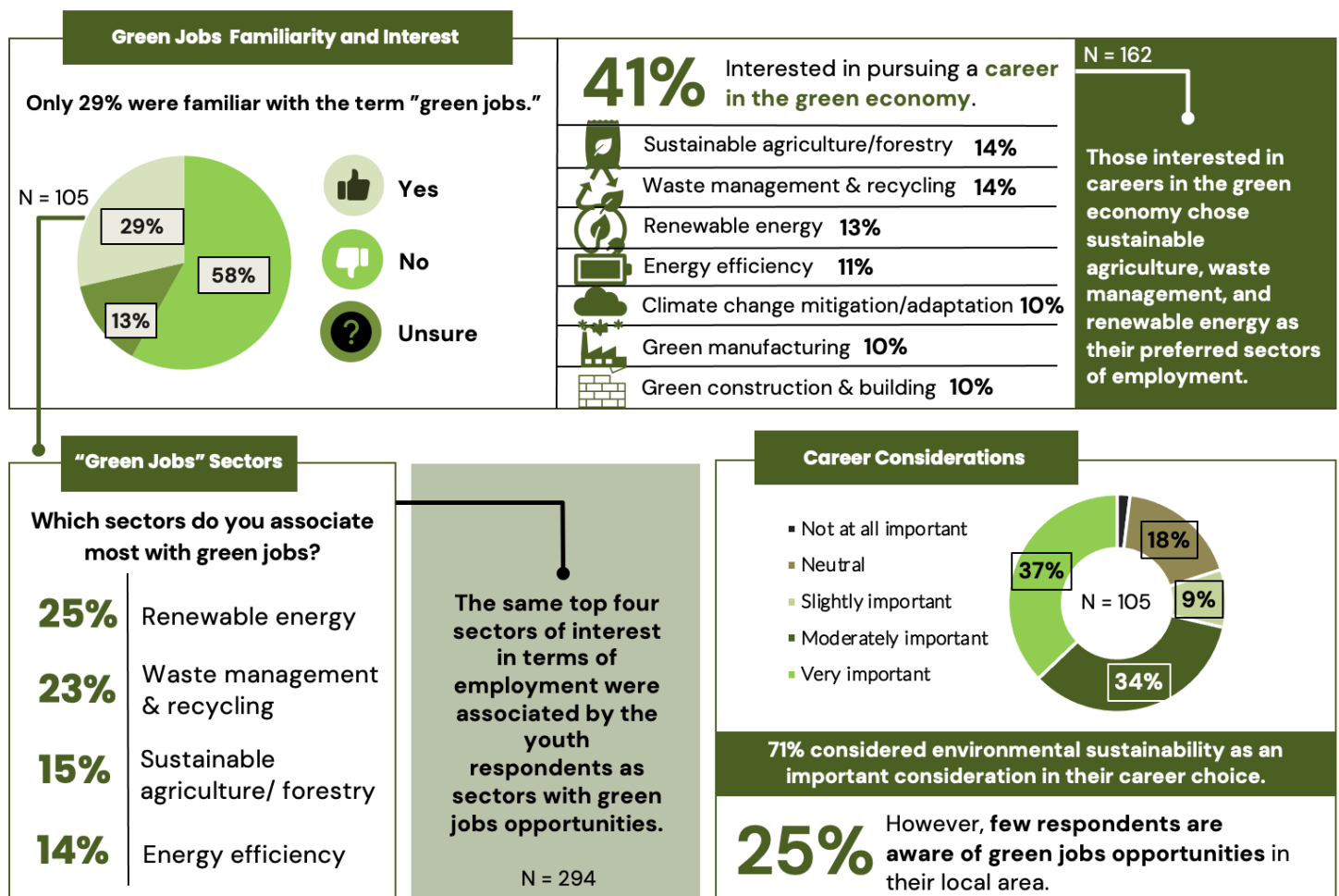
¹⁰ The online survey was disseminated within July 2024 and generated 105 responses. Questions were patterned from Plan International's Young People and Green Skills Report (August 2022).

¹¹ This urban skew is considered in the interpretation of the results, as perspectives and opportunities may differ in rural areas.

views of those still preparing to enter the job market, those who have recently entered it, and those seeking employment.

Climate change impacts and experience. Regarding climate change impacts, the respondents show a high level of concern, with an overwhelming majority (89%) expressing moderate to extreme worry. Moreover, 97% of respondents reported having personally experienced these impacts in the form of 1) increased temperatures/heat waves (19%), 2) changes in rainfall patterns (18%), 3) air pollution (15%), 4) more frequent/severe natural disasters (13%), and 4) health impacts (13%). Such common experience may be a driving factor in young people’s interest in green jobs.

Figure 16. Youth Survey Results: Green Jobs Familiarity and Interest



Green jobs awareness. There is a significant awareness gap among the youth respondents, with only 29% of respondents familiar with the term "green jobs." The same respondents were further asked to provide a definition of green jobs, which generated results along the lines of "sustainability", "environment", "preservation", and "restoration." Some answers capturing these key themes are listed as follows:

- "Green jobs are jobs that focus on preserving and protecting the environment."

- *“Employment that contributes to preserving or restoring the quality of the environment.”*
- *“Jobs that advocate environmental preservation and protection”*
- *“Green jobs are jobs that are not destructive to the environment rather it is likely that it promote restoration and/or preservation of the environment.”*
- *“Jobs that promote environmental sustainability”*
- *“Jobs which roles primarily include promotion of a healthy and safe environment and well-functioning ecosystem”*
- *“Green jobs include tree planting and preservation, maintenance, and restoration of the environment.”*

Interest in green jobs. Despite the lack of familiarity on green jobs by most of the respondents, a promising 41% expressed interest in pursuing a career in the green economy. Their preferred sectors for green careers align closely with traditional environmental fields as sustainable agriculture/forestry (14%), waste management & recycling (14%), and renewable energy (13%) top the list, followed closely by energy efficiency (11%) and climate change mitigation/adaptation (10%). Interestingly, the sectors that respondents associate most with green jobs mirror their career interests, with renewable energy (25%), waste management & recycling (23%), sustainable agriculture/forestry (15%), and energy efficiency (14%) garnering the most responses. This may indicate that youth perceptions of green jobs are influencing their career interests. Further, a significant majority (71%) consider environmental sustainability as an important factor in their career choices, which bodes well for the future of the green economy and suggests that employers in existing and emerging green sectors may have a competitive advantage in attracting young talent.

However, there is a critical gap: while there is substantial interest in green careers, only 25% of respondents are aware of green jobs opportunities in their local area, which poses a barrier to youth engagement in the green economy.

Green skills perspectives and assessment. As summarized in Figure 17, youth respondents consider environmental awareness (15%), scientific/technical knowledge (14%), and problem-solving and critical thinking (13%) as the most important skills for addressing climate change, implying the need for both specialized knowledge and transferable skills in tackling environmental challenges. Other highly valued skills include innovation and creativity (12%) and communication and advocacy (11%).

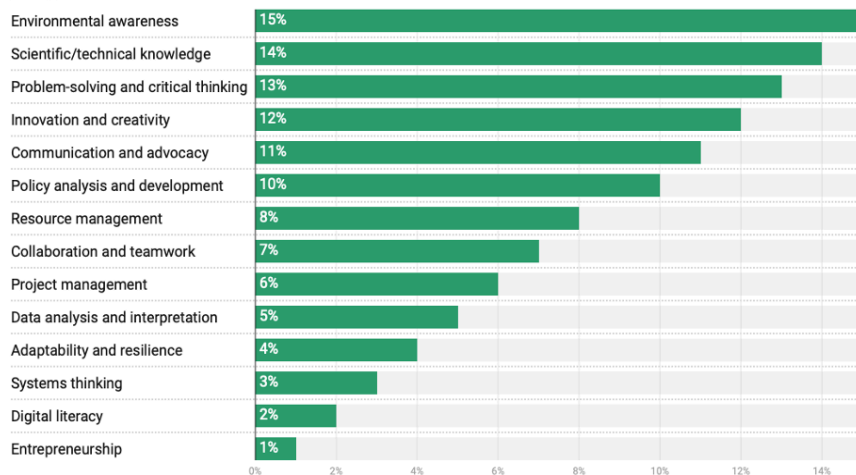
A self-assessment of the youth respondents of their green skills competence paints a mixed picture. While 46% felt they were moderately to very competent in the important skills they identified, a significant portion (41%) remained neutral, and 6% felt not at all competent. Perhaps most tellingly, only 39% of respondents felt that their education has adequately prepared them to build the green skills needed to address climate change. Moreover, the fact that only 10% of respondents have received training related to green skills and environmental sustainability is a stark indication of the limited availability or accessibility of specialized green skills training. The areas where training has been received – waste management & recycling, green construction, and renewable energy – provide insight into the current focus areas of green skills development programs.

Figure 17. Youth Survey Results: Green Skills Perspectives and Assessment

Green Skills Perspectives and Assessment

Youth respondents considered environmental awareness, scientific/technical knowledge, and problem-solving and critical thinking as the most important skills for addressing climate change.

N = 510



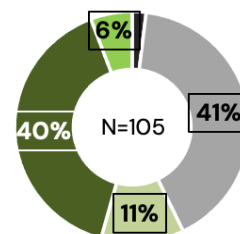
39%

Feel that their **education has adequately prepared them to build the green skills** needed to address climate change.



When asked to assess their current skills level on the important skills they identified, **around 46% felt they were Moderately Competent to Very Competent.**

- Not at all competent
- Neutral
- Slightly competent
- Moderately competent
- Very competent



10%

Only 10% have received training related to green skills and environmental sustainability.

The trainings taken were in the areas of **waste management & recycling, green construction, and renewable energy.**



The youth respondents were also asked to indicate the skills they think will be most important in the future job market. This gathered a diverse range of technical and core skills illustrated in Figure 12.

Technical skills are seen by the youth as important in the future job market. Scientific and technical knowledge emerged as a top response, with many respondents emphasizing the importance of understanding climate science, environmental processes, and green technologies. Alongside this, the youth respondents highlighted innovation and creativity as other important skills for the future, while data analysis skills were prominently mentioned. Similarly, they identified policy analysis and development as crucial, understanding that the ability to comprehend and create environmental policies is key to shaping sustainable practices at various levels.

Project management and digital literacy were cited as practical skills necessary for implementing sustainability initiatives. The young respondents acknowledged the growing role of technology in environmental management and the need for efficient planning and execution of projects.

Figure 18. Youth Survey Results: Skills for the Future

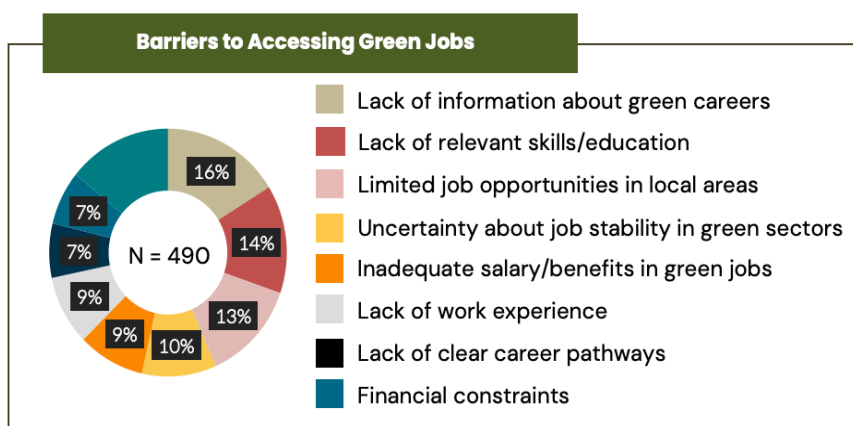


Core skills identified include resource management, problem-solving and adaptability, advocacy, and sustainability integration. Resource management skills were emphasized, with youth recognizing the importance of efficiently managing and conserving natural resources. They also valued problem-solving abilities and adaptability, understanding that environmental challenges are dynamic and often require flexible approaches. In addition, communication and advocacy skills were highlighted as essential for raising awareness and influencing policy. The respondents stressed the importance of effectively conveying environmental issues and proposed solutions to various stakeholders.

The youth respondents also noted the significance of sustainability integration as an important skill in the job market – the ability to incorporate sustainability principles across diverse sectors and projects. Such responses reflect young people’s understanding that environmental considerations need to be woven into all aspects of future work and industry.

Barriers to green jobs. The youth face a mix of informational, educational, and structural barriers in accessing green job opportunities and facilitating entry into the green economy (Figure 19). The most significant barrier, cited by 16% of respondents, is the lack of information about green careers. Closely following is their lack of relevant skills and educational opportunities (14%), which highlights a potential mismatch between current training and educational offerings and the skills demanded by the green job market.

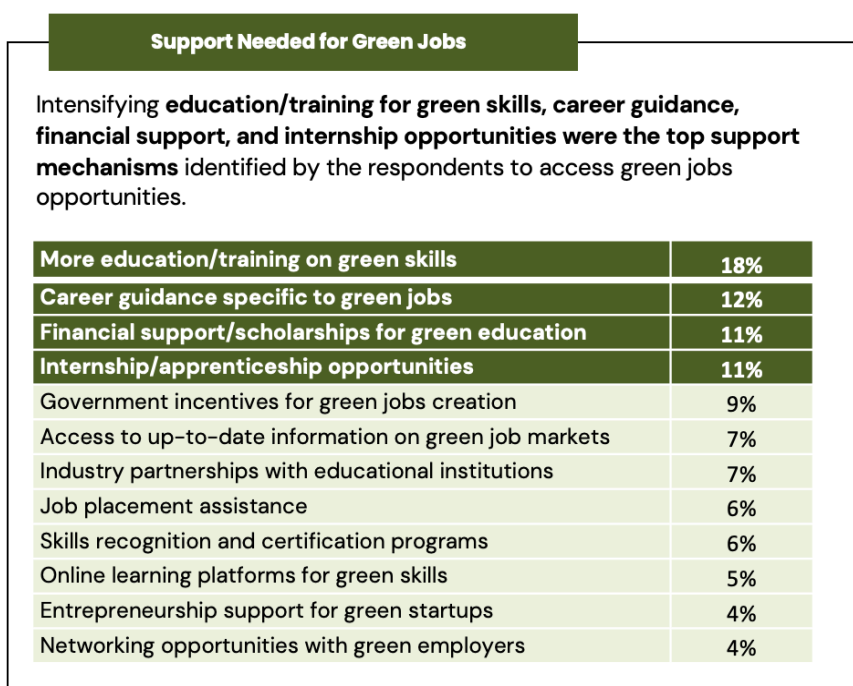
Figure 19. Youth Survey Results: Barriers to Green Jobs



Limited job opportunities in local areas (13%) emerged as the third most significant barrier, pointing to geographical disparities in green job availability. Meanwhile, uncertainty about job stability in green sectors (10%) indicates that there may be

perceptions of volatility or risk associated with careers in the green economy. Other notable barriers to green jobs include inadequate salary/benefits (9%), lack of work experience (9%), and lack of clear career pathways (7%), implying that green jobs may not yet be perceived as competitive or attractive compared to traditional career options, and that there is a need for more entry-level opportunities and clearer progression paths in green sectors.

Figure 20. Youth Survey Results: Support Needed for Green Jobs

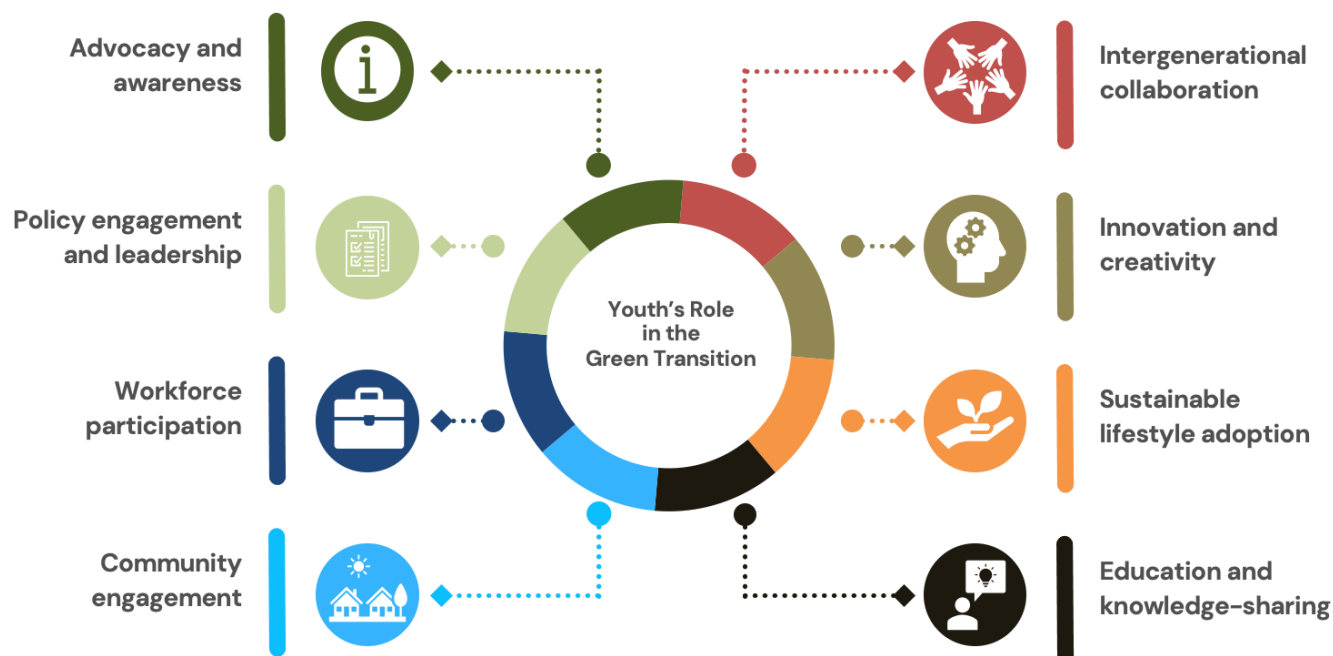


Support and strategies for the youth. In terms of identifying support mechanisms needed to enable the youth to leverage and access existing and emerging green jobs potential, more education and training on green skills emerged as the primary need, with 18% of respondents identifying this as a necessary strategy. Career guidance specific to green jobs was the

second most important support mechanism (12%), which suggests that career advisors and counselors need to be well-informed about green job opportunities, required qualifications, and potential career paths in sustainable industries. Financial support and scholarships for green education, along with internship and apprenticeship opportunities, were equally valued at 11% each. The lower-ranked but still significant support mechanisms identified by the respondents include government incentives for green jobs creation (9%) and industry partnerships with educational institutions (7%).

These barriers call for a multi-stakeholder approach involving policy interventions and stronger collaboration between academia and the private sector so that young people are not left behind in the green economy transition.

Figure 21. Youth Survey Results: Youth's Role in the Green Transition



The youth's role in the green transition. When asked about the part they can play as the country transitions towards more sustainable business models, the respondents identified eight (8) key roles for the youth illustrated in Figure 21.

- 1) **Advocacy and Awareness.** Young people are seen as influential advocates for a greener economy. Many respondents emphasized the importance of spreading awareness through various channels, particularly social media platforms where youth have a strong presence. They view themselves as educators and campaigners, capable of informing others about the opportunities in green jobs and the importance of environmental conservation. The digital literacy of younger generations is highlighted as a key asset in disseminating information and mobilizing support for environmental causes.
- 2) **Policy Engagement and Leadership.** Many responses indicate a desire for young people to be more involved in policy-making processes. They see themselves as potential leaders who can influence decision-making at various levels, from local communities to national governments. The youth express a willingness to lobby for corporate accountability and push for policies that support a greener economy. Their role as future inheritors of the planet is often cited as a motivation for taking on leadership positions in environmental initiatives.
- 3) **Community Engagement and Grassroots Movements.** Several responses highlight the potential for young people to drive change through community-level

initiatives and grassroots movements. This includes participating in local environmental projects, organizing community clean-ups, and engaging in tree-planting activities. The power of collective action and the ability of youth to mobilize their immediate circles are seen as significant factors in driving the transition to a greener economy.

- 4) **Workforce Participation.** Many suggest that the youth should pursue careers or develop skills related to green jobs and industries. There is a recognition that the transition to a greener economy will require a workforce equipped with technical, digital, and sustainability-focused skills.
- 5) **Intergenerational Collaboration.** While many responses focus on the unique contributions of the youth, there is also recognition of the need for intergenerational collaboration. Some respondents suggest that young people should work alongside older generations, learning from their experiences while bringing fresh perspectives to the table to create lasting, meaningful change in economic systems and environmental practices.
- 6) **Innovation and Creativity.** The survey responses frequently mention the innovative capacity of young people, indicating that their creative thinking can lead to breakthroughs in green technologies and more efficient, sustainable practices across various industries. The youth also believe that new perspectives and adaptability are important components in the transition.
- 7) **Sustainable Lifestyle Adoption.** A significant theme in the responses is the importance of young people adopting and promoting sustainable lifestyles, such as practicing proper waste management, reducing consumption, recycling, and making eco-friendly choices in their daily lives. Many respondents believe that by modeling these behaviors, young people can influence their peers and older generations, creating a ripple effect of positive environmental action.
- 8) **Education and Knowledge Sharing.** The youth view themselves as key actors in educating others and disseminating information about green practices to inform and prepare others for the green transition.

Synthesis

This chapter presented the evolving trends and demands of the labor market driven by green growth and sustainability commitments. Efforts to green the labor supply through education and training were discussed alongside the emerging industry opportunities for green jobs across key employment growth sectors. The following points further highlight the need to align the country's labor supply, labor demand, and green skills in support of the Philippines' green jobs and just transition agenda:

Recent labor market trends

- The labor force experienced modest expansion between May 2023 and May 2024, growing by 1.1% with an increase of 544,000 workers. However, the labor force participation rate declined slightly from 65.3% to 64.8%, indicating some untapped workforce potential.
- Employment grew by 1.3% (605,000 workers), though not keeping pace with the growth of the working-age population, indicating a need for more job creation.
- Structural shifts were observed, with services remaining the largest employer (60.1%) and increases in construction, administrative services, and manufacturing, offset by declines in agriculture and forestry, reflecting an ongoing transition in the economy.
- Informal employment remains pervasive, estimated at over 70% of total employment, highlighting the prevalence of precarious work arrangements.
- The youth labor market showed concerning trends, with the youth labor force declining by 5% and youth employment dropping by 5.5%, though underemployment among youth improved, suggesting some optimization of available jobs.

Greening the country's labor supply

- TESDA is strategically integrating green competencies and sustainable practices into its TVET system, while the Department of Education is incorporating environmental education, sustainability awareness, and green skills development into the K-12 curriculum to equip the workforce with the necessary skills and mindset to support the country's transition to a green economy.
- The labor supply pipeline also includes a steady stream of TVET graduates, university graduates, and registered professionals in green-oriented fields, providing a strong foundation for the emerging green job opportunities.

Labor demand and prospects for green jobs

- Opportunities for green jobs are emerging across multiple sectors, including renewable energy, green construction, sustainable agriculture, ecotourism, and green manufacturing.
- In-demand green occupations span technical, managerial, and operational roles, requiring specialized skills in areas like renewable energy engineering, environmental science and management, sustainability and ESG, green construction, precision agriculture, and innovative green technologies.
- The renewable energy sector appears to be a major driver of green job creation, with hundreds of openings across technical, administrative, and business

functions, such as solar and renewable energy engineers, energy analysts, and project managers.

- The construction industry is embracing sustainability, with openings for LEED coordinators, environmental engineers, and trade workers skilled in green building techniques, while the agriculture sector is evolving toward more sustainable and climate-resilient practices, creating opportunities for agronomists, farm managers, agricultural engineers, and quality control specialists.
- Women are playing important roles as entrepreneurs, educators, community leaders, and STEM professionals in driving the green economy transition.

The youth as key transition drivers

- There is a clear green jobs interest from the youth, with a majority considering sustainability in their career choices. However, this interest is not yet fully translated into labor market participation. There is a significant awareness gap, with only a minority familiar with the concept of green jobs, and even fewer aware of local green job opportunities.
- The sectors of most interest for green careers for the youth – sustainable agriculture, waste management, and renewable energy – reflect traditional environmental fields. This may indicate a need to broaden awareness of green job opportunities in other sectors of the economy.
- The skills identified by the youth as most important for addressing climate change – environmental awareness, scientific/technical knowledge, and critical thinking – align well with the needs of the green economy. However, there is a noticeable gap between the perceived importance of these skills and the respondents' confidence in their own competence.
- Less than half of the youth respondents feel their education has adequately prepared them for green jobs, and only a small fraction have received specific training in green skills.

VI. Challenges and Key Stakeholder Views

The transition to a green economy presents an array of challenges that must be addressed to ensure an inclusive labor market. These challenges, identified through stakeholder consultations, span various aspects of human resource development and labor market dynamics in the context of green jobs.

6.1. A primary challenge identified lies in developing a workforce equipped with the necessary skills and knowledge for green jobs. Stakeholders have identified several specific issues:

- | | |
|--|---|
| ➤ Skills gap | Many workers lack the specialized knowledge, technical, and core skills required for emerging green jobs. |
| ➤ Rapidly evolving skills requirements | The fast pace of technological change in existing and emerging green industries makes it difficult for workers to keep their skills current/sufficient to industry demands. |
| ➤ Inadequate training programs | Educational and training institutions struggle to keep pace with the changing demands of the green economy, often offering outdated or insufficient curricula. |
| ➤ Limited awareness | There is a general lack of understanding among workers and job seekers about what green jobs entail and the skills they require. |

6.2. Ensuring a balanced and accessible labor market for green jobs presents another set of challenges:

- | | |
|---------------------------------|---|
| ➤ Supply-demand mismatch | There is often a disconnect between the supply of green jobs and the availability of skilled workers in this sector. |
| ➤ Geographical disparities | Green job opportunities may not be evenly distributed across regions, leading to localized skill shortages or surpluses. |
| ➤ Lack of clear career pathways | The absence of well-defined career pathways in green sectors makes it difficult for workers to plan their professional development. |
| ➤ Information gap | Insufficient data and information about green job prospects hinder effective employment facilitation, career planning, and policy-making. |

6.3. The governance of green jobs and the just transition process presents coordination challenges:

- | | |
|-----------------------------------|--|
| ➤ Multi-stakeholders coordination | Aligning efforts across government agencies, private sector entities, workers groups, and civil society organizations requires robust mechanisms for collaboration |
| ➤ Policy coherence | Ensuring that policies and programs are aligned with both environmental goals and social equity considerations |

➤ Regulatory framework	Developing and implementing appropriate regulations to support green job creation while ensuring worker protection and environmental standards
➤ Monitoring and evaluation	Establishing effective systems to track progress and assess the impact of green jobs initiatives

6.4. Building the capacity of various stakeholders to effectively participate in the green transition was raised as a concern:

➤ Knowledge gaps	Many stakeholders, including employers, workers' organizations, and local communities, lack comprehensive understanding of green economy concepts and practices.
➤ Resource constraints	Limited financial and technical resources hinder stakeholders' ability to implement green initiatives or adapt to new requirements.
➤ Resistance to change	Some stakeholders may be reluctant to embrace the transition due to perceived risks or uncertainties.
➤ Limited institutional capacity	Government agencies and other institutions may lack the expertise or resources to effectively support the green transition.

6.5. Ensuring a just transition that leaves no one behind is perhaps the most critical challenge:

➤ Worker displacement	As certain industries phase out or transform, many workers face the risk of job loss or significant career changes.
➤ Inadequate social safety nets	Existing social protection systems may not be sufficient to support workers affected by the transition.
➤ Retraining and reskilling needs	Developing comprehensive and accessible programs to retrain/reskill displaced workers for green jobs is a serious challenge.
➤ Community impacts	The transition can affect entire communities, particularly those dependent on carbon-intensive industries, requiring holistic support strategies.
➤ Equity and inclusion	Ensuring that the benefits of green jobs are accessible to marginalized groups, including women, youth, and rural populations.

6.6. For a more granular look into the challenges and opportunities related to green jobs, skills, and the green transition, the following sectoral perspectives¹² are summarized as follows:

¹² See Annex 3 for the full documentation of the consultation outputs.

- 6.6.1. **For the renewable energy sector, academe and civil society organizations (CSOs) emphasized the need for a more comprehensive understanding of green jobs that integrates social justice and inclusivity, as the current definition is narrow and lacks consideration of labor rights and indigenous rights.** Industry and national government agencies (NGAs) identified significant skills gaps in the sector, highlighting the challenge of bridging the talent mismatch despite efforts to develop relevant curricula. Regulatory uncertainty was cited as a major obstacle for workforce planning and investment in the industry. Stakeholders proposed various opportunities, such as collaboration for technology transfer, integration of renewable energy in technical and vocational education, and the creation of a Just Transition Council to align policy efforts across sectors and ensure a fair transition for affected workers
- 6.6.2. The construction sector faces significant challenges in terms of gender equality, sustainability, and skills development. **The stakeholder sentiments showed numerous opportunities for improvement such as developing comprehensive policy frameworks, enhancing education and training programs, promoting green practices, and facilitating job creation in the green construction sector.**
- 6.6.3. **The participants in the transport sector highlighted the complex interplay of technological, economic, and social factors in the transition to green jobs in the transport sector.** While there are significant challenges, particularly in terms of worker transition and infrastructure development, there are also numerous opportunities for skills development, policy interventions, and sustainable practices that can support a just transition in the sector.
- 6.6.4. **Stakeholders in the agriculture sector notices the shift towards more environmentally friendly farming methods, such as the adoption of agroforestry and organic farming practices, driven in part by the availability of skilled agricultural graduates.** However, convincing farmers to transition to these sustainable practices remains a challenge, as the initial period can lead to income loss. Technological advancements, including the development of agricultural machinery and the utilization of digital technologies, offer promising opportunities for improving productivity and efficiency.
- 6.6.5. **Inputs from the manufacturing sector revealed challenges and opportunities in the transition on green jobs.** Key observations included low OSH compliance among MSMEs, lack of green production incentives, and high energy costs leading to labor cost-cutting. Challenges such limited financial resources for transition, and lack of policy coherence were highlighted. However, the sectoral stakeholders also identified opportunities, including cross-sectoral partnerships and incentives for green production.
- 6.6.6. **The ecotourism sector participants highlighted the need for a holistic approach to driving the transition towards green jobs and just transition.** The observed the emergence of streamlined digital services and a noticeable gap in investment towards training and developing human capital within the sector. They also saw certain

barriers posed by mandatory accreditation requirements and the vulnerability of some jobs due to environmental and economic transitions.

- 6.6.7. **Cross-cutting challenges: Gender gaps and barriers.** Several major challenges hinder women's participation in green jobs and sustainable economic opportunities, which include access to finance, persistent wage disparities, the burden of care work, and educational gaps limit women's ability to start or expand businesses in green sectors and fully engage in green job opportunities. Women are underrepresented in managerial positions, relegating many to subordinate roles rather than positions of ownership or responsibility.

VII. Strategic Action Plan for Green Jobs

Creating sustainable employment opportunities while ensuring a just transition for workers require a comprehensive roadmap that address various aspects of green jobs and the transition to a greener economy, from building a skilled workforce to implementing inclusive social protection measures. For the purposes of the NGJ HRD Plan, the identified Goals for Philippine green jobs and just transition, which also correspond to the Plan's vision, are the following:

Figure 22. NGJ HRD Plan 2020-2030 Strategic Goals



This Strategic Action Plan presents the different Goals, Outcomes, and respective Strategies of the NGJ HRD Plan. *First*, the **Goals** serve as the broader national targets on green jobs and just transition that are anchored on the PDP 2023-2028 and the PLEP 2023-2028. It must be emphasized that each of the Goals must further any of the three PLEP Priorities. *Second*, the **Outcomes** refer to the expected results set by the NGJ HRD Plan across different aspects of a Goal in the medium term. *Third*, the **Strategies** state the particular action points that must be done to contribute to the realization of an Outcome.

To visualize such relationship, a Strategy Framework for each of the NGJ HRD Goals is integrated in each Section. It shows that the PDP 2023-2028 and the PLEP 2023-2028 serve as the mandate for pursuing the GJ HRD Goals. Each of the subsequent Sections shall discuss the GJ HRD Goals and their brief descriptions to be followed by a framing of challenges in attaining these Goals. Different Outcomes under the Goal shall be discussed together with the respective (i) Outcome description; (ii) Strategies (Programs/Projects) for each Outcome; (iii) Key Milestones for each Strategy; and (iv) Lead Agencies/Institutions.

Goal 1: Green Jobs-Ready and -Skilled Labor Force

Foremost in the goals of the NGJ HRD Plan is to create a green jobs-ready and -skilled labor force. With the demands driven by the mainstreaming of green jobs across different industries and sectors, the State shall ensure that the labor force is equipped with the appropriate skills to take advantage of employment opportunities that are opened by greening the economy. A crucial factor in this process is making educational and training opportunities with respect to green jobs available and accessible to Filipinos. The NGJ HRD Plan sets the following Outcomes and Strategies, which is visually represented through a Strategy Framework in Figure 23.

Figure 23. Goal 1 Strategy Framework



Outcome 1.1: Demand for green skills education and training increased

The first outcome essential for a green jobs-ready and -skilled labor force is ensuring that the demand for green skills education and training is increased, and eventually sustained. The demand for green skills education and training refers to the willingness of

the labor force to undergo retraining and reskilling with respect to green skills, which can help them subsequently enter green jobs. Because green skills are still being integrated into the mainstream of labor force, there is a need to implement interventions that would increase demand among the population.

Table 13. Outcome 1.1. Strategies

Key Milestones	Lead/Co-Lead	Timeline
1.1.1. Integrate green jobs, occupations, and skills in career development support programs		
Review existing career development support programs to include green jobs	DOLE	2024 to 2026
Include and identify green jobs that are offered in DOLE-organized career fairs	DOLE in collaboration with enterprises, PESOs, and Job Placement Offices	2024 to 2026
Include and identify green jobs that are offered in PESO-organized career fairs	DOLE and PESOs in collaboration with enterprises	2024 to 2026
1.1.2. Integrate green competencies in basic and secondary education curricula		
Identify green competencies that are fit for each level of basic and secondary education	Department of Education (DepEd) in collaboration with Career Development Support Working Groups and private/public schools' associations	2024 to 2026
Conduct a curriculum review in basic and secondary education to identify where green competencies may be integrated		2024 to 2026
Mainstream revised curricula with green competencies among faculty nationwide		2024 to 2026
1.1.3. Promote green skills among membership base of stakeholder organizations		
Organize green skills roadshows and advocacy activities which include available education and training opportunities for members	Labor unions and cooperatives	2024 to 2030

Outcome 1.2: Accessibility of education and training for green jobs expanded

The second outcome essential for a green jobs-ready and -skilled labor force is ensuring that the accessibility of education and training for green jobs is expanded. Availability, accessibility, and affordability of educational and training opportunities for green jobs are prerequisites to developing a labor force that is ready for a green economy. Whether

instituted by the public or private sector or by partnership between the two, these opportunities must be promoted by the government to all interested Filipinos.

Table 14. Outcome 1.2 Strategies

Key Milestones	Lead/Co-Lead	Timeline
1.2.1. Implement greening technical and vocational education and training system		
Conduct an annual assessment of Green TVET implementation	TESDA	2024 to 2026
Conduct a tracer survey for green education and training graduates	TESDA in collaboration with enterprises	2024 to 2026
Offer education and training responding to the needs of priority green sectors	TESDA	2024 to 2026
1.2.2. Expand green skills offerings in tertiary education		
Design model courses on green skills	CHED in collaborations with SUCs and Higher Education Institutions	2024 to 2026
Review existing program offerings and identify where courses on green skills may be offered	CHED in collaborations with SUCs and Higher Education Institutions	2024 to 2026
1.2.3. Expand scholarships, grants, and incentives for potential green workforce		
Provide a scholarship program for enrolment into green skills education and training	TESDA, DOST	2024 to 2030
Provide a scholarship program or discount system for tertiary students enrolled in green skills-related programs	CHED in collaborations with state and private universities and colleges, and DOST	2024 to 2030
Initiate internal human resource development grants mechanism for currently employed workers interested in enrolling in green skills education and training opportunities	Enterprises	2024 to 2030
1.2.4. Implement digitalization of education and training for green skills		

Initiate a digital platform where green skills education and training offerings may be hosted	TESDA in collaboration with DICT	2024 to 2026
Offer pilot offerings in the digital platform	TESDA	2024 to 2026

Outcome 1.3: Workforce with green skills produced

The third outcome essential for a green jobs-ready and -skilled labor force is ensuring that a workforce with green skills is produced. It is not sufficient that there is a demand for green skills and that such demand is met through the availability of educational and training opportunities. In fact, such outcomes should lead to the eventual creation of a workforce that has the necessary skills to be employed in green jobs. Further, to ensure that the long-term welfare of Filipinos is protected, such skills must be climate-resilient and -adaptive as well.

Table 15. Outcome 1.3 Strategies

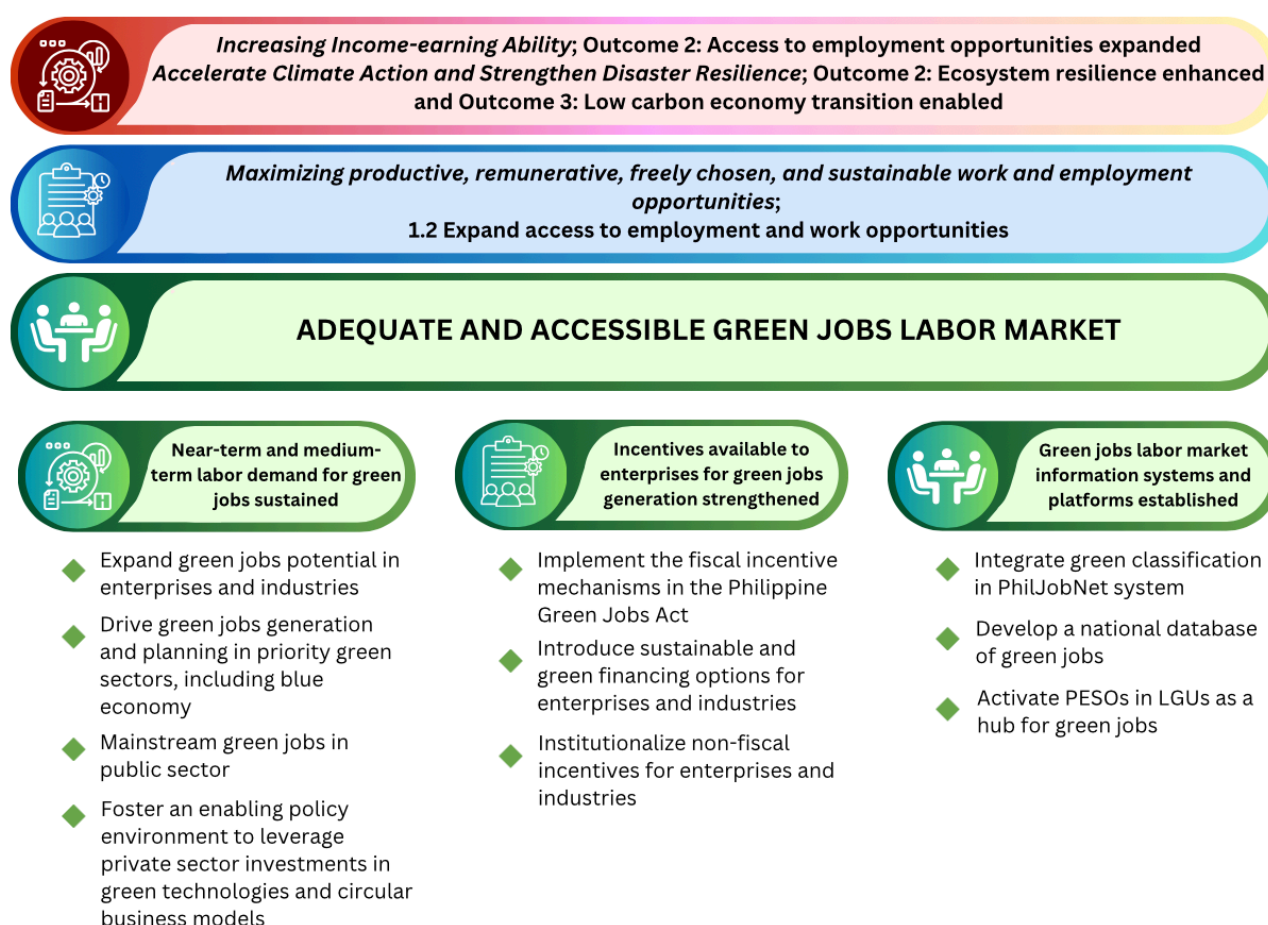
Key Milestones	Lead/Co-Lead	Timeline
1.3.1. Professionalize green occupations		
Form a technical working group with relevant agencies on identifying green occupations that require professionalization	PRC in collaboration with DOLE and DTI	2024 to 2026
Draft bill seeking the professionalization of identified green occupations	PRC in collaboration with DOLE and DTI	2024 to 2026
Encourage providers of Continuing Professional Development courses across existing professions to integrate green skills and competencies	PRC in collaboration with DOLE and DTI	2024 to 2026
1.3.2. Institutionalize accreditation of green skills and green competencies providers		
Draft criteria and guidelines for accreditation of providers	TESDA	2024 to 2026
Issue an administrative order adopting the criteria and guidelines for accreditation	TESDA	2024 to 2026
1.3.3. Ensure education and training meets international standards		
Mainstream revised curricula with green competencies among faculty nationwide	DepEd, CHED, TESDA	2024 to 2030
Conduct a biannual scoping review of existing green skills education and training standards in identified countries	TESDA in collaboration with DOLE and DTI	2024 to 2030
Identify areas of improvements and adopt changes based on international standards in existing training regulations	TESDA	2024 to 2030

1.3.4. Integrate green qualifications into the Philippine Qualifications Framework (PQF)		
Identify areas in PQF where green qualifications may be integrated	PQF-National Coordinating Council	2024 to 2026
Adopt a revised PQF with green qualifications	PQF-National Coordinating Council	2024 to 2026
1.3.5. Integrate green skills and competencies into the Philippine Skills Framework (PSF) Initiative		
Identify areas in PSF where green skills and competencies may be integrated	DTI in collaboration with DOLE and TESDA	2024-2028
Adopt a revised PSF with green skills and competencies	DTI in collaboration with DOLE and TESDA	2024-2028

Goal 2: Adequate and Accessible Green Jobs Labor Market

A crucial aspect of the NGJ HRD Plan is ensuring that there exists an adequate and accessible green jobs labor market. Despite the job-readiness of the labor force through educational and training opportunities, it is important that the labor market has sufficient opportunities to take the labor force in. With this, the State shall endeavor to create a labor market that has adequate green jobs for qualified Filipinos seeking employment. Moreover, labor information systems and mechanisms play a significant role in connecting the labor force to the labor market.

Figure 24. Goal 2 Strategy Framework



Outcome 2.1: Near-term and medium-term labor demand for green jobs sustained

The first outcome essential for an adequate and accessible green jobs labor market is ensuring that the near-term and medium-term labor demand for green jobs are sustained. Sustaining labor demand for green jobs refers to the introduction of green jobs as a viable vehicle for economic development and business growth, as well as the mainstreaming of green jobs in industries and enterprises. Popularization, consultations, and public information about green jobs directed to the business sector would result in green jobs generation and consequently in labor demand generation.

Table 16. Outcome 2.1 Strategies

Key Milestones	Lead/Co-Lead	Timeline
2.1.1. Expand green jobs potential in enterprises and industries		
Organize dialogues and roadshows with enterprises on mainstreaming green jobs in business plan and operations	DOLE (Lead) Enterprises	2024 to 2030
Publish a case study on best industry practices on mainstreaming green jobs.	DOLE	2024 to 2030

Initiate greening and sustainability programs and projects within the enterprise.	Enterprises	2024 to 2026
2.1.2. Drive green jobs generation and planning in priority green sectors, including the blue economy		
Establish working relationships among green jobs focal persons from NGAs related to the priority green sectors	DOLE	2024 to 2026
Integrate the green jobs component in the plans and roadmaps of NGAs related to the priority green sectors	DOLE	2024 to 2026
2.1.3. Mainstream green jobs in the public sector		
Identify green items/positions in various levels of public employment	CSC in collaboration with NGAs, GOCCs, LGUs	2024 to 2028
Identify green jobs in various government-led infrastructure projects	CSC	2024 to 2028
Include green jobs generation and promotion as a criterion in the Seal of Good Local Governance	DILG	2024 to 2028
Include green jobs generation and promotion as a criterion in the guidelines for public-private partnership projects	PPP Center	2024 to 2028
Include the green component as a criterion in the guidelines for the annual Search for Best PESO	DOLE	2024 to 2028
2.1.4. Foster an enabling policy environment to leverage private sector investments in green technologies and circular business models		
Strengthen the implementation of anti-red tape law, rules, and regulations, and ease of doing business law	ARTA	2024 to 2026

Outcome 2.2: Incentives available to enterprises for green jobs generation strengthened

The second outcome essential for an adequate and accessible green jobs labor market is ensuring that the incentives available to enterprises for green jobs generation are strengthened. Incentives, whether fiscal or non-fiscal, play an important role in encouraging the private sector to take part in the government's priority areas, such as green jobs generation. For instance, incentives may be extended to green industries or to originally non-green industries, which then transition their goods, services, or processes to green. On the other hand, incentives may be based on the quantity of green jobs generated.

Table 17. Outcome 2.2 Strategies

Key Milestones	Lead/Co-Lead	Timeline
2.2.1. Implement the fiscal incentive mechanisms under existing laws		
Operationalize the Green Jobs Certification and Assessment System	CCC in collaboration with DENR	2024 to 2026
Issue an administrative order providing the guidelines of the Green Jobs Certification and Assessment System and the mechanism for availing of fiscal incentives	CCC in collaboration with DOLE and DOF	2024 to 2026
Mainstream fiscal incentives for the greening initiatives of enterprises under existing laws	DOF (Lead) BOI	2024 to 2026
2.2.2. Introduce sustainable and green financing options for enterprises and industries		
Publish a case study on available financing options for green initiatives	DOLE	2024 to 2026
Organize dialogues with government and private financial institutions ramp up financing options	BSP	2024 to 2026
2.2.3. Institutionalize non-fiscal incentives for enterprises and industries		
Organize the green jobs generation awards recognition for leading enterprises	DOLE	2024 to 2028

Outcome 2.3: Green jobs, labor market information systems, and platforms established

The third outcome essential for an adequate and accessible green jobs labor market is ensuring that green jobs labor market information systems and platforms are established. The accessibility of information with respect to employment opportunities in a labor market is as important as the availability of jobs itself. Despite the job-readiness of the labor force, no employment commences if the population is not bridged toward these opportunities. For the green jobs labor market, these systems and platforms are key to the labor force's awareness of their current and near-term employment prospects.

Table 18. Outcome 2.3 Strategies

Key Milestones	Lead/Co-Lead	Timeline
2.3.1. Integrate green classification in PhiJobNet system		
Identify green jobs that are or may be shown in PhiJobNet.	DOLE	2024 to 2026

Create a category/filter for green jobs in PhiJobNet	DOLE	2024 to 2026
2.3.2. Develop a national database of green jobs and a comprehensive green occupation index		
Implement a national program to establish a database of green jobs	DOLE, in collaboration with PSA	2024 to 2026
Develop a comprehensive green occupation index through existing national surveys and statistics	PSA in collaboration with DOLE	2024 to 2028
2.3.3. Activate PESOs in LGUs as a hub for green jobs		
Issue a joint circular among relevant agencies for the inclusion of green jobs in PESOs.	DOLE in collaboration with DILG and PESOMAP	2024 to 2028

Goal 3: Shared Green Jobs and Just Transition Governance

Shared labor market governance is a recognized principle in meaningful labor market administration. The NGJ HRD Plan envisions the same for green jobs and just transition. Grounded on multi-stakeholder participation, particularly tripartism that involves a shared approach among the government, employers and business sector, and workers and trade unions, the policies and actions that will be implemented are the results of thorough deliberation and consultation.

Figure 25. Goal 3 Strategy Framework



Outcome 3.1: Tripartite and bipartite mechanisms on green jobs and just transition at the national and enterprise levels established

The first outcome essential for a shared green jobs and just transition governance is ensuring that a tripartite mechanism on green jobs and just transition is established through existing tripartite bodies such as the National Tripartite Industrial Peace Council. This strategy ensures sufficient space for stakeholders to discuss critical areas of concern related to green jobs and just transition. The same principle shall also be endeavored to be accomplished at the enterprise level through bipartite mechanisms, among others.

Table 19. Outcome 3.1 Strategies

Key Milestones	Lead/Co-Lead	Timeline
3.1.1. Integrate the green jobs agenda in existing tripartite bodies		
Include an agenda item on green jobs and just transition in the National Tripartite Industrial Peace Council (NTIPC)	DOLE	2024 to 2028
3.1.2. Define processes for consultation among tripartite stakeholders on green jobs and just transition national policies		

Issue guidelines on the tripartite consultation process on national policies on green jobs and just transition	DOLE, Enterprises, and Workers associations	2024 to 2026
Institutionalize a mechanism for feedback and evaluation on the effectiveness of green jobs and just transition policy implementation.	DOLE, Enterprises, and Workers associations	2024 to 2026
3.1.3. Promote the creation of a workplace- or enterprise-level body on green jobs and just transition		
Issue guidelines on the creation of a bipartite mechanism for consultation on green jobs and just transition at the enterprise level	DOLE (NCMB)	2024 to 2028
3.1.4. Mainstream green jobs and just transition in government policies		
Conduct a review of existing government laws, rules, regulations, and issuances where green jobs and just transition aspects may be integrated	DOLE	2024 to 2026
Coordinate with respective government agencies with such rules, regulations, and issuances to discuss how green jobs and just transition may be integrated	DOLE	2024 to 2026

Outcome 3.2: Advocacy efforts and partnerships on green jobs and just transition intensified

The second outcome essential for a shared green jobs and just transition governance is ensuring that advocacy efforts and partnerships on green jobs and just transition are intensified. The tripartite stakeholders collectively have a role in advocating for green jobs and a just transition. To some extent, this is still a part of the mainstreaming of these areas in public discourse and consciousness. While it is recognized that each of the stakeholders has interests in the promotion of green jobs and just transition that they will highlight in their respective advocacy work, they still complement the efforts of the other stakeholders.

Table 20. Outcome 3.2 Strategies

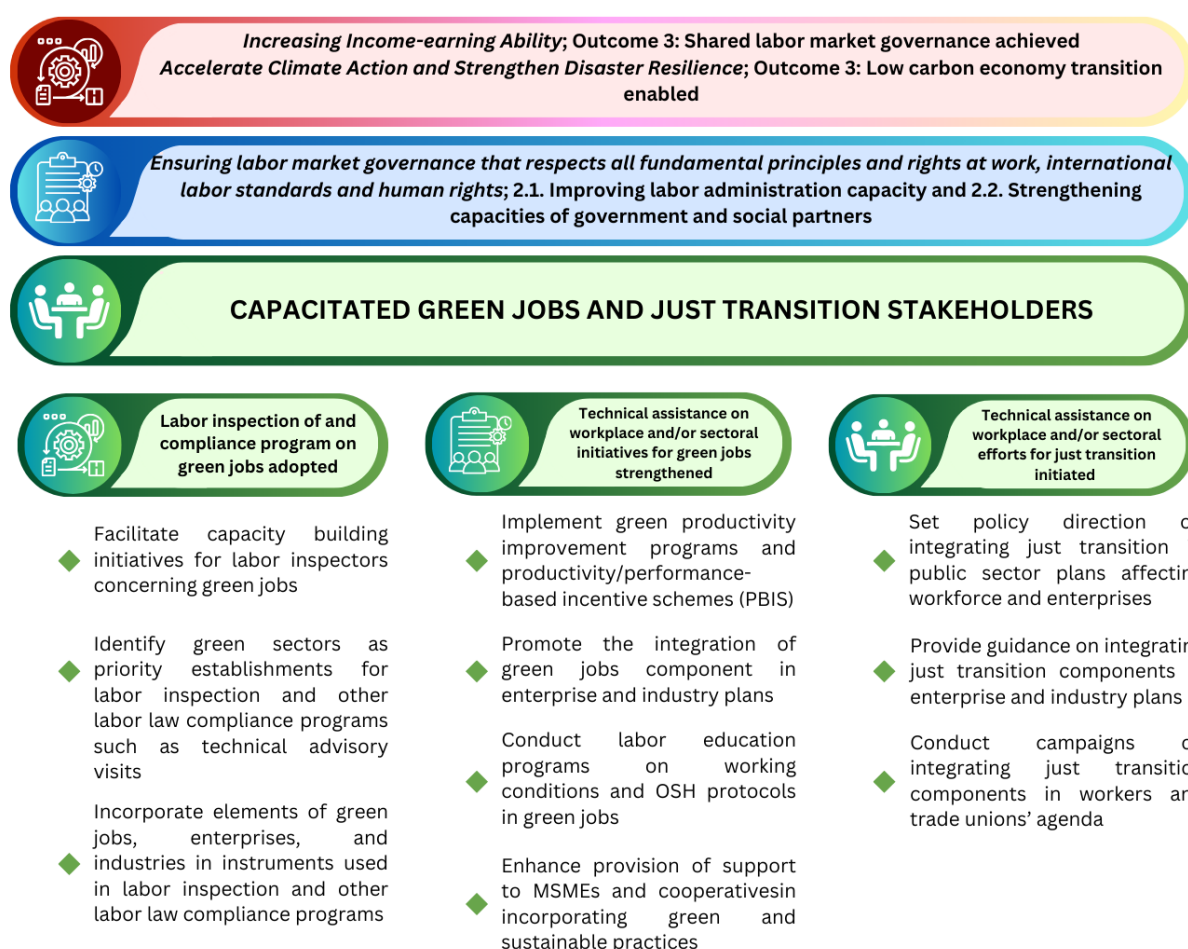
Key Milestones	Lead/Co-Lead	Timeline
3.2.1. Harness linkages among tripartite stakeholders for public awareness and advocacy on green jobs		

Create a tripartite public awareness program on green jobs, which uses Labor Education Programs as a starting point	DOLE	2024 to 2026
3.2.2. Institutionalize education/training-to-industry partnerships on pathways to green jobs		
Initiate discussions on partnerships for pathways among educational and training institutions and enterprises	DOLE in collaboration with CHED, SUCs, and TESDA	2024 to 2026
Create pilot programs for school-to-job partnerships	DOLE and Enterprises	2024 to 2026
3.2.3. Strengthen collaboration on data management and data-sharing on green jobs among tripartite stakeholders		
Initiate discussions on data-sharing on green jobs between DOLE and other government agencies	DOLE	2024 to 2028
Initiate discussions on data-sharing on green jobs between DOLE and enterprises or workers' associations	DOLE and Enterprises	2024 to 2028
Sign a memorandum of agreement between DOLE and the tripartite stakeholders on data-sharing	DOLE, Enterprises, and Workers associations	2024 to 2028

Goal 4: Capacitated Green Jobs and Just Transition Stakeholders

Capacitated green jobs and just transition stakeholders supplement the efficacy of a shared governance mechanism. The NGJ HRD Plan emphasizes the need for capacity building among stakeholders on the various emerging best practices in green jobs promotion. These areas for capacity building may include the adaptation of existing practices to fit the needs of green jobs and just transition as well as the development of new practices that respond to the unique demands of these areas. Recognizing that capacitated actors lead to a robust green jobs labor market, the State shall ensure that adequate support is extended to the stakeholders to maximize their roles.

Figure 26. Goal 4 Strategy Framework



Outcome 4.1: Labor inspection and other compliance programs on green jobs adopted

The first outcome essential for capacitated green jobs and just transition stakeholders is ensuring that labor inspection and compliance programs on green jobs are adopted. Labor inspection is one of the key functions of the government to determine whether businesses and enterprises comply with the standards and conditions of labor. On the other hand, a compliance program can also guide enterprises on which aspects need to be maintained. For green jobs, the capacity of both the government and private sector to maintain decent standards of work, especially in green industries, is crucial for a functional labor market.

Table 21. Outcome 4.1 Strategies

Key Milestones	Lead/Co-Lead	Timeline
4.1.1. Facilitate capacity-building initiatives for labor inspectors concerning green jobs		
Organize and implement a training program on green jobs for further understanding of labor inspectors	DOLE	2024 to 2026

Include a topic discussion on green jobs in the basic course for labor inspectors, basic OSH training, construction OSH training, technical safety inspection training, and other related training	DOLE	2024 to 2026
Incorporate a discussion on green jobs in the 52-week learning sessions of the BWC for labor inspectors across all DOLE Regional Offices	DOLE	2024 to 2026
4.1.2. Identify green sectors as priority establishments for labor inspection and other labor law compliance programs, such as technical advisory visits		
Review the data on labor inspection and other compliance programs related to identified priority green sectors	DOLE	2024 to 2026
Initiate the pilot implementation of new guidelines and standards in identified enterprises in priority green sectors	DOLE	2024 to 2026
4.1.3. Incorporate elements of green jobs, enterprises, and industries in instruments used in labor inspection and other labor law compliance programs		
Issue appropriate and relevant guidelines for the adoption of labor inspection and other labor law compliance programs in the identified green sectors	DOLE	2024 to 2028
Coordinate with other DOLE and Green Jobs Act partners on the available learning materials that can be included in the current labor inspection and compliance programs of the DOLE	DOLE	2024 to 2028
Integrate updated green jobs learning materials in technical and advisory visits, if available	DOLE	2024 to 2028

Outcome 4.2: Technical assistance on workplace and/or sectoral initiatives for green jobs strengthened

The second outcome essential for capacitated green jobs and just transition stakeholders is ensuring that technical assistance on workplace and/or sectoral initiatives for green jobs is strengthened. Many enterprises and industries have already started exploring the potential of green jobs as an investment prospect, which means that they have adapted their medium- and long-term plans to this. However, much needs to be done to mainstream green jobs in industries that are still reluctant about their market soundness. Technical assistance to enterprises and workers' associations on the integration of green jobs into their systems is a must.

Table 22. Outcome 4.2 Strategies

Key Milestones	Lead/Co-Lead	Timeline
4.2.1. Implement green productivity improvement programs and productivity/performance-based incentive schemes (PBIS)		
Issue guidelines on green productivity and how this can be adopted in an enterprise-level	DOLE and Enterprises	2024 to 2026
4.2.2. Promote the integration of the green jobs component in enterprise and industry plans		
Organize dialogues and roadshows with enterprises on mainstreaming green jobs in business plan and operations, including sole proprietorships and cooperatives	DOLE and Enterprises	2024 to 2026
Publish a case study on best industry practices on mainstreaming green jobs	DOLE and Enterprises	2024 to 2026
4.2.3. Conduct labor education programs on working conditions and OSH protocols in green jobs		
Harmonize all green jobs-focused labor education programs offered by different DOLE bureaus and attached agencies for workers and employers to advance understanding and uniform application of green jobs, including for self-employed workers	DOLE in collaboration with workers' associations	2024 to 2028
Integrate collected green jobs-focused learning materials in all DOLE e-learning portals and learning sessions	DOLE in collaboration with workers' associations	2024 to 2028
4.2.4. Enhance provision of support to MSMEs and cooperatives in incorporating green and sustainable practices		
Engage in dialogue with MSMEs and cooperatives on increasing greening initiatives and integrating green jobs in their systems	DOLE in collaboration with DTI, MSME Development Council, MSMEs, and Cooperatives	2024 to 2030

Outcome 4.3: Technical assistance on workplace and/or sectoral efforts for just transition initiated

The third outcome essential for capacitated green jobs and just transition stakeholders is ensuring that Technical assistance on workplace and/or sectoral efforts for just transition is initiated. Aside from capacitating stakeholders on the green jobs aspect, there should also be a simultaneous effort to mainstream just transition in the shift to a sustainable economy among stakeholders. More specific policies and guidelines on how

just transition can be operationalized in various industries and sectors can capacitate stakeholders and, thus, prevent the proliferation of unjust consequences to Filipino workers who may be left behind in the process because of green jobs promotion and generation.

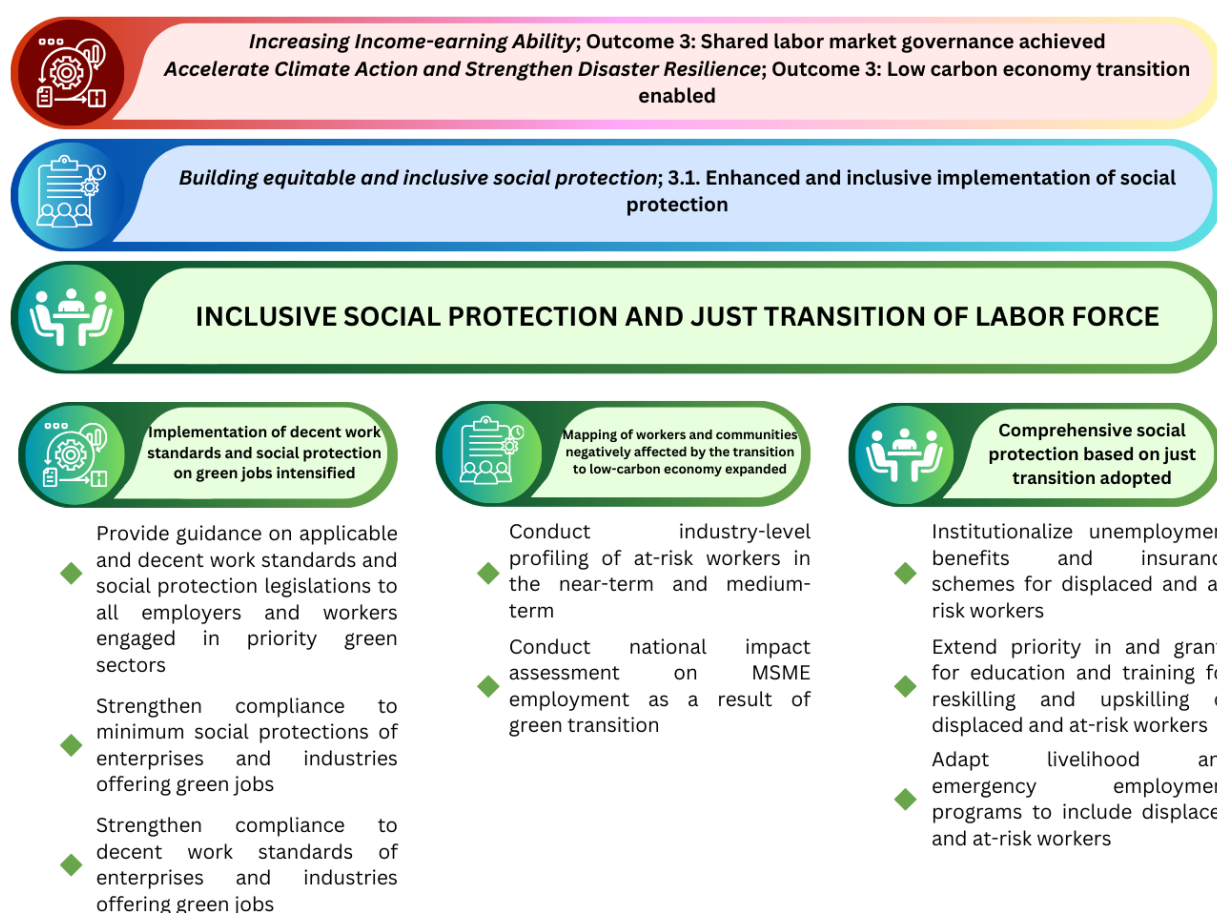
Table 23. Outcome 4.3 Strategies

Key Milestones	Lead/Co-Lead	Timeline
4.3.1. Set policy direction on integrating just transition in public sector plans affecting workforce and enterprises		
Form a technical working group to draft a just transition framework and policy in public policy	DOLE	2024 to 2026
Coordinate with government agencies to integrate the just transition component in their respective plans and roadmaps	DOLE	2024 to 2028
4.3.2. Provide guidance on integrating just transition components in enterprise and industry plans		
Issue guidelines on the just transition framework and how it can be adopted at the enterprise-level	DOLE in collaboration with DTI and Enterprises	2024 to 2028
Engage in dialogues with enterprises to discuss how just transition can be operationalized at the enterprise-level	DOLE in collaboration with DTI and Enterprises	2024 to 2028
4.3.3. Conduct campaigns on integrating just transition components in workers' and trade unions' agenda		
Engage in dialogues with workers' associations to discuss how just transition can be mainstreamed in their agenda	DOLE in collaboration with workers' associations	2024 to 2028

Goal 5: Inclusive Social Protection and Just Transition of the Labor Force

An essential component of ensuring decent work is the institution of social protection mechanisms for the benefit of workers. The NGJ HRD Plan builds upon the existing social protection mechanisms currently available to Filipino workers and extends these to workers who are employed in green jobs. Further, with due consideration of the consequences of transition to more sustainable industries and technologies, Filipino workers who are negatively affected by such transition must likewise have adequate social protection consistent with principles of just transition.

Figure 27. Goal 5 Strategy Framework



These principles are in pursuance of the State's duty to promote social justice as mandated by the Constitution. The NGJ HRD Plan sets the following Outcomes and Strategies, which are visually represented through a Strategy Framework in Figure 21.

Outcome 5.1: Implementation of decent work standards and social protection on green jobs intensified

The first outcome essential for inclusive social protection and just transition of the labor force is ensuring that the implementation of existing minimum social protection floors and decent work standards for green jobs is intensified. Consistent with the definition of green jobs as referring to decent work, social protection is necessary. With the creation of new occupations with respect to the greening of industries, the existing minimum social protection floors must likewise be upheld and meaningfully implemented. Further, central to the definition of green jobs is decent work, which means that rights at work and other standards of decent work are upheld.

Table 24. Outcome 5.1 Strategies

Key Milestones	Lead/Co-Lead	Timeline
5.1.1. Provide guidance on applicable and decent work standards and social protection legislations to all employers and workers engaged in priority green sectors		

Issue timely and relevant labor advisories reiterating the proper application of decent work standards and social protection in green jobs	DOLE	2024 to 2026
Organize roadshows with key enterprises on the proper application of social protection and decent work standards in green jobs	DOLE, Enterprises, and Workers associations	2024 to 2030
5.1.2. Strengthen compliance with minimum social protections of enterprises and industries offering green jobs		
Engage in dialogues with the management of enterprises offering green jobs on compliance with minimum social protections	DOLE and Enterprises	2024 to 2028
Support and provide incentives to MSMEs through Technical and Advisory Visits (TAVs)	DOLE and Enterprises	2024 to 2028
5.1.3. Strengthen compliance with decent work standards of enterprises and industries offering green jobs		
Engage in dialogues with the management of enterprises offering green jobs on compliance with decent work standards	DOLE	2024 to 2028

Outcome 5.2: Mapping of workers and communities negatively affected by the transition to a low-carbon economy expanded

The second outcome essential for inclusive social protection and just transition of the labor force is ensuring that the mapping of workers and communities negatively affected by the transition to a low-carbon economy is expanded. International and domestic policy discourse on the shift to a low-carbon economy has recognized that such a transition may have negative consequences for workers and communities that do not have adequate support in adapting to it. A necessary step to mitigating these effects is the evidence-based determination of those affected and their vulnerabilities, and how such can be properly addressed by the tripartite stakeholders.

Table 25. Outcome 5.2 Strategies

Key Milestones	Lead/Co-Lead	Timeline
5.2.1. Conduct industry-level profiling of at-risk workers in the near-term and medium-term		
Initiate discussions with enterprises on the profiling of at-risk workers within the enterprise	DOLE, Enterprises, and	2024 to 2028

	Workers associations	
Conduct a comprehensive profiling of at-risk workers at enterprise-level	DOLE, Enterprises, and Workers associations	2024 to 2028
5.2.2. Conduct a national impact assessment on MSME employment as a result of the green transition		
Engage in dialogues with MSMEs on the impacts of the green transition	DOLE and Enterprises	2024 to 2028
Conduct a study on the impacts of the green transition on MSME employment	DOLE, Enterprises, and Cooperatives	2024 to 2028

Outcome 5.3: Comprehensive social protection based on just transition adopted

The third outcome essential for inclusive social protection for and just transition of the labor force is ensuring that comprehensive social protection based on just transition is adopted. Besides the existing minimum social protection floors, further social protection that is directed to protecting those part of the labor force who are negatively affected by the transition to a low-carbon economy merits serious consideration. The social protection of workers, not only those who benefited from the green jobs generation but also those who have not, is part and parcel of a comprehensive human resource development in the green economy, thus, it is important to include youth, women, and marginalized groups towards just transition.

Table 26. Outcome 5.3 Strategies

Key Milestones	Lead/Co-Lead	Timeline
5.3.1. Institutionalize unemployment benefits and insurance schemes for displaced and at-risk workers		
Conduct a review of effectivity of existing unemployment benefits and insurance schemes for displaced and at-risk workers	DOLE	2024 to 2028
Form a technical working group to develop new unemployment benefits and insurance schemes for displaced and at-risk workers	DOLE	2024 to 2028
Introduce the Coal Retirement Program under the Climate Investment Fund Act from multilateral development banks	DOLE, DOE, Development Banks	2024 to 2028
Introduce available financing and insurance schemes that may be accessed by displaced and at-risk workers	DOF	2024 to 2028

5.3.2. Extend priority in and grants for educational and training for reskilling and upskilling of displaced and at-risk workers		
Issue guidelines for providing priority in enrollment and grants for educational and training opportunities to displaced and at-risk workers by providing technological and skills transfer to workers	DOLE in collaboration with TESDA and CHED	2024 to 2028
5.3.3. Adapt livelihood and emergency employment programs to include displaced and at-risk workers		
Integrate displaced and at-risk workers as qualified beneficiaries of existing livelihood and emergency employment programs (DOLE-AMP; TUPAD), including guidance to program implementation in targeting these workers	DOLE	2024 to 2028

VIII. Results Framework

The Results Framework presents the tool for Monitoring and Evaluation (M&E) of the implementation progress of the various NGJ HRD Plan Strategies as discussed in the previous Section. M&E serves as an essential component of the NGJ HRD Plan because it allows the stakeholders in general and the responsible actors in particular to track the progress and timeliness of the action points in the Plan. Based on the Strategic Action Plan, the tool shall visually show whether the Goals for Green Jobs and Just Transition are met.

It also aims to provide an assessment tool that is easily understandable by and adaptable to various stakeholders of the NGJ HRD Plan. On the part of the responsible institutions from both the public and private sectors, it clearly shows their progress in terms of Key Milestones achieved per Strategy, which would help them channel resources and attention to direct the accomplishment of other Key Milestones that may be lagging. Further, the tool may still be used, despite any possible change in staff membership or leadership in implementing institutions.

The M&E tool indicates the **total number of Key Milestones accomplished**. Such an indicator may be interpreted as follows: (i) progress per Strategy; (ii) progress per Outcome; or (iii) progress per Goal. For example, if the responsible institution is interested to know its progress on a particular Strategy, then it may refer to the number of Key Milestones accomplished under that Strategy. On the other hand, if the DOLE, as the primary government agency tasked to oversee green jobs and just transition promotion, is interested to know the overall progress on a particular Outcome or the broader Goals, then the number of Key Milestones accomplished also shows the relevant information.

The tool shows the various Outcomes and Strategies of each Goal and a progress bar reflecting the Key Milestones for each Strategy. To properly monitor the progress, the one using the tool may shade the progress bar with the following colors and their corresponding meanings: (i) Green – Accomplished; (ii) Yellow – Implementation on-going; (iii) Orange – Initial/Preparatory steps undertaken; and (iv) No shade – No action. For purposes of determining the **Key Milestones accomplished**, only those shaded in **green** shall be counted.

One of the challenges in using the M&E tool is the non-inclusion of the time component (e.g., whether a Key Milestone is on track or delayed) in the tool's immediate indicator. Thus, a full progress analysis for purposes of reporting should likewise have an assessment of which Key Milestones are on track or delayed as a supplementary document.

Tables 32 to 36 respectively show the M&E tool for each of the five Goals namely, Green Jobs-Ready and -Skilled Labor Force; Adequate and Accessible Green Jobs Labor Market; Shared Green Jobs and Just Transition Governance; Capacitated Green Jobs and

Just Transition Stakeholders; and Inclusive Social Protection for and Just Transition of Labor Force.

Table 27. M&E Tool for Goal 1

Goal 1: Green Jobs-Ready and -Skilled Labor Force	
Key Milestones	Number of Accomplished Key Milestones
1.1. DEMAND FOR GREEN SKILLS EDUCATION AND TRAINING INCREASED	_/7
1.1.1. Integrate green jobs, occupations, and skills in career development support programs	_/3
Review existing career counselling and guidance programs to include green jobs	
Include and identify green jobs that are offered in DOLE-organized career fairs	
Include and identify green jobs that are offered in PESO-organized career fairs	
1.1.2. Integrate green competencies in basic and secondary education curricula	_/3
Identify green competencies that are fit for each level of basic and secondary education	
Conduct a curriculum review in basic and secondary education to identify where green competencies may be integrated	
Mainstream revised curricula with green competencies among faculty nationwide	
1.1.3. Promote green skills among the membership base of stakeholder organizations	_/1
Organize green skills roadshows, which include available education and training opportunities, for membership	
1.2. ACCESSIBILITY OF EDUCATION AND TRAINING FOR GREEN JOBS EXPANDED	_/10
1.2.1. Implement Greening Technical and Vocational Education and Training (TVET) System	_/3
Conduct an annual assessment of Green TVET implementation	
Conduct a tracer survey for green education and training graduates	
Offer education and training responding to the needs of priority green sectors	
1.2.2. Expand green skills offerings in tertiary education	_/2
Design model courses on green skills	
Review existing program offerings and identify where courses on green skills may be offered.	
1.2.3. Expand scholarships, grants, and incentives for the potential green workforce	_/3
Provide a scholarship program for enrollment in green skills education and training	
Provide a scholarship program or discount system for tertiary students enrolled in green skills-related programs	
Initiate an internal human resource development grants mechanism for currently employed workers interested in enrolling in green skills education and training opportunities	
1.2.4. Implement digitization of education and training for green skills	_/2
Initiate a digital platform where green skills education and training offerings may be hosted	
Offer pilot offerings on the digital platform	

1.3. WORKFORCE WITH GREEN SKILLS PRODUCED	_/12
1.3.1. Professionalize green occupations	_/3
Form a technical working group with relevant agencies on identifying green occupations that require professionalization	
Draft bill seeking the professionalization of identified green occupations	
Encourage providers of Continuing Professional Development courses across existing professions to integrate green skills and competencies	
1.3.2. Institutionalize accreditation of green skills and green competencies providers	_/2
Draft criteria and guidelines for accreditation of providers	
Issue an administrative order adopting the criteria and guidelines for accreditation	
1.3.3. Ensure education and training meet international standards	_/3
Mainstream revised curricula with green competencies among faculty nationwide	
Conduct a biannual scoping review of existing green skills education and training standards in identified countries	
Identify areas of improvement and adopt changes based on international standards in existing training regulations	
1.3.4. Integrate green qualifications into the Philippine Qualifications Framework (PQF)	_/2
Identify areas in PQF where green qualifications may be integrated	
Adopt a revised PQF with green qualifications	
1.3.5. Integrate green skills and competencies into the Philippine Skills Framework (PSF) Initiative	_/2
Identify areas in the PSF where green skills and competencies may be integrated	
Adopt a revised PSF with green skills and competencies	
TOTAL ACCOMPLISHED KEY MILESTONES FOR GOAL 1	__/29

Table 28. M&E Tool for Goal 2

Goal 2: Adequate and Accessible Green Jobs Labor Market	
Key Milestones	Number of Accomplished Key Milestones
2.1. NEAR-TERM AND MEDIUM-TERM LABOR DEMAND FOR GREEN JOBS SUSTAINED	_/11
2.1.1. Expand green jobs potential in enterprises and industries	_/3
Organize dialogues and roadshows with enterprises on mainstreaming green jobs in business plan and operations	
Publish a case study on best industry practices on mainstreaming green jobs	
Initiate greening and sustainability programs and projects within the enterprise	
2.1.2. Drive green jobs generation and planning in priority green sectors, including the blue economy	_/2

Establish working relationships among green jobs focal persons from NGAs related to the priority green sectors	
Integrate the green jobs component in the plans and roadmaps of NGAs related to the priority green sectors	
2.1.3. Mainstream green jobs in the public sector	_/5
Identify green items/positions in various levels of public employment	
Identify green jobs in various government-led infrastructure projects	
Include green jobs generation and promotion as a criterion in the Seal of Good Local Governance	
Include green jobs generation and promotion as a criterion in the guidelines for public-private partnership projects	
Include the green component as a criterion in the guidelines for the annual Search for Best PESO	
2.1.4. Foster an enabling policy environment to leverage private sector investments in green technologies and circular business models	_/1
Strengthen the implementation of anti-red tape law, rules, and regulations, and ease of doing business law	
2.2. INCENTIVES AVAILABLE TO ENTERPRISES FOR GREEN JOBS GENERATION STRENGTHENED	_/6
2.2.1. Implement the fiscal incentive mechanisms under existing laws	_/3
Operationalize the Green Jobs Certification and Assessment System	
Issue an administrative order providing the guidelines of the Green Jobs Certification and Assessment System and the mechanism for availing of fiscal incentives	
Mainstream fiscal incentives for the greening initiatives of enterprises under existing laws	
2.2.2. Introduce sustainable and green financing options for enterprises and industries	_/2
Publish a case study on available financing options for green initiatives	
Organize dialogues with government and private financial institutions ramp up financing options	
2.2.3. Institutionalize non-fiscal incentives for enterprises and industries	_/1
Organize the green jobs generation awards recognition for leading enterprises	
2.3. GREEN JOBS LABOR MARKET INFORMATION SYSTEMS AND PLATFORMS ESTABLISHED	_/5
2.3.1. Integrate green classification in PhiJobNet system	_/2
Identify green jobs that are or may be shown in PhiJobNet	
Create a category/filter for green jobs in PhiJobNet	
2.3.2. Develop a national database of green jobs and a comprehensive green occupation index	_/2
Implement a national program to establish a database of green jobs	
Develop a comprehensive green occupation index through existing national surveys and statistics	
2.3.3. Activate PESOs in LGUs as a hub for green jobs	_/1
Issue a joint circular among relevant agencies for the inclusion of green jobs in PESOs	
TOTAL ACCOMPLISHED KEY MILESTONES FOR GOAL 2	__/22

Table 29. M&E Tool for Goal 3

Goal 3: Shared Green Jobs and Just Transition Governance	
Key Milestones	Number of Accomplished Key Milestones
3.1. TRIPARTITE MECHANISM ON GREEN JOBS AND JUST TRANSITION ESTABLISHED	_/7
3.1.1. Integrate the green jobs agenda in existing tripartite bodies	_/1
Include an agenda item on green jobs and just transition in the National Tripartite Industrial Peace Council (NTIPC)	
3.1.2. Define processes for consultation among tripartite stakeholders on green jobs and just transition national policies	_/2
Issue guidelines on the tripartite consultation process on national policies on green jobs and just transition	
Institutionalize a mechanism for feedback and evaluation on the effectiveness of green jobs and just transition policy implementation	
3.1.3. Promote the creation of a workplace- or enterprise-level body on green jobs and just transition	_/1
Issue guidelines on the creation of a bipartite mechanism for consultation on green jobs and just transition at the enterprise level	
3.1.4. Mainstream green jobs and just transition in government policies	_/2
Conduct a review of existing government laws, rules, regulations, and issuances where green jobs and just transition aspects may be integrated	
Coordinate with respective government agencies with such rules, regulations, and issuances to discuss how green jobs and just transition may be integrated	
3.2. ADVOCACY EFFORTS AND PARTNERSHIPS ON GREEN JOBS AND JUST TRANSITION INTENSIFIED	_/6
3.2.1. Harness linkages among tripartite stakeholders for public awareness and advocacy on green jobs	_/1
Create a tripartite public awareness program on green jobs, which uses Labor Education Programs as a starting point	
3.2.2. Institutionalize education/training-to-industry partnerships on pathways to green jobs	_/2
Initiate discussions on partnerships for pathways among educational and training institutions and enterprises	
Create pilot programs for school-to-job partnerships	
3.2.3. Strengthen collaboration on data management and data-sharing on green jobs among tripartite stakeholders	_/3
Initiate discussions on data-sharing on green jobs between DOLE and other government agencies	
Initiate discussions on data-sharing on green jobs between DOLE and enterprises or workers' associations	
Sign a memorandum of agreement between DOLE and the tripartite stakeholders on data-sharing	
TOTAL ACCOMPLISHED KEY MILESTONES FOR GOAL 3	__/12

Table 30. M&E Tool for Goal 4

Goal 4: Capacitated Green Jobs and Just Transition Stakeholders	
Key Milestones	Number of Accomplished Key Milestones
4.1. LABOR INSPECTION OF AND COMPLIANCE PROGRAM ON GREEN JOBS ADOPTED	_/8
4.1.1. Facilitate capacity-building initiatives for labor inspectors concerning green jobs	_/3
Organize and implement a training program on green jobs for further understanding of labor inspectors	
Include a topic discussion on green jobs in the basic course for labor inspectors, basic OSH training, construction OSH training, technical safety inspection training, and other related training	
Incorporate a discussion on green jobs in the 52-week learning sessions of the BWC for labor inspectors across all DOLE Regional Offices	
4.1.2. Identify green sectors as priority establishments for labor inspection and other labor law compliance programs, such as technical advisory visits	_/2
Review the data on labor inspection and other compliance programs related to identified priority green sectors	
Initiate the pilot implementation of new guidelines and standards in identified enterprises in priority green sectors	
4.1.3. Incorporate elements of green jobs, enterprises, and industries in instruments used in labor inspection and other labor law compliance programs	_/3
Issue appropriate and relevant guidelines for the adoption of labor inspection and other labor law compliance programs in the identified green sectors	
Coordinate with other DOLE and Green Jobs Act partners on the available learning materials that can be included in the current labor inspection and compliance programs of the DOLE	
Integrate updated green jobs learning materials in technical and advisory visits, if available	
4.2. TECHNICAL ASSISTANCE ON WORKPLACE AND/OR SECTORAL INITIATIVES FOR GREEN JOBS STRENGTHENED	_/6
4.2.1. Implement green productivity improvement programs and productivity/performance-based incentive schemes (PBIS)	_/1
Issue guidelines on green productivity and how this can be adopted in an enterprise-level	
4.2.2. Promote the integration of the green jobs component in enterprise and industry plans	_/2
Organize dialogues and roadshows with enterprises on mainstreaming green jobs in business plan and operations	
Publish a briefer on best industry practices on mainstreaming green jobs	
4.2.3. Conduct labor education programs on working conditions and OSH protocols in green jobs	_/2
Harmonize all green jobs-focused labor education programs offered by different DOLE bureaus and attached agencies for workers and employers to advance understanding and uniform application of green jobs, including for self-employed workers	

Integrate collected green jobs-focused learning materials in all DOLE e-learning portals and learning sessions	
4.2.4. Enhance provision of support to MSMEs and cooperatives in incorporating green and sustainable practices	_/1
Engage in dialogue with MSMEs and cooperatives on increasing greening initiatives and integrating green jobs in their systems	
4.3. TECHNICAL ASSISTANCE ON WORKPLACE AND/OR SECTORAL EFFORTS FOR JUST TRANSITION INITIATED	_/5
4.3.1. Set policy direction on integrating just transition in public sector plans affecting workforce and enterprises	_/2
Form a technical working group to draft a just transition framework and policy in public policy	
Coordinate with government agencies to integrate the just transition component in their respective plans and roadmaps	
4.3.2. Provide guidance on integrating just transition components in enterprise and industry plans	_/2
Issue guidelines on the just transition framework and how it can be adopted at the enterprise-level	
Engage in dialogues with enterprises to discuss how just transition can be operationalized at the enterprise-level	
4.3.3. Conduct campaigns on integrating just transition components in workers' and trade unions' agenda	_/1
Engage in dialogues with workers' associations to discuss how just transition can be mainstreamed in their agenda	
TOTAL ACCOMPLISHED KEY MILESTONES FOR GOAL 4	__/19

Table 31. M&E Tool for Goal 5

Goal 5: Inclusive Social Protection and Just Transition of the Labor Force	
Key Milestones	Number of Accomplished Key Milestones
5.1. IMPLEMENTATION OF DECENT WORK STANDARDS AND SOCIAL PROTECTION ON GREEN JOBS INTENSIFIED	_/5
5.1.1. Provide guidance on applicable and decent work standards and social protection legislations to all employers and workers engaged in priority green sectors	_/2
Issue timely and relevant labor advisories reiterating the proper application of decent work standards and social protection in green jobs	
Organize roadshows with key enterprises on the proper application of social protection and decent work standards in green jobs	
5.1.2. Strengthen compliance with minimum social protections of enterprises and industries offering green jobs	_/2
Engage in dialogues with the management of enterprises offering green jobs on compliance with minimum social protections	
Support and provide incentives to MSEs through Technical and Advisory Visits (TAVs)	

5.1.3. Strengthen compliance with decent work standards of enterprises and industries offering green jobs	_/1
Engage in dialogues with the management of enterprises offering green jobs on compliance with decent work standards	
5.2. MAPPING OF WORKERS AND COMMUNITIES NEGATIVELY AFFECTED BY THE TRANSITION TO LOW-CARBON ECONOMY EXPANDED	_/5
5.2.1. Conduct industry-level profiling of at-risk workers in the near-term and medium-term	_/2
Initiate discussions with enterprises on the profiling of at-risk workers within the enterprise	
Conduct a comprehensive profiling of at-risk workers at enterprise-level	
5.2.2. Conduct national impact assessment on MSME employment as a result of the green transition	_/2
Engage in dialogues with MSMEs on the impacts of the green transition	
Create a study on the impacts of the green transition on MSME employment	
5.3. COMPREHENSIVE SOCIAL PROTECTION BASED ON JUST TRANSITION ADOPTED	_/6
5.3.1. Institutionalize unemployment benefits and insurance schemes for displaced and at-risk workers	_/4
Conduct a review of effectivity of existing unemployment benefits and insurance schemes for displaced and at-risk workers	
Form a technical working group to develop new unemployment benefits and insurance schemes for displaced and at-risk workers	
Introduce the Coal Retirement Program under the Climate Investment Fund Act from multilateral development banks	
Introduce available financing and insurance schemes that may be accessed by displaced and at-risk workers	
5.3.2. Extend priority in and grants for educational and training for reskilling and upskilling of displaced and at-risk workers	_/1
Issue guidelines for providing priority in enrolment and grants for educational and training opportunities to displaced and at-risk workers by providing technological and skills transfer to workers	
5.3.3. Adapt livelihood and emergency employment programs to include displaced and at-risk workers	_/1
Integrate displaced and at-risk workers as qualified beneficiaries of existing livelihood and emergency employment programs (DOLE-AMP; TUPAD), including guidance to program implementation in targeting these workers	
TOTAL ACCOMPLISHED KEY MILESTONES FOR GOAL 5	__/15

IX. Ways Forward

The updating of the NGJ HRD Plan is only the beginning of a whole-of-society effort to further mainstream green jobs and just transition in Philippine society in the near term and medium-term. Driven by the PDP 2023-2028 and PLEP 2023-2028, there is an expectation that focus and resources will be extended to accomplish the goals and outcomes and implement the strategies presented in this Plan.

Continuous Local and International Engagements

The process of updating the NGJ HRD Plan has shown that there is much work to be done to encapsulate all the various aspects of human resource development with respect to green jobs. At the core of this work ahead are further collaboration, dialogue, and consultation. As mentioned in the previous Section, in the crafting of the Sectoral Plans, collaboration with the relevant NGAs is crucial in order to effectively reflect the human resource development needs of the particular sectors. There is also a big space for collaboration among educational and training institutions, both public and private, in creating courses that truly match the labor demand. Similarly, collaboration between the educational and training institutions and the enterprises must also be harnessed to create skills-jobs pathways.

Social dialogue is also a key component of updating the NGJ HRD Plan, consistent with principles of just transition. Systems transitions in various industries driven by calls for sustainability present an imminent threat to the labor force. With this, the discussions on a national tripartite body that specifically deals with the issues of green jobs and just transition must be prioritized. In the meantime, the government should be at the forefront of maintaining social dialogue whenever there are issues that concern the displacement of workers due to climate action or greening initiatives.

In the international level, the government shall continue to engage with the international climate process, particularly on the Just Transition Work Programme of the UNFCCC. While the Work Programme may guide subsequent actions of the Philippine government with respect to institutionalizing just transition mechanisms domestically, there is also a potential for the Philippine government to take the lead in these discussions—particularly highlighting the country’s NGJ HRD Plan as a mechanism for just transition.

Improving the Country’s Green Jobs Database

The goals and outcomes in the NGJ HRD Plan are ambitious, which the government, through the involvement of various stakeholders such as workers, business, academe, and civil society, among others, commits to work for in the upcoming years. The Plan sets a tall order for the government to lead and accomplish to ensure that all aspects of green jobs human resource development are covered.

However, there remains further work on improving the data access on green jobs. As articulated in some of the strategies in this Plan, there is a wide gap not only in official data on green jobs, green skills, and green occupations, but most importantly, data on displaced workers and workers at-risk as a result of the green transition in various enterprises and industries. Without data as fundamental as these, the government's capacity to ensure a just transition is further limited. Thus, with further collaboration with other NGAs and the enterprises themselves, data can be gathered and used for better policy interventions.

Ultimately, there is also an emerging need to address the issues of workforce retention within the country and of future-proofing work. On workforce retention, a whole-of-nation approach must be instituted to ensure that there are sufficient green jobs in the country upon which the Filipino workforce can depend. The attrition of the Filipino workforce to jobs in the foreign market presents a real threat to the sustainability of industries and of economic development. Further, on future-proofing work, the present human resource development strategies should not only address the skills gaps in the present, but also ensure that these skills do not become obsolete when new technologies are introduced.

Development of Sectoral Plans

The NGJ HRD Plan has identified six (6) priority green sectors that show great potential in green jobs generation and promotion, namely, Renewable Energy, Construction, Transport, Sustainable Agriculture, Manufacturing, and Ecotourism. Recognizing that the NGJ HRD Plan attempts to paint the general picture of what a Philippine society that has fully integrated green jobs and just transition in its human capital development, the Sectoral Plans on each of the priority green sectors are essential to capitalize on the gains of these sectors as a vehicle for expanding green jobs in the country.

These Sectoral Plans follow the frameworks used in the NGJ HRD Plan to have a coherent HRD Plan irrespective of sectors. What these Sectoral Plans contribute to human capital development is a more nuanced understanding of the sectors to pinpoint the labor supply and labor demand needs unique to each sector. Further, it is recommended that these Sectoral Plans be crafted together with the other NGAs that work closely with the particular industry or sector.

X. References

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XI. Annexes

Annex 1: Inventory of Philippine Green Initiatives

Table 32. Greening Initiatives of National Government Agencies

Name of Initiative	Brief Description	Lead Agency
Integration of green components in the Philippine Development Plan 2023-2028	The PDP 2023-2028, the government's blueprint for national development in the medium-term, includes sector-specific plans that incorporate initiatives to support the nation's shift to a greener economy. ● Intensification of waste recycling and recovery programs (Chapter 2) ● Increase of green spaces at the city and barangay levels (Chapter 2) ● Integration of green features in housing and community design in the Green Building Code (Chapter 2) ● Creation of a green job database (Chapter 4) ● Implementation of the Green Jobs Human Resource Development Plan (Chapters 4, 15) ● Integration of green competencies into TVET and education programs (Chapter 4) ● Integration of environmental sustainability and green qualifications in the Philippine Qualifications Framework (Chapter 4) ● Placement of adequate levels of social protection to address the just transition of unskilled workers (Chapter 4) ● Increase of R&D solutions for green architecture, additive manufacturing, and safer local building materials (Ch. 6) and on major national issues like public health, energy efficiency, climate change, and green growth (Chapter 8) ● Boost of aviation, maritime, and shipping companies' capacity to invest in green, modern, and resilient hubs (Chapter 7) ● Introduction of a carbon tax for extractive industries and pollution (Chapter 11) ● Establishment of safe and well-connected active mobility networks, including greenways (Chapter 12) ● Implementation of Green Energy Option Program (Chapter 12) ● Adoption of Waste to Energy technology (Chapter 12) ● Promote the green and blue economy (Chapter 15) ● Develop and implement the Green Jobs Assessment and Certification System and Guidelines (Chapter 15)	NEDA

	● Foster an enabling policy environment to leverage private sector investments in green technologies and circular business models (Chapter 15) ● Provide support and training opportunities for workers and enterprises affected by the transition to a sustainable and green economy (Chapter 15) ● Strengthening of green public procurement programs (Chapter 15)	
Greening the Technical and Vocational Education and Training (TVET) system	The Greening the TVET system aims to mainstream sustainable development in the entire TVET system of the country.	TESDA
Green TVET Journal	The Green TVET Journal shows the best practices of the Technical Vocational Institutions (TVIs) in greening the TVET System.	TESDA
Cold Chain Innovation Hub Project (CCI-Hub)	CCI-Hub is the official platform of the “Global Partnership for Improving the Food Cold Chain in the Philippines” project, the aim of which is to identify, develop and stimulate the development of low-carbon, energy efficient refrigeration innovation technologies and business practices in the Philippines for use throughout the food cold chain whilst increasing food safety and security.	TESDA
National Solid Waste Management (SWM) Program for a World Without Waste	TESDA and Coca-Cola Philippines partnered to implement the Barangay Solid Waste Management Training Program (BSWMTP) for a World Without Waste under the banner program of Trash-Free Pilipinas, which envisions to create litter-free communities.	TESDA
Workers Organization	To strengthen trade unions and other workers' organizations, the Workers Organization Development Program (WODP) acts as a supportive instrument. More productivity, prosperity, and welfare for the	DOLE-BLR

Development Program (Scholarship Grant)	employer, workers' organization, its members, and their dependents are the goals of this chance for systemic learning and growth.	
Development and Review of Competency Standards/ Training Regulations (CS/TR), integrated with 21st Century Skills, and integrated in basic competencies.	TESDA has developed eighty-nine (89) Training Regulations (TRs) with green competency components. TESDA continues to integrate green skills into the basic competency to ensure its application in the industry.	TESDA
Capability Building Program	A strong solution to the skills gap in the job market is the Capability Building Program. TVET institutions are empowered, given the resources and expertise necessary to address the demands of the community and local industry.	TESDA
Career Information System (CIS)	A database of career information pamphlets that offer useful details on the nature of work, prerequisites for a basic education, abilities and competences, qualities, employment prospects, and the price of education and training for in-demand, emerging, and environmentally friendly careers.	DOLE-BLE
Tripartism and Social Dialogue	Social dialogue, sound industrial relations, and effective governance between government, employers, and workers' organization, promote social justice, inclusive economic growth, improved wages, and sustainable enterprises, fostering decent work for all.	DOLE-BLR
Labor Inspection Program	The basis of the labor inspection program is found in Article 128 of the Labor Code of the Philippines, as renumbered, which emphasizes the authority of the Secretary of Labor and Employment and his or her duly authorized representative to exercise visitorial and enforcement powers. The program is the main	DOLE-BWC and Regional Offices

	mechanism to ensure and maintain higher levels of compliance concerning general labor standards, occupational safety and health standards, and other social legislations of covered establishments.	
DOLE Integrated Livelihood Program (DILP)	The initiative aims to provide funding to people, organizations, and local government units (LGUs) so they can begin, develop, and finish livelihood projects.	DOLE-BWSC
Tulong Panghanapbuhay sa Ating Disadvantaged Workers (TUPAD)	Package of assistance that gives displaced people and other disadvantaged workers temporary work.	DOLE-BWSC
Public Utility Vehicle Modernization Program (PUVMP)	PUVMP was established to address both the aggravating transport-related problems and the future transportation demand of the country. It aims to provide a safer, more efficient, reliable, convenient, affordable, climate-friendly, and environmentally sustainable transportation system in the country.	DOTR
Green Energy Auction Program (GEAP)	GEAP is a competitive process of procuring a renewable energy supply that aims to facilitate investments in renewable energy capacities.	DOE
Green Energy Option Program (GEOP)	GEOP is a voluntary policy mechanism under the Renewable Energy Act of 2008 that allows electricity end-users to choose Renewable Energy as their source of energy.	DOE
Green Public Procurement (GPP)	GPP is a process whereby public authorities seek to procure goods, services, and works with a reduced environmental impact throughout their life cycle when compared to goods, services, and works with the same primary function that would otherwise be procured.	GPPB
National Organic Agriculture Program (NOAP)	NOAP serves as the guide for the implementation of Organic Agriculture activities and the development of similar projects and endeavors in order to attain a unified and comprehensive action towards a vibrant and sustainable organic agriculture industry in the country.	DA

ANAHAW-Philippine Sustainable Tourism Certification	ANAHAW is a certification system for tourism establishments that focuses on enabling innovation initiatives that help reduce operational costs and carbon emissions through smart methods, processes, and technologies, and on mainstreaming sustainable tourism.	DOT
Government Energy Management Program (GEMP)	GEMP aims to reduce the use and cost of energy in government agencies by advancing energy efficiency technologies and practices in all government facilities.	DOE
Sustainable Finance Framework	The BSP plans to release a sustainable finance framework, requiring banks to incorporate sustainability, social and environmental governance, and corporate governance concepts into their business plans and risk management.	BSP

Table 33. Greening Initiatives of Local Government Units

Name of Initiative (Action/Program/Project)	Brief Description	Lead LGU
Search for the Cleanest, Safest, and Greenest LGU	The Search for Cleanest, Safest, and Greenest Local Government Unit (LGU) seeks to create a platform for community development participation; organize all facets of society to assist in transforming communities into clean, safe, and green spaces; and institutionalize a national system of recognition for the cleanest local government units. ¹³	Province of La Union
From Tree to Classroom	The effort attempts to address two of the community's most pressing problems: waste management and the requirement for additional chairs in public schools. The local administration	Isabela City

¹³ La Union Provincial Government. Retrieved from: <https://launion.gov.ph/lgus-leading-in-environmental-management-initiatives-recognized/#:~:text=The%20Search%20for%20the%20Cleanest%2C%20Safest%2C%20and%20Greenest%20LGU%20aims,of%20providing%20recognition%20to%20the.>

	saw a chance to repurpose fallen trees into something beneficial for public schools, rather than letting them burn or rot on the streets.	
Lunhaw Awards	EO 49 stipulates that Dabawenyos and organizations with outstanding and creative efforts in environmental management and sustainability must be honored and recognized with the Lunhaw Awards. All organizations, academic and commercial establishments, small groups or clubs, neighborhoods, homes, and individuals who have been practicing and participating in green efforts for at least two years are eligible to apply.	Davao City
Integrated Coastal Management (ICM) Program	Limit the pollution caused by land-based activities that endanger the coastal and marine environment of Bataan; employ integrated strategies and tactics to reduce the negative effects on the environment, economy, and society; and preserve the variety of values present in Bataan.	Province of Bataan
Marine Protected Area Management	In order to support marine biodiversity, fisheries productivity, and inclusive economic growth for Camiguin and Region X as a whole, harmonized policies and strategies for the effective management of locally-managed MPAs are needed. Additionally, critical marine habitats should be conserved and protected.	Province of Camiguin

Table 34. Greening Initiatives of Businesses

Name of Initiative (Action/Program/Project)	Brief Description	Lead Institution
GForest	The GCash application makes it simple to send and receive money, make purchases of goods and services, and pay bills. Over 60 million registered users have benefited from GCash's ability to simplify financial transactions to this day. It has further helped the way Filipinos transact, with over 139,000 partner merchants nationwide.	Globe Fintech Innovations, Inc.

	One of the key services of GCash, focusing on greening practices and sustainability, is the GForest, wherein users can plant a tree by using the GForest points collected from transactions and by walking. To date, 2,244,284 trees have already been planted in partner reforestation sites of GCash and saved 30.5 Billion grams of carbon emissions.	
Project Wash	The three primary areas of Jollibee Foods Corporation's planet roadmap are waste reduction, energy and water efficiency, and packaging and recycling. Packaging and recycling strive to decrease single-use plastic packaging to increase packaging sustainability for all brands. Reducing waste can lessen food waste in retailers as well as food loss and waste in landfills during the manufacturing process. Finally, cutting down on energy use during the production process is the aim of energy and water efficiency.	Jollibee Foods Corp.
Water For All	"Water for All," a group-wide initiative of San Miguel Corporation, was introduced in 2017. Its goal is to reduce non-product, utility water use by 50% by 2025. To set water consumption targets for all of our facilities and offices around the country and to implement and oversee water-saving initiatives, the firm formed the SMC Water Council, which is made up of technical experts from each of our operational businesses.	San Miguel Corp. (SMC)
River Cleanup	San Miguel Corporation finished the Tullahan River remediation project in August 2022. The initiative, in collaboration with the DENR, was the biggest river cleanup operation that a private enterprise has ever undertaken. The Pasig River cleanup campaign initiative would only surpass this achievement in terms of magnitude and scope a year later. Additionally, SMC has started cleaning up the Meycauayan River in Bulacan to lessen recurring flooding.	SMC
Waste-to-Resource	Coal combustion residuals (CCR) are recycled by SMC primarily for use as aggregate in cement production. Coal ash is utilized by the industry as a supplement and a stand-in for clinker, an ingredient that fortifies cement. Coal ash cannot replace clinker in the making of cement, but adding it helps cut down on greenhouse gas emissions. Recycled coal ash from SMGP's Limay Power Plant and Malita Power Plant has reached up to 80–90% and 70–80%, respectively.	SMC

Zero-Waste	To examine the trash that they produce, Shell Philippines is conducting internal reviews with outside experts. They have also partnered with the World Business Council for Sustainable Development (WBCSD) to receive tools and metrics that will enable them to track their development and performance in terms of circularity moving ahead. By the end of 2022, Shell had finished 24 waste assessments at its key production sites to determine the main waste streams, exchange knowledge, and create strategies to decrease the amount of trash that was disposed of. Shell wants to do this by improving recovery, recycling, and reuse while decreasing waste output.	Shell Corporation
Energy Efficiency	By 2050, Shell wants to have zero net emissions from both energy-related emissions and emissions from all of its activities. Shell manufacturing sites are using more and more lower-carbon energy sources to help achieve this. In creating these, Shell's Renewables and Energy Solutions division (previously New Energies) is a major player.	Shell Corporation
SM Social Good	SM is actively addressing the climate adaptability of enterprises, towns, and communities in addition to intensifying the sustainability of its ecosystem of firms.	SM Group of Companies
SM Green Movement	The three pillars of the SM Green Movement are as follows: (i) Green Planet, which emphasizes workable, sustainable solutions for managing energy, waste, and water to protect the environment, conserve resources, and continue to increase resilience to the effects of climate change; (ii) Green living, which offers customers green options through the SM Green Finds, which promotes eco-friendly products made from local, organic ingredients and supports local communities. Additionally, through (iii) Green Culture, which instills sustainability in people's culture by empowering them with sustainability knowledge, encouraging green practices at work, and recognizing their "greenovations" through the SM Green Movement Day and Awards, SM will support our MSME partners in their green practices.	SM Group of Companies

Table 35. Greening Initiatives of Civil Society

Name of Initiative (Action/Program/Project)	Brief Description	Lead Organization
Building for Ecologically Responsive Design Excellence (BERDE) Program	The BERDE Program was established to develop the Philippines' own national voluntary green building rating system to facilitate green building projects in the country, inspire confidence in the industry, and build trust in the industry. It was later recognized by the Philippine government.	Philippine Green Building Council
SolarNRG Solar Projects Sustainable Synergy: How Green Roofs and Solar Panels Complement Each Other (Blog)	Solar systems provide businesses and households the opportunity to produce their clean energy, lowering dependence on non-renewable energy sources. Green roofs are sustainable systems that house plants or vegetation, transforming conventional rooftops into thriving ecosystems. They contribute positively to the environment through green elements, fostering biodiversity and promoting energy efficiency in Philippine houses and buildings.	SolarNRG Philippines
Climate Justice for all Ban Foreign Waste	Let's stand with Filipino Communities calling for an end to fossil fuels and payment for climate damages. The Philippine government must ban foreign waste entry and ratify the Basel Ban Amendment to stop illegal waste dumping.	Greenpeace Philippines

Reconnect with Food	Reconnecting with our food choices, starting at home, involves switching to organic, plant-based foods from local eco-farms, reducing meat and dairy consumption, and growing food ourselves.	
Philippines programme	The program supports Indigenous Peoples' Liberation Councils (IPLCs) to strengthen sustainable forest management in four major forest landscapes, including Sierra Madre, Southern Palawan, Northern Mindanao, and South-Central Mindanao. It aims to influence the government to address destructive mining, enact green bills, and defend environmental human rights, with strategies including community journalism, gender equality, and climate change advocacy.	Green Livelihoods Alliance

Annex 2: Participants in the Multi-Stakeholder Consultations

National Government Agencies

Board of Investments
Climate Change Commission
Construction Industry Authority of the Philippines
Department of Education
Department of Energy
Department of Environment and Natural Resources Office
Department of Tourism
Department of Transportation
Department of Trade and Industry
National Youth Commission
Philippine Economic Zone Authority
Philippine Trade Training Center
Philippine Statistics Authority
Public Employment Service Offices
Tourism Infrastructure and Enterprise Zone Authority

DOLE Offices

Bureau of Local Employment
Bureau of Workers with Special Concern
Bureau of Working Conditions
Institute for Labor Studies
National Wages Productivity Commission
Technical Education and Skills Development Authority
Professional Regulations Commission

Trade Unions/Workers Groups

Federation of Free Workers
International Trade Union Confederation
Public Services Labor Independent Confederation
South Metro Transport Cooperation
Trade Union Congress of the Philippines

Academe

Batangas State University
Don Bosco One TVET Philippines Inc.
United TVET
Mapua University
Lyceum of the Philippines University
University of the Philippines – National Center for Transportation Studies

Private Sector/Industry Associations

ACEN Renewables
Automobile Association of the Philippines

Employers Confederation of the Philippines
Council of Hotel and Restaurant Educators of the Philippines
Energy Development Corporation
Federation of Philippines Industries
Hotel and Restaurant Association of the Philippines
Peatraco Food Incorporation
Philippine Chamber of Commerce and Industry
PhilExport
Semiconductors and Electronics Industries in the Philippines Inc.

Civil Society Organizations

Oxfam Pilipinas
Center for Agrarian Reform and Rural Development
Society for Sustainable Tourism

Development Partners

Asian Development Bank
International Labour Organization

Annex 3: Documentation of Consultation Outputs

BREAKOUT SESSION OUTPUTS		
RENEWABLE ENERGY		
		
OBSERVATIONS	CHALLENGES	OPPORTUNITIES AND PROSPECTS

1. There is an effort to include or integrate SDGs in the curriculum of certain courses and for students to know the necessary green skills. 2. There is an awareness of green jobs but not necessarily decent jobs, attributed to a lack of social dialogue and protection. Green Jobs is equated to being environmentally friendly, but not necessarily tied to justice. 3. With the launch of the NAP and the NDC, critical impact drivers, climate risks, and opportunities based on the challenges have been observed by the CCC. They are keen on job creation. 4. A private company shared that they have expanded their business to solar energy systems, for which they hired experts, paving the way for mastery of how the system works. They are currently exploring possibilities in wind and turbines. 5. Private sector associations shared that they have recent efforts to report and collate industry requirements regarding the offshore wind industry. They suggested that Norwegian companies in the PH engaged in the same industry may help identify potential people and help jumpstart the offshore wind industry. 6. CSOs expressed that the fundamentals of “just transition” must be revisited, as it is becoming a buzzword, ignoring labor rights and indigenous	1. There is a technical skills gap, regulatory uncertainty/changes in government policies, and issues with retention of talent according to DOE. 2. Regulatory uncertainty becomes a challenge for human resource planning in the energy industry, which may in turn affect investment decisions of workforce development initiatives. 3. More sectors to be inspected will demand more labor inspectors. According to BWC, however, if there is an ample number of inspectors, it will contribute to just transition by encouraging compliance with the law. 4. Defining "green jobs" in the public sector. There's a need to explore whether jobs in the public sector, such as those in government agencies or public services, can be considered "green jobs" and contribute to the transition towards renewable energy and environmental sustainability. 5. Automation limits job creation according to EDC, may limit job creation opportunities in the long term, posing challenges for sustainable employment and economic development. 6. It is a challenge to bridge the gap of skills and talents, which cannot all be addressed despite compliance with the minimum requirements of the commission in developing the curriculum, according to a representative from the academe.	1. Create stackable micro-credentials to complement what the industry needs and address the gap, according to a academe representative. 2. Collaboration with local and international partners for technological transfers and job matching. Technology transfers from foreign countries may be beneficial, especially the transferring of pioneering projects in emerging technology which may contribute to upskilling and reskilling of the Filipino workforce. 3. Right-skilling initiatives. Implementing initiatives to match skills with job opportunities ensures that the workforce is equipped with the necessary competencies and qualifications to capitalize on job prospects. 4. Clean energy technology integration in TVET institutions. There are big opportunities in integration, according to TESDA, since there are sectors that are ramping up their green programs which causes TESDA to develop green training regulations. For example, renewable energy may pose great opportunities. Social, environmental, and economic pillars of green jobs are always checked by TESDA. 5. TESDA highlights the significance of collaboration and partnerships between government agencies, educational institutions, industry stakeholders, and civil society
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people's rights, for example, despite being mainstreamed as a concept and a process. 7. The Climate Investment Fund Act, implemented by DOF, particularly the Coal Retirement Program, has been introduced in multilateral development banks. 8. DOE stated that the issuance of statutory and regulatory laws, such as the EEC Law and the EVIDA law, have increased contributions to Green Jobs. 9. There is an expansion of energy companies, such as those involved in green buildings and electric vehicles. They now have labor requirements because of the laws. Because of the EO on energy resiliency and government energy management programs, these are already incorporated into energy systems and plans.	7. TESDA stated that it is a challenge to identify green jobs since the definition is generic for all sectors. When they develop standards, they are immediately unaware of its green skills requirements. 8. In general, there is a lack of just transition, social protection, and reskilling and upskilling. A labor sector representative reminded that job creation is not "one-to-one", wherein the jobs created will cater to those affected. There must be clarity as to how efforts coming from different sectors may be aligned. There must be policy coherence. 9. CSOs commented that the definition of green jobs is not robust. The concept of just transition must uphold the rights of other sectors and have a robust analysis of the gender framework. The inclusion of women and marginalized groups is the backbone towards winning just transition.	organizations in advancing renewable energy initiatives. 6. Just transition work program wins in COP28. At the national level, there must be the integration and incorporation of complete just transition policies. Just transition's popularization may both be a risk and an opportunity. 7. Creation of a Just Transition Council. A CSO and labor representative stated that Indonesia has created a JTC, which may be replicated here despite the difference in ownership laws. This multi-stakeholder group composed of the private sector, chamber of commerce, and NGAs for energy transition may be a similar mechanism for checks and balances. The certification process would help. 8. Promotion of Activities and Programs. Information dissemination and inclusion of MSMEs in regions may be beneficial according to NWPC. 9. DOLE must be given a seat in the CCC. Granting DOLE a seat in the CCC enables coordinated efforts to address labor issues and promote employment opportunities in the renewable energy sector within the broader framework of climate change mitigation and adaptation strategies. 10. Prioritize Renewable Energy as opposed to technologies such as fossil fuels to accelerate the transition towards a sustainable energy future.
RECOMMENDATIONS/STRATEGIES		

RENEWABLE ENERGY	
EDUCATION AND TRAINING	1. Integrate green competencies Strengthen the delivery of green skills in basic and secondary programs. The education curricula must be edited and universal access to education must be ensured. 2. Implementation of green TVET framework. This implementation is vital for fostering sustainable development and equipping learners with the necessary skills to address environmental challenges. 3. Expand scholarships and grants. Investing in education and training helps develop the expertise needed to facilitate the transition to clean energy. This is mostly offered by TESDA only. 4. Increase graduates of green skills by offering the TVET program. Since the number of graduates and certified is still quite low relative to the estimated employment demand in the green subsectors, particularly for construction, services, agriculture, transport and waste management. 5. Institutionalize green skills program. There must be accreditation of green skills and adoption of quality assurance as a strategy. TVET institutions must be compliant with TESDA. 6. Professionalize the green sector. This combats climate change effectively. However, this may be difficult to the utility sector, waste pickers, segregation. 7. Develop skills of graduates. Employment facilitation must be coupled with job creation. This equips individuals for careers in renewable energy.
EMPLOYMENT FACILITATION AND CREATION	1. Strengthen cooperatives. TESDA currently has efforts to replicate this in LGUs. This will promote inclusive growth and community involvement. 2. Job creation for TVET graduates. TVET manifested that there are a lot of TVET graduates for electrical and electronics courses, but there are no jobs readily available. 3. Labor Inspection Holiday. Suggested by BWC as an incentive if the companies are compliant with general labor standards and OSH.
FINANCING AND INCENTIVES	1. Public Financing. PESO may be a “green hub” for the creation of Green Jobs and implementing the mentioned strategies. There must be manpower and Plantilla positions in government. 2. Productivity-based incentives. It drives efficiency and performance in the sector and encourages innovation and technological advancements.

OTHERS	1. Gender dimension. Gender must be considered from education to other sectors. More opportunities must be given to women such as training and scholarship grants. Women must be targeted for interventions.	
BREAKOUT SESSION OUTPUTS		
CONSTRUCTION		
OBSERVATIONS	CHALLENGES	OPPORTUNITIES AND PROSPECTS
1. There are decent work and gender equality deficits. Gender discrimination, gender-based violence, and the gender pay gap are prevalent according to the labor sector. 2. There are no sectoral initiatives and policies to promote green practices within the construction industry, highlighting the need for targeted interventions to encourage environmentally friendly construction methods and materials. 3. TESDA developed training for BIM modelers and CIAP developed training for BIM managers. Building Information Modeling (BIM) helps architects and engineers in designing energy-efficient buildings. 4. There must be guidelines for training and education for workers. There is a need to choose sustainable materials, reduce energy consumption, manage water and energy use, and reduce noise pollution.	1. Uninterested individuals resulting in no takers, particularly in the Furniture Industry and Bamboo Engineering NC II diploma program. 2. There is a need to upskill and reskill, especially for older workers and newcomers in the construction sector, to equip them with the necessary skills and knowledge to adapt to technological advancements and evolving industry practices. 3. The need to ensure equality among female and LGBTQ workers is essential to create a more inclusive and diverse industry that values and respects the contributions of all workers. 4. Promoting green buildings and decent jobs: The adoption of green building practices not only contributes to environmental sustainability but also creates opportunities for the creation of decent and sustainable jobs within the construction sector.	1. Don Bosco offers a program in Furniture Technology and Bamboo Engineering in NC to support transition and preparation for Green Jobs. 2. Offering scholarship grants can support individuals interested in pursuing careers in the construction industry, by providing financial assistance for education and training programs. 3. There must be the greening of industry. Training including labor rights and promotion of ILO C190 in construction training programs can enhance the industry's sustainability and social responsibility. 4. Job generation. Increasing construction jobs to maintain rapid growth, captivate investments and expand economic opportunities for all Filipinos. 5. Ensure gender equality. Implementing initiatives to promote gender equality and inclusivity in the construction workforce can create a more equitable work environment.

		6. Develop the Philippines Skills Framework for construction and integrate training related to Green Jobs.
RECOMMENDATIONS/STRATEGIES		
EMPLOYMENT FACILITATION AND CREATION	1. Promote and conduct information campaigns on Green Jobs. Conduct an information drive on the Green Jobs generation. 2. Include discussion about Green Jobs in the Current Development and Support Program (CDSP). 3. Supporting the LGU guidelines on Green Jobs facilitates the alignment of local policies and initiatives with national goals for sustainable development and employment creation. 4. Integrating green classification in the PhiJobNet system enhances job matching and recruitment processes, connecting job seekers with opportunities in the green construction sector. 5. Conducting capability development for Public Employment Service Office (PESO) managers about Green Jobs equips them with the knowledge and tools to effectively promote and facilitate green employment opportunities within their communities.	
POLICY AND ADVOCACY	1. Mainstreaming Green Jobs and just transitioning ensures that sustainability principles are integrated into industry practices and development plans. 2. Promoting green skills among membership-based organizations and implementing green productivity initiatives encourages the adoption of environmentally friendly practices and technologies within the construction industry. 3. Embedding the Philippine Skills Framework for construction facilitates skills development and certification processes, enhancing workforce competency and professionalism. 4. Identifying corresponding training programs for the skills framework ensures that training initiatives are aligned with industry needs and standards. 5. Developing the framework through a sub-sectoral approach allows for targeted interventions and tailored solutions to address specific challenges and opportunities within the construction industry. 6. Institutionalizing the framework by 2028 ensures its long-term sustainability and impact on workforce development and industry competitiveness.	

	7. Establishing a national tripartite construction roadmap through the General Industry Agreement (GIA) 2025-2026 provides a strategic framework for industry stakeholders to collaborate on sectoral development priorities and initiatives.
OTHERS	1. Developing a gendered framework for promoting Green Jobs ensures that gender equality considerations are integrated into policies, programs, and initiatives aimed at fostering sustainability and inclusivity within the sector.

BREAKOUT SESSION OUTPUTS

TRANSPORT



OBSERVATIONS	CHALLENGES	OPPORTUNITIES AND PROSPECTS
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1. Encourage online sellers to shift to eco-friendly packaging; adopt green practices. The rise of e-bikes and e-tricycles can lessen carbon emissions. Most LGUs promote low carbon transport; promote the transitioning from Internal Combustion Engine (ICE) Vehicle to Electric Vehicle (EV). 2. PUV modernization does not have enough worker consultation. There are no just transitions for jeepney drivers, and they remain vulnerable. 3. There was a public consultation during the PUVMP, inputs from the legislative were considered, transition into a modernization program in a just and humane way, and green routes have criteria for identification.	1. Logistics became popular. However, there is an oversupply of bubble wraps in logistics; look for alternatives. 2. Lack of technical experts. The absence of established ethics standards or certifications in the transport sector creates challenges in ensuring quality, safety, and professionalism among workers and service providers. 3. Integrity issues; e-bikes and e-trikes have expensive electricity, and eco-friendly stuff is more expensive and limited. 4. No support or subsidy from the government regarding the charging facilities. 5. Limited awareness and low union density. Many workers remain unaware of key issues affecting the transport industry, contributing to a low union density of only 7% in the Philippines, which hinders collective action and advocacy efforts to address worker rights and welfare. 6. Light vehicle operations face challenges due to ambiguous guidelines and restrictions, leading to uncertainties and inefficiencies in the transportation system, particularly in the categorization and regulation of light vehicles.	1. Skills training is needed. This can enhance the capabilities of workers in the transport sector, improving service quality, safety standards, and professionalism. 2. Adoption of hybrid and more environmentally friendly vehicles. This is an opportunity to reduce carbon emissions and environmental impact in the transport sector, contributing to sustainable development and mitigating climate change. 3. Upskilling/reskilling for all workers enables them to adapt to changing market demands, enhance customer experiences, and promote environmentally sustainable practices in the tourism industry. 4. Flexible Working Arrangement (FWA). Implementing FWA policies can enhance productivity and work-life balance for transport workers, enabling them to better manage their schedules and responsibilities while reducing traffic congestion and environmental pollution. 5. The Philippine Skills Framework launched in 2021 is an inter-agency effort to build the skills and competencies of our human capital and better prepare our country's workforce for the future economy. 6. Funding from international organizations can be an opportunity to invest in sustainable transport infrastructure, technology upgrades, and capacity-
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	7. There will be jobs that will not be in demand in the future, and people may lose their jobs. There are strict enforcement concerns.	building initiatives, accelerating progress towards inclusive and environmentally sustainable transport systems. 7. DOTR and TESDA may create a battery for electric vehicles, and implement green routes, as there is an oversupply of public transportation (Bus, UV Express, Traditional Jeepney).
RECOMMENDATIONS/STRATEGIES		
EDUCATION AND TRAINING	1. Develop standards, conduct training, provide scholarships, upskill/reskill. 2. The Philippine Skills Framework needs to integrate curriculum on green jobs skills and development, according to PSA.	
EMPLOYMENT FACILITATION AND CREATION	1. Providing scholarships. Not everyone can afford college or acquire skills, upskilling, and training, according to PSA. 2. Skills training is needed to be able to come up with the facilitation of jobs and create green skills, according to PESO.	
POLICY AND ADVOCACY	1. Since the concept of green jobs is too broad, mainstreaming or awareness is encouraged. 2. The National Wages and Productivity Commission (NWPC) recommends heightening advocacies for green jobs, introducing green jobs, making green jobs inclusive for everybody, mainstream workers.	
SOCIAL PROTECTION	1. Expand social protection for transport workers, strengthen the application, and monitor its outcome, according to NWPC.	
FINANCING AND INCENTIVES	1. The Philippine Statistics Authority (PSA) suggests proposed tax holidays for Micro, Small, and Medium Enterprises (MSMEs) and benefits for displaced workers to stimulate growth and support job creation in the transport sector.	

	2. SMTC suggests prioritizing electric vehicle (EV) users through incentives to promote the adoption of cleaner and more sustainable transportation options, contributing to environmental conservation and reducing carbon emissions.
OTHERS	1. Accessibility and availability of data. If we can get crucial information like data, it will be an advantage. If the data is absent, there will be a gap in the plan. 2. Extensive research needed. According to NWPC, everyone's input is important since they are stakeholders. It is important for policy making.

BREAKOUT SESSION OUTPUTS

SUSTAINABLE AGRICULTURE



OBSERVATIONS	CHALLENGES	OPPORTUNITIES AND PROSPECTS
Utilizations of agroforestry. A CSO representative shared that they have an organic farming partner area in Iloilo that develops organic rice farms. Most farmers don't use conventional fertilizers anymore. However, it takes years for the farmers to start planting again when shifting from conventional to organic farming. Organic farming started in pre-pandemic, then agroforestry last year. Development of machinery for agricultural practices. The academe representative developed machinery for agricultural practices. In a way, this may lead to commercialization. Organic farms are growing, driven partly by the availability of skilled graduates from agricultural courses offered by academic institutions, indicating a positive trend towards sustainable farming practices. Usage of solarization technique is increasing, demonstrating a shift towards environmentally-friendly farming methods aimed at improving soil health and pest management while reducing reliance on chemical inputs. The Philippine Youth Development Plan upholds inclusivity in terms of agriculture.	Convincing farmers to adopt agroforestry. Convincing farmers to adopt organic farming can be challenging. When transitioning to organic farming, there will be a period where the farmers will lose income according to a CSO representative. Just transition is costly. Land tenure issues. In any agriculture job, there will be no work if the land is nonexistent. There are a lot of arable lands available but most of the time they are converted to commercial or residential areas. Promotion of organic farming and agroforestry remains challenging. There are a lot of arable lands available but most of the time they are converted to commercial or residential areas. The number of farmers is few, posing a threat to food security and agricultural sustainability, highlighting the need for initiatives to attract and retain individuals in farming occupations. Lack of facilities and equipment for farming hinders productivity and efficiency, underscoring the importance of investment in agricultural infrastructure to support farmers	Utilization of digital economy. According to a TVET institution, in Australia, they are now in the process of getting the DNA of their cows so when they export their cows, they would know that it was from them. Usage of technology and data. There are groups or associations wherein the farmer can connect to the market without the need for a middleman. However, in harnessing digital technology, cybersecurity is needed. Organizing farmers into associations can empower them to collectively address common challenges, access resources and support services, and strengthen their bargaining power in the market, fostering collaboration and sustainable growth within the agricultural sector. Funding support. The academe expressed that there is an increase in the number of youths who are interested in agriculture, which may be supported through funding. Utilization of small spaces in residential areas or small farms. By considering options like vertical farming or hydroponics, this could

According to NYC, the youth stated that the agriculture sector should be separated from the environmental sector. 6. Transition to greener projects in Mindanao. According to the private sector, there is a transition to greener projects in Mindanao, specifically in Zamboanga. One example is the bamboo seedlings project.	and enhance their capacity to adopt modern farming practices. 6. There is a significant gap in funding for agricultural development, limiting the ability of farmers to invest in necessary resources and technologies, emphasizing the need for increased financial support and innovative financing mechanisms. 7. Decline in participation of youth in the agricultural sector. According to NYC, what the parents say about their kids having a job related to agriculture has a big impact. An employer representative added that students who study agriculture in schools don't pursue careers in agriculture after they graduate. 8. Lack of awareness. There is a lack of active promotions in schools, according to NYC. On the other hand, an employer representative mentioned that most people are not aware that what they're doing is green practices.	potentially evolve into a business, offering employment opportunities
RECOMMENDATIONS/STRATEGIES		
EDUCATION AND TRAINING	1. BS in Digital Agriculture. An academe representative shared they are offering this course to train the younger generation of farmers. 2. Continuation of research projects on sustainable agriculture ensures the development and dissemination of innovative farming practices that promote environmental conservation and resilience to climate change. 3. Mainstreaming of just transition. NYC expressed that mainstreaming of just transition for SK Youths, councils, youth, and youth-serving organizations may be beneficial. NYC may partner with CCC and NAPC.	

	4. Continuation of research agenda for just transition entails ongoing research efforts to explore and develop strategies for a fair and equitable transition to sustainable agriculture. 5. Development of Information, Education, and Communication (IEC) materials involves creating informative and engaging resources such as pamphlets, posters, videos, and online content to raise awareness and educate stakeholders about sustainable agriculture, environmental conservation, and social equity issues in the agricultural sector. 6. Promotion of agriculture and agribusiness courses in secondary and tertiary education. The National Youth Commission (NYC) commented that this may attract more student enrollees. 7. Providing incentives to encourage youth participation in Agri-related activities can include initiatives such as scholarships, grants for agricultural education programs, mentorship opportunities with experienced farmers, and subsidies for start-up costs in agriculture. These incentives aim to attract young people to the agricultural sector, address the aging farmer population, and promote sustainable farming practices for future food security. 8. The promotion of training as a decent job and capacity development on agricultural methods empowers farmers with the knowledge and skills needed to adopt sustainable farming practices, improving productivity and livelihoods. 9. Development of Agripreneurship programs for youth, including training in Agri-entrepreneurship and other essential skills, encourages entrepreneurship in agriculture and fosters a new generation of environmentally conscious farmers and business owners. 10. Facilitation of access to business and livelihood projects involves providing support services such as training, technical assistance, access to markets, and financial resources for aspiring entrepreneurs in the agricultural sector.
POLICY AND ADVOCACY	1. Creation of a Green Jobs Tripartite Body or Committee facilitates dialogue and collaboration among government, industry, and labor sectors to develop policies and initiatives that promote green job creation, supporting sustainable development and inclusive growth. 2. Inclusion of Green Jobs advocacy in organizations like ECOP (Employers Confederation of the Philippines) raises awareness and promotes the adoption of environmentally friendly practices in the private sector, contributing to a more sustainable and socially responsible business environment. 3. Hosting a Just transition conference or forum provides a platform for stakeholders to discuss and strategize the transition to a sustainable and inclusive economy, ensuring that no one is left behind in the shift towards green and resilient agricultural practices.

FINANCING AND INCENTIVES

1. **Collaboration between organizations like the National Youth Commission (NYC) and the Department of Agriculture (DA)** or private organizations for funding Agri-related research offers opportunities to mobilize resources and support innovative projects that promote sustainable agriculture and youth participation in the sector, driving economic growth and environmental sustainability.

BREAKOUT SESSION OUTPUTS

ECOTOURISM



OBSERVATIONS

CHALLENGES

OPPORTUNITIES AND PROSPECTS

1. Lack of sustainability in ecotourism sites. Green Skills have been embedded in the basic education curriculum. 2. Peer-to-peer (P2P) Services. The emergence of digital apps covering the entire ecotourism supply chain, from booking accommodations to arranging guided tours, has streamlined the process for travelers, enhancing convenience and accessibility. 3. Lack of emphasis on human capital development. There is a noticeable gap in investment and attention towards training and developing individuals within the ecotourism sector, hindering the potential for skilled workforce growth and sustainable tourism practices. 4. Lack of awareness of ecotourism-specific standards. Many stakeholders and participants in the ecotourism industry are not fully aware of or aligned with established ecotourism standards and principles, resulting in inconsistent practices and potentially negative environmental impacts.	1. Mandatory DOT accreditation. The requirement for Department of Tourism (DOT) accreditation poses a barrier for small-scale ecotourism operators, who may struggle to meet the stringent criteria, limiting their participation in the formal tourism industry. 2. Vulnerability of some jobs in Ecotourism sectors. Certain positions within the ecotourism sector, such as tour guides, are susceptible to economic downturns or environmental changes, leading to job insecurity for individuals reliant on these roles. 3. Regulation of tourism activities. According to DTI-PTTC, there is a need to regulate tourism activities and for the alignment of tourist standards. 4. Lack of awareness of green jobs. Many individuals interested in pursuing careers in ecotourism are not aware of the diverse range of green job opportunities available within the sector, resulting in underutilization of human resources and talent. 5. Lack of waste management and composting. Inadequate waste management infrastructure and practices within ecotourism destinations contribute to environmental degradation and pollution, undermining the ecological integrity of these areas.	1. Active participation of NGOs in promoting tourism. Non-governmental organizations play a vital role in advocating for sustainable tourism practices and educating both industry stakeholders and travelers about the importance. 2. Partnership with tourism institutions. Collaboration between ecotourism operators and academic institutions or tourism associations can facilitate knowledge sharing, skills development, and the implementation of best practices in sustainable tourism management. 3. Development of tourism infrastructures. Investing in eco-friendly tourism infrastructure, such as renewable energy facilities, eco-lodges, and nature trails, not only enhances the visitor experience but also contributes to the conservation and preservation of natural habitats. 4. Farmers series training track. DTI- PTTC suggests enterprise building, growing the farm tourism business operations and expanding the farm tourism business (Farmer Tourism). 5. Incentives for Green Jobs initiatives. Government incentives and programs that promote the creation and development of green jobs within the ecotourism sector can stimulate
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		economic growth, enhance job security, and foster sustainable tourism practices.
RECOMMENDATIONS/STRATEGIES		
EDUCATION AND TRAINING	1. Integration of green competence in the basic education curriculum. Implementation of an initiative to raise awareness about environmental issues. 2. Promotion of eco-friendly practices within schools. 3. Development of Tourism Roadmaps (TRs), and Competency Standards (CS) for Tourism. To enhance skills and professionalism within the tourism industry. 4. Micro credentials courses are being introduced to provide specialized training in areas such as sustainable tourism management. 5. Implementation of a Green Technical Vocational Education and Training (TVET) Framework aims to equip individuals with practical skills for eco-friendly tourism practices. 6. Encourage students to develop skills related to environmental conservation and sustainability. 7. Initiatives like the Blue Zone Summit organized by Batangas State University serve as platforms for knowledge exchange and capacity building in sustainable tourism.	
EMPLOYMENT FACILITATION AND CREATION	1. Conduct tourism job fairs. PSA suggests the conduct of ecotourism job fairs with an emphasis on Green Jobs. 2. Partnerships with industry stakeholders facilitate job creation and ensure alignment with industry needs, fostering employment opportunities within the ecotourism sector.	
POLICY AND ADVOCACY	1. Enhancement of ecotourism framework through policy development and advocacy initiatives, supporting green entrepreneurship and innovation. 2. Awareness projects. For incentives regarding Green Jobs and awareness through social cards on Green Jobs-related occupations regarding Ecotourism. 3. Heightened information dissemination and awareness campaigns on Green Jobs. 4. Integration of regulation and stakeholders' engagement ensures that ecotourism practices are aligned with environmental conservation goals. 5. Creation of tourism infrastructure standards.	

	6. The Inclusion in Seal of Good Local Governance (SGLG) indicators incentivize local governments to prioritize sustainable tourism development. 7. Pursue the development of the Philippine Skills Framework for tourism. Standardize skills requirements and qualifications within the industry.
SOCIAL PROTECTION	1. Programs such as Technical Vocational Education and Training (TVET) scholarships provided by the Department of Education (DepED) offer opportunities for underprivileged individuals to gain skills and access employment in the tourism sector. 2. Cash for work program. Provide temporary income support and employment opportunities for vulnerable communities involved in ecotourism projects.
FINANCING AND INCENTIVES	1. Awards and recognition for sustainability practices. Motivates tourism stakeholders to adopt and showcase sustainable practices, contributing to the overall sustainability of the industry.
OTHERS	1. Research and innovation development. Supports the development of sustainable tourism practices and solutions to environmental challenges, driving continuous improvement and adaptation within the sector.
BREAKOUT SESSION OUTPUTS	
MANUFACTURING	



OBSERVATIONS	CHALLENGES	OPPORTUNITIES AND PROSPECTS
1. Low OSH Compliance from MSMEs due to lack of machines. Most of the outputs of MSMEs come from the raw labor of their employees whose safety is compromised due to a lack of training and safety equipment. 2. Low buy in. Leading to an increase in add-ons in their wages. 3. Green Production. According to ADB, in food manufacturing, there is not much on the green	1. RA 11285. According to a private sector representative, the baseline of having a low energy cost to be able to continue with the greening process is a challenge. 2. Lack of financial resources to transition. Transition requires the facility to increase the costs. Incentivizing the companies may be explored. Another example is traditional	1. Jeepney modernization. Modernization can bring forth more opportunities in manufacturing. 2. Skilling and reskilling. According to DepEd, skilling and reskilling may be an opportunity, especially with Artificial Intelligence as a trend. 3. Integration of Green Jobs and Just Transition in the basic curriculum. By incorporating education on sustainable practices and green technologies into the basic curriculum, the

production of foods, there is not much incentive given on the greening the production process. 4. There is high employment but not much in greening production. According to ADB, the manufacturing sector has recovered but the focus is not on green resources.	jeepneys to modernized jeepneys have no financial resources. 3. Lack of policy coherence. According to the labor sector, there is a lack of consultations with all stakeholders. For example, there is an energy policy but also PUV modernization. DOLE is not included in the talks. The batteries being used also come from dirty energy. 4. Lack of gender dimensions. There's a need to address gender disparities within the manufacturing sector, ensuring equal opportunities and representation for women in leadership roles and workforce participation. 5. The supply chain is forced to subscribe to foreign manufacturing services instead of boosting the local manufacturers. 6. Power and energy are costly. According to PSA, cutting labor cost becomes the easy way out in the transition. 7. According to an employer representative, the use of machines has an impact on the job security of laborers.	workforce can be better prepared for environmentally friendly manufacturing practices, contributing to long-term sustainability. 4. Strengthening the partnership links to other sectors. Collaborating with sectors such as renewable energy and transportation can create synergies and opportunities for innovation, resource-sharing, and market expansion, enhancing the overall competitiveness and sustainability of the manufacturing sector. 5. Opportunity for funding from international organizations. Funding from international organizations can support investment in sustainable manufacturing technologies, capacity-building programs, and infrastructure development, accelerating the transition towards greener and more inclusive manufacturing practices. 6. Incentivizing industry and academia for green production. Offering incentives such as tax breaks, grants, and research funding can encourage collaboration between industry and academia to develop and implement environmentally friendly production methods, driving innovation and competitiveness while reducing environmental impact. 7. Monitoring and evaluation of the previous plans. Regular monitoring and evaluation of past initiatives and policies allow for the
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		identification of strengths, weaknesses, and areas for improvement, enabling policymakers to refine strategies and ensure effective implementation towards sustainable development goals.
RECOMMENDATIONS/STRATEGIES		
EDUCATION AND TRAINING	1. Advocacy. Education and greening programs, according to DepEd. Strengthening education in the integration of green technology related. 2. Creation of green modules. According to DepEd, this may be done by mapping out competencies in selected areas.	
EMPLOYMENT FACILITATION AND CREATION	1. Employment facilitation. According to Philippine Trade Training Center (PTTC), this is to ensure that no one is left behind. They emphasize the importance of inclusive employment practices to prevent marginalization and ensure that all individuals have access to gainful employment opportunities.	
POLICY AND ADVOCACY	1. Tripartite led Just Transition Framework. According to the labor sector, this is necessary not only in manufacturing but all sectors. This may be based on the COP Plan rather than taking from other frameworks.	
SOCIAL PROTECTION	1. Certification. BWC commits to providing stronger mechanisms to enterprises going green. They also propose green indicators in the labor inspection checklist. 2. Strengthen enforcement. This can safeguard workers' rights, improve working conditions, and provide social protection measures. 3. Social protection for workers. BWC wants to strengthen enforcement and monitoring mechanisms to check labor standards, OSH, and worker rights.	

FINANCING AND INCENTIVES

1. **Disincentivize dirty energy producers.** According to PTTC, it may be beneficial to disincentivize dirty energy producers and impose taxes on those organizations and even companies that are producing carbon in their production process.