Green Jobs and Skills Development

GGGI’s Employment Studies
GGGI’s Green Employment Assessments

GGGI develops technical assessments that help developing countries maximize their green employment creation.

**What is a green job?**

A direct employment created in an economic sector and through related activities, which:

- Reduces environmental impact by limiting GHG emissions
- Contributes to the conservation and protection of natural capital
- Reduces waste & pollution
- Supports adaptation efforts to climate change
- Is decent and meets certain working conditions

**Methods used by GGGI to estimate and forecast green jobs**

**Employment factors**
- Estimates direct employment effects of increased activity in one sector
- Provides a snapshot of the current employment situation
- Provides a basis for further assessment using more complex models

**Input-output analysis**
- Estimates direct, indirect, and induced employment effects over the short and medium term
- Provides a higher degree of accuracy on what actually happens in the economy

**General equilibrium models**
- Estimates long term and dynamic employment effects
- Provides a logical and systematic approach to study ripple effects of an economic change

GGGI’s Green Employment Assessments accomplish four objectives:

1. **Model the employment effects of reaching long-term climate goals.**
   - Provides a basis for further analysis of the economic impact of long-term climate policies.
   - Enables policy makers to assess the potential costs and benefits of different climate scenarios.

2. **Model the economic value chain stage, at the national, subnational, or regional level considering the targets stated in the NDCs and/or other long-term climate policies.**
   - Assesses the economic potential of green investments and job creation.
   - Helps identify potential gaps and opportunities for policy intervention.

3. **Identify skills & NDCs/LEDS targets.**
   - Provides a logical and systemic approach to study ripple effects of an economic change.
   - Enables the assessment of the potential for green job creation in developing and emerging economies.

4. **Provide action-oriented policy recommendations to maximize the green employment opportunities in priority economic sectors and complement the existing labor and sectoral policies.**
   - Offers concrete guidance for policymakers and stakeholders on how to support green job creation.
   - Facilitates the alignment of green job creation with existing labor and sectoral policies.
Employment Assessment of Renewable Energy: Power sector pathways compatible with NDCs and national energy plans (2020)

Objective
This study estimates the green jobs potential of Hungary's National Clean Development Strategy (NCDS). This Strategy outlines a 30-year vision of socioeconomic and technological development pathways for the country.

Methods
An integrated general equilibrium modeling approach was used to explore the specificities of the sectors as well as the system-wide and cross-sectoral dynamics of the decarbonization process, for three main scenarios. Clean development is a model of development that nurtures sustainable economic growth and creates green jobs and economic development opportunities while minimizing environmental pollution and greenhouse gas emissions.

Employment Opportunities
- Investing in the green transition brings macroeconomic benefits that lead to significant boost in economic growth and create additional green jobs compared to the BAU scenario. An important aspect is that the early implementation of investments can serve as an incentive for recovery during the economic crisis caused by the COVID-19 pandemic by creating thousands of new and green jobs and increasing the well-being of the Hungarian people.


Objective
This report provides a starting point to explore and coordinate policymaking and stakeholder actions targeting green jobs in the UAE.

Methods
To understand the current status of green jobs in the UAE, relevant business activities and initiatives in the ten sectors expected to contribute to the UAE Green Agenda 2030 were reviewed. The first attempt to quantify green jobs in each sector was also made by using employment factors from other countries, which were then applied to the already confirmed national targets and technology deployment plans, as well as existing growth prospects.

Employment Opportunities
- Results showed that current number of green jobs in the UAE are estimated at around 49,500, roughly 0.7% of the total workforce. Significant sources of green jobs today are the public sector, waste management and recycling, tourism, and transport. The number of green jobs could reach 83,000 in 2030 if more sustainable practices are adopted.
- There has been no single policy specifically targeting the promotion of green jobs in the UAE to date. However, several policies that relate to green jobs are being implemented.


Objective
This study assessed the employment creation potential of RE technologies based on future power sector scenarios for three GGGI Member countries: Mexico, Indonesia, and Rwanda.

Methods
The study applied a scenario analysis to investigate the employment implications of RE technologies under different power sector scenarios up to 2030 and applying Input-Output and value change analysis.

Employment Opportunities
- Mexico, the results show that installing the additional RE capacity required to reach the 2030 NDC target will result in the creation of more than 600 thousand total job-years.
- Indonesia, under the RUKN scenario the selected RE technologies such as hydro, geothermal and solar PV, could create about 3.7 million direct jobs, whereas about 2.1 million direct jobs could be created under the PLN scenario.
- Rwanda, under the NDC unconditional scenario, 14 thousand direct job-years and USD 136 million in value added will be created by 2030. The additional 171 MW RE capacity required under the HA scenario will generate around 31 thousand direct jobs.
- Overall, all three countries assessed in the study will benefit from investments in RE compared to investments in fossil fuel-based technologies, as RE has greater potential in terms of employment and economic value-added in the wider economy beyond the RE sectors.

Energy, transport and forestry

Objective
This study assessed opportunities for expanding green jobs in Fiji consistent with national policies, plans, priorities, NDC commitments and the achievement of the SDGs. This study is linked to the Fiji Low Emission Development Strategy 2018–2050 (LEDS, 2018).

Methods
This study provides a baseline green jobs estimate for selected sectors for 2018 and indicative projections of green jobs for 2030 and 2050 for two LEDS scenarios: BAU-U (Business as Usual-Unconditional) which assumes no additional finance and VHA (Very High Ambition) emissions reductions, with substantial financial implications.

Employment Opportunities
- Under BAU-U direct green employment is 2,774 in 2030 and 4,195 in 2050 respectively as electricity generation grows. Under VHA, there is heavy investment in both renewable and thermal electricity with substantial financial implications.
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Our approach to assessing green jobs

The Global Green Growth Institute (GGGI) is an international organization dedicated to supporting and promoting strong, inclusive, and sustainable economic growth in developing countries and emerging economies. GGGI's mission is to support the transition of its Member and Partner countries toward a model of green growth by developing and implementing strategies that simultaneously achieve poverty reduction, social inclusion, environmental sustainability and economic growth. By pursuing this mission, GGGI aims to achieve its vision of a resilient world of strong, inclusive and sustainable green growth.

About Global Green Growth Institute (GGGI)

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