Bridging gaps in human skills and capacity in key adaptation and mitigation sectors

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Climate policies and employment: Overview

- Climate and low-carbon development policies can affect employment through:
  - Shifts in the volume, composition and quality of employment across sectors,
  - Changes in the level and distribution of income.

- Most studies point to **net gains in employment**. However, such gains are not achieved by default, but **by design**. Climate and employment policies are needed in order to:
  - Stimulate job creation as an objective in itself;
  - Ensure that jobs created meet decent work criteria - Addressing issues specific to the informal sector;
  - Advance social inclusion with dedicated social protection policies, skills building and upgrading for enterprises and workers.
### Changing and Emerging Occupations

<table>
<thead>
<tr>
<th>Degree of skill change</th>
<th>Occupational change</th>
<th>Typical skills response</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None or only quantitative</td>
<td>None or increased training in existing occupations</td>
<td>National park ranger, bus driver</td>
</tr>
<tr>
<td>Low</td>
<td>Changing Occupation</td>
<td>On-the-job learning or short training courses</td>
<td>Organic farmer, Tourist guide in eco-tourism</td>
</tr>
<tr>
<td>Medium</td>
<td>Changing or emerging occupation</td>
<td>Short courses or longer continuous training</td>
<td>Plumber installing solar water heaters, Bricklayer building biogas digesters</td>
</tr>
<tr>
<td>High</td>
<td>Emerging occupation</td>
<td>Initial training, university degree or longer continuous training</td>
<td>Solar Energy Technician, Carbon consultant, Architects, and Agricultural engineers</td>
</tr>
</tbody>
</table>
Bridging skills gaps to enable climate action

Review of 21 country studies:
- Countries underestimated the growth of green sectors
- General lack of scientists and engineers
- National skill structure does not meet skills demand

In many countries, there is a weak coordination between environmental policies and skills needs and requirements

Source: ILO, 2011 Skills for green jobs: A global review
Gaps in skilled workers in energy: Case of China

- Project on Green Jobs Creation and Promotion (Hunan and Fujian provinces) – Asian Development Bank/ILO
- A survey of 389 enterprises
- Survey shows significant shortages of workers with green skills (40% of enterprises lack green technical workers)

- **Shortage of skilled workers** in renewables, energy efficiency and environmental protection industries.
  - Solar PV - annual skills shortage of 200,000
- Only 30 out of 1,200 vocational colleges have PV related programs
  - Implications for TVET – on-the-job training, online training
Greening educational and training systems

- Institutionalizing green building into curricula at different levels
  - Academic (CBU-architecture)
  - Technical and vocational training

In the **Dominican Republic**, within the framework of the [FOIL project](#), learning standards and curricula for eight green occupations have been developed and included into the vocational training portfolio of all countries in central America.
Promoting skills for green entrepreneurship

Challenges to young entrepreneurs

Youth Entrepreneurship Facility in East Africa

Start Your Green Business
Dynamic and Integrated Green Entrepreneurship Training

Indonesia:
40 Trainers
149 Green Entrepreneurs trained/operating green businesses
Sectors: Creative industries, food/agriculture, renewable energy, tourism, waste management

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Collaborative approaches for better impact

- **FAO**
  - Green Materials, Products and Technologies

- **UNEP**
  - Enabling Green Business Environment and awareness

- **ITC**
  - Capital and Financial Services

- **UNCTAD EMPRETEC**
  - Entrepreneurship and Business Linkages

- **ILO**
  - Working Conditions and Productivity for Decent Work
  - Technical & Vocational Skills for Green Jobs
  - Start and Improve Your Green Construction Business

**Market-driven Business Support Services and Value Chain Development**
Thank you


- Green Jobs Programme of the ILO: [www.ilo.org/greenjobs](http://www.ilo.org/greenjobs)