A Just Transition
to Clean Energy and
Greener Economies and Societies

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Internationnal Labour Organisation,
Geneva
A few words about the ILO

- Tripartite membership, governance and operational modalities: the key role of social dialogue
- Decent Work as a central goal
- Towards a Centenary celebration in 2019
- Alignment with 2030 Development Agenda and SDGs (beyond 8)
Environmental sustainability a central theme and cross-cutting issue in Strategic Plan

The Green Jobs Programme of the ILO
Rio+20: Green Economy, Sustainable Development and Poverty eradication

The importance of inclusive green economies in setting the pathway to sustainable development

Triple benefit:

1. Environmental - climate change resilience, low-emission development, stable natural environment and lasting biodiversity
2. Economic – viable enterprises and sectors
3. Social – decent work, poverty eradication, social inclusion

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Green Jobs provide the linking element to address the two key challenges:

- Social development
- Environmental sustainability

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Example: Jobs in Renewable Energy - now

- **China**: 3,390 jobs
- **Rest of EU**: 2,234 jobs
- **USA**: 724 jobs
- **Germany**: 653 jobs
- **France**: 371 jobs
- **India**: 437 jobs
- **Japan**: 218 jobs
- **Bangladesh**: 223 jobs
- **Brazil**: 934 jobs

**Total**: 7.7 Million jobs in 2014

Countries such as Brazil, India, Japan, and China lead in renewable energy jobs.
Expected jobs in Renewable Energy - 2030

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Feed-in tariff policies for renewable energy (Trend world-wide 1990-2013)

Source:
“1.3 million workers in the coal industry and 500,000 in steel will be cut. The employees would be reallocated”.

(Source: Bloomberg, 29 February 2016, quoting Minister Yin Weimin for Human Resources Development and Social Security)
<table>
<thead>
<tr>
<th>EFFECT</th>
<th>EXAMPLE</th>
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</thead>
<tbody>
<tr>
<td><strong>New job creation</strong></td>
<td>Renewable energy sector; energy performance service companies; mobility services</td>
</tr>
<tr>
<td><strong>Elimination</strong></td>
<td>Some types of mining Packaging (materials discouraged or banned)</td>
</tr>
<tr>
<td><strong>Substitution</strong></td>
<td>Shifting from fossil fuels to RE&amp;EE, automobiles to mass transit, waste disposal to recycling, primary metals production to secondary production</td>
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<tr>
<td><strong>Transformation</strong></td>
<td>Existing jobs greened along with changed workplace practices and methods. Supply-chain effects outside green (e.g. steel for wind turbines)</td>
</tr>
</tbody>
</table>
2. What do we mean by Green Jobs?

Green jobs are **decent jobs** in any sector or occupation that:

- 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
In practice:

Process
- Reducing energy and resource intensity
- Eco-efficiency
- Reducing and recycling waste

Product and services
- Organic agricultural products (certified)
- Green textiles (green labelling)
- Eco-tourism (certified)
- Green construction (certified)
- Green financing

Nature conservation
- Ecosystem support
- Natural resource management
Green jobs are also decent jobs

Guaranteeing rights at work
- Respect of the ILO International Labour Standards

Creating jobs
- Equal opportunities, freely chosen, productive and gainful

Extending social protection
- Decent salary, social protection coverage, occupational safety and health

Promoting social dialogue
- Freedom of association and collective bargaining

Gender equality, Non discrimination

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Green Jobs Mapping
Green Building & Construction

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Source: ILO 2014
Schematic relationships between total employment, green jobs and decent

E: Non-green jobs in non-environmental sector that were created thanks to greening
The potential for Decent and Green Jobs

The Green Jobs Programme of the ILO
What are Green jobs?
The potential for Green Jobs

https://www.youtube.com/watch?v=uPG_PovluyQ&index=5&list=PL635910AB8F27F3A0

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The chart illustrates the millions of jobs in global renewable energy employment from 2008 to 2014, assessed by the United Nations Environment Programme (UNEP), International Labour Organization (ILO), International Renewable Energy Agency (IRENA), and respective years.

- **Biofuels**
- **Biomass**
- **Biogas**
- **Geothermal**
- **Small Hydro**
- **Solar Heat**
- **CSP**
- **Solar PV**
- **Wind**

The chart shows a significant increase in the number of jobs in renewable energy over the years, with a notable increase from 2013 to 2014.
4. What is ahead: aligning SDGs, sustainability and jobs

Goal 7 Energy
- Ensure universal access to affordable, reliable and modern energy services
- Increase substantially the share of renewable energy in the global energy mix development

Goal 12 Sustainable consumption and production
- Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle

Goal 13 Climate change
- Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

African manufacturing enterprises lose up to 20% of sales revenues due to power shortage, costing 2.1% of GDP on average, World Bank

Resource intensive-economies will cost global productivity drops of 2.4% by 2030 and 7.2% by 2050, while sustainable pathways increase total factor productivity, ILO

In the Asia Pacific region, the costs of climate change to the workforce due to both health care and lost wages is likely to be $10 billion to $20 billion per year by 2030, Lancet Commission

The Green Jobs Programme of the ILO
SDGs, sustainability and jobs

Goal 7: Energy
- China: 4 million jobs in renewable energies today, 10 million in 2020

Goal 12: Sustainable consumption and production
- Europe: 1 percentage increase in resource use efficiency leads to up to 200,000 new jobs

Goal 13: Climate change
- South Africa EPWP created over 4 million work opportunities during 2009-2014, many in adaptation related sectors (water management, flood control)

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The Green Centenary Initiative

Strengthening **our ability to act**: tackling the challenges of the transition with new tools and approaches

- Capacity building of ILO constituents and staff
- Pilot application of the Just Transition Guidelines
- Scaling up development cooperation programmes (social protection, skills, entrepreneurship, job creation and green work, labour migration, social dialogue)
- .. using Green Jobs Packages

Bolstering our capacity to lead: pushing the frontiers of **knowledge**

- Flagship report on climate change, decent work and just transition
- Country assessments to understand the labour market impacts of NDCs – as part of Just Transition

Acting through strategic **partnerships and office-wide engagement**

- Strategic partnerships (ITUC, IOE, OECD, UN System)
- Engagement in international processes on climate change
- Office-wide engagement
Internation Labour Conference on Green Jobs, 2013

- **Common Vision** - “Achieving decent work, green jobs and sustainable development”

- **Guiding principles** for the greening of economies, enterprises and jobs, including the need for building strong social consensus on the goal and pathways to sustainability.

- The important role of **social dialogue** and respect, promotion and realization of fundamental principles and rights at work.

*The Green Jobs Programme of the ILO*
Tripartite Agreement

- “…transition to a greener economy could help reach many social goals over the next 20 to 30 years, including creating 15 to 60 million additional decent jobs”…ILO

- “ Employers believe that proactively addressing higher energy efficiency and environmental issues of resource use...helps to enable long-term sustainable growth”…Employers

- “The transition has to create green and decent jobs and should not make workers the variable of adjustment. The world needs an ambitious transition towards environmental sustainability and workers want it to be a just transition”…Workers

The Green Jobs Programme of the ILO
2015 ILO Tripartite Expert Meeting: Guidelines for a Just Transition

- Anchor in COP21 Paris Agreement: “Recognizing the imperative of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities”
- Building on ILC 2013 Conclusions
- Consensus among 8+8+8 experts, mix of countries;
- Founded on fact-based background Report
- With recommended practical follow up by Governments, Social Partners and ILO Office
- Provides a model of change to reach relevant SDGs
- Vehicle for « Green Centenary Initiative»

The Green Jobs Programme of the ILO
1. Policy coherence and effective institutional arrangements

2. Social Dialogue

Macro/Sector
- Macroeconomic
- Industrial and sector

Employment
- Enterprises
- Skills
- Labour market

Social Protection
- Occupational safety and health
- Social protection
Guidelines for a Just Transition for all

1. Policy coherence and effective institutional arrangements

2. Social Dialogue

Macro/Sector
- Macroeconomic evaluation
- Industrial and sectoral policies

Employment
- Enterprises
- Skills
- Labour market

Social Protection
- Occupational safety and health
- Social protection
Just Transition Program Cycle

- Assessment of Green Jobs Actual/Potential
- Capacity building
- Social Dialogue & Action Plan
- Inter-ministerial/stakeholder Task Force
- Pilot Projects
- Green Jobs strategy
- Policy Implementation
- More and better Green Jobs
Skills development is key to facilitate a just transition

Bangladesh SHS
Bringing green energy and green jobs to Bangladesh
http://www.youtube.com/watch?v=uPG_PovluyQ&index=4&list=PL635910AB8F27F3A0
Bangladesh—SHS Installations, 2002-2013

Sources: IDCOL, Barua

Installations of 80,000 SHS per month
# Occupations in Solar Power

<table>
<thead>
<tr>
<th>Equipment Manufacturing</th>
<th>Utility-scale Plants:</th>
<th>Residential, Commercial PV</th>
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<tbody>
<tr>
<td></td>
<td>Project Development</td>
<td>Construction and Installation</td>
</tr>
<tr>
<td>Project managers</td>
<td>Project managers</td>
<td>Plant Managers</td>
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<tr>
<td>Civil engineers</td>
<td>Civil engineers</td>
<td>Power plant operators</td>
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<tr>
<td>Construction workers</td>
<td>Construction workers</td>
<td>Electricians</td>
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<tr>
<td>Welders, iron &amp; steel workers</td>
<td>Welders, iron &amp; steel workers</td>
<td>Electrical engineers</td>
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<tr>
<td>Land acquisition / development specialists</td>
<td>Land acquisition / development specialists</td>
<td>Pump operators (CSP only)</td>
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<tr>
<td>Permitting specialists</td>
<td>Permitting specialists</td>
<td>Plumbers, pipefitters &amp; steamfitters (CSP)</td>
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<tr>
<td>Land surveyors</td>
<td>Land surveyors</td>
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<tr>
<td>Engineer (chemical, electrical, mechanical)</td>
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<tr>
<td>Technicians</td>
<td>Technicians</td>
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<tr>
<td>Semiconductor processors</td>
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<tr>
<td>Machine-tool operators</td>
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<tr>
<td>Welders, Solderers &amp; Brazers</td>
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<tr>
<td>Coating &amp; painting workers</td>
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<td>Glaziers</td>
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<tr>
<td>Electrical &amp; electronic assemblers</td>
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Renewable in action - Country illustration
Solar water pumping in the state of Karnataka, India
http://www.youtube.com/watch?v=SDOq3BIZMj8

Clean energy entrepreneurs powering rural areas
East Africa (Kenya and Uganda) solar lighting and biogas technologies
Promoting green entrepreneurship in East Africa
https://www.youtube.com/watch?v=M-EDC7urqx0&list=PL635910AB8F27F3A0&index=3

Skills for renewable energy jobs - Bangladesh SHS
Bringing green energy and green jobs to Bangladesh
http://www.youtube.com/watch?v=uPG_PovluyQ&index=4&list=PL635910AB8F27F3A0
Resources on line

• ILO Green Jobs Programme:  
  www.ilo.org/greenjobs

• Green Jobs Training Platform:  
  http://greenjobs.itcilo.org