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Skills development for the green transition: new paradigm and key obstacles

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ILO definition of green jobs

Green jobs are **decent jobs** in agriculture, manufacturing or services 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

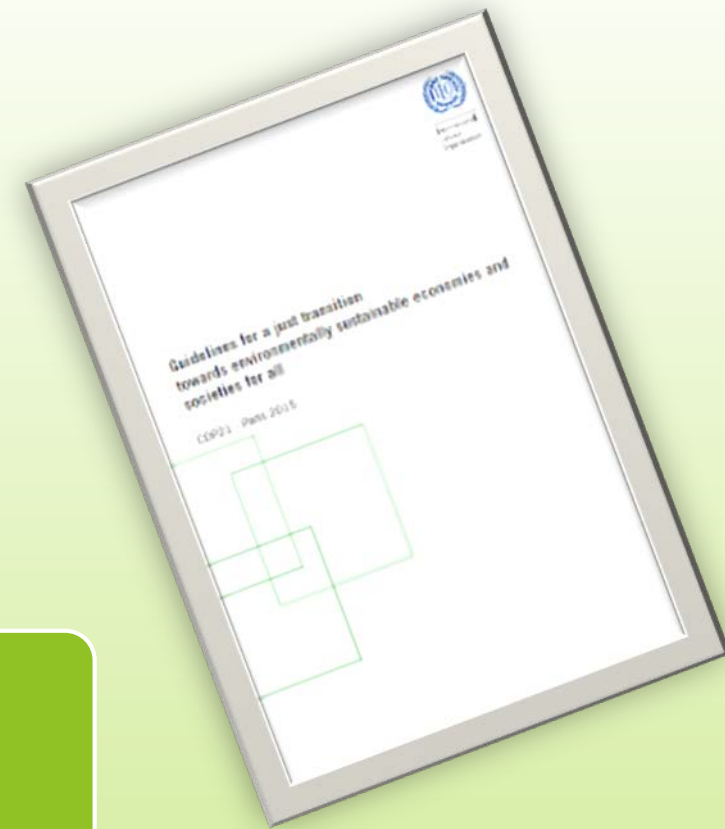
Decent jobs: Jobs which provide minimum wages, safe working conditions, social protection and promotes and respects social dialogue and worker rights.

ILO Just Transition Framework

International Labour Conference (2013) between worldwide business associations and employers, trade unions, and governments, was the need to base the transition towards a more sustainable means of production and consumption on social justice criteria.

In 2015, the ILO adopted the policy guidelines for a just transition towards environmentally sustainable economies and societies for all.

This transition policy framework is particularly relevant for coal mining regions.



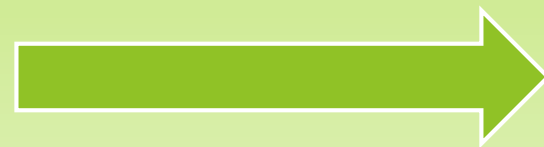


For a just
transition
towards a
sustainable
future

ILO (2015) *Guidelines for a Just Transition: NO ONE LEFT BEHIND*

1. Macroeconomic and growth policies
2. Industrial and sectoral policies
3. Enterprise policies
4. Occupational safety and health
5. Social protection
6. Active labour market policies
7. Rights at work
8. Social dialogue and tripartism and

9. Skills development is one of the key policy area to address the environmental, economic and social sustainability.



Available at:

http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_432859.pdf

ILO World Employment and Social Outlook 2018 (WESO 2018):

- ▶ **24 million jobs** open up in the green economy.
- ▶ 6 million will be lost mostly in the fossil fuels and nuclear (+ utilities) sector, mainly concentrated in the Middle East region.
- ▶ **18 million net job creation across.**

1.2 billion jobs rely on ecosystem services

Need to respond urgently in retraining needs of workers in existing occupations and training opportunities for new green jobs!



24 million jobs created from the energy transition

Assumptions

Employment in 2030 associated with energy sustainability, compared with the business-as-usual scenario (millions)

Sector	Jobs created	Sector	Jobs lost
Construction	6.5	Petroleum refinery	-1.6
Manufacture of electrical machinery and apparatus	2.5	Extraction of crude petroleum and services related to crude oil extraction	-1.4
Mining of copper ores and concentrates	1.2	Production of electricity by coal	-0.8
Production of electricity by hydro	0.8	Mining of coal and lignite; extraction of peat	-0.7
Cultivation of vegetables, fruit, nuts	0.8	Private households with employed persons	-0.5
Production of electricity by solar photovoltaic	0.8	Manufacture of gas; distribution of gaseous fuels through mains	-0.3
Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	0.7	Extraction of natural gas and services related to natural gas extraction, excluding surveying	-0.2

Without skills development there will be no just transition

Benefits:

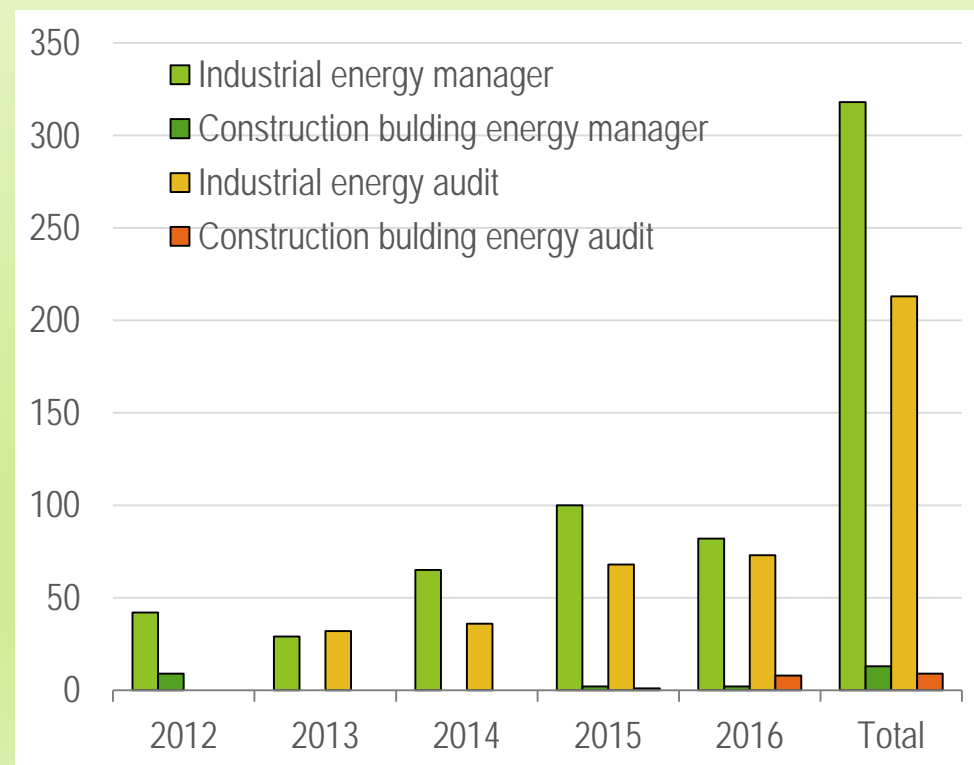
- ✓ Fundamental driver of green transition
- ✓ Productive employment and decent work
- ✓ Virtuous cycle of innovation, investment and competitiveness

Challenges:

- ❑ Lack of systematic skills needs anticipation for green transition
- ❑ Unsuccessful policy coordination
- ❑ Participation of social partners

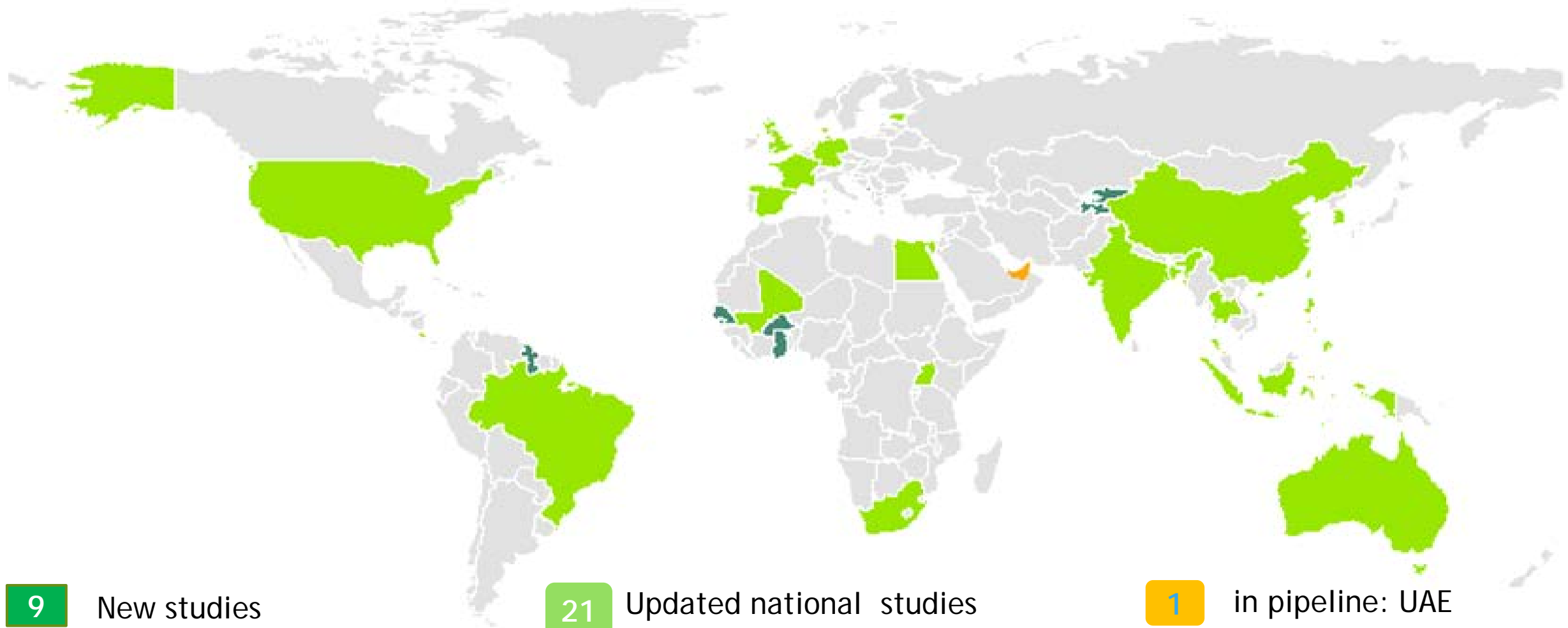
Case study: Energy sector

Indonesia: Number of graduates certified as energy managers and auditors, 2012-16



Source: LSP HAKE, 2017.

ILO Global research on Skills for Green Jobs in 30+ countries



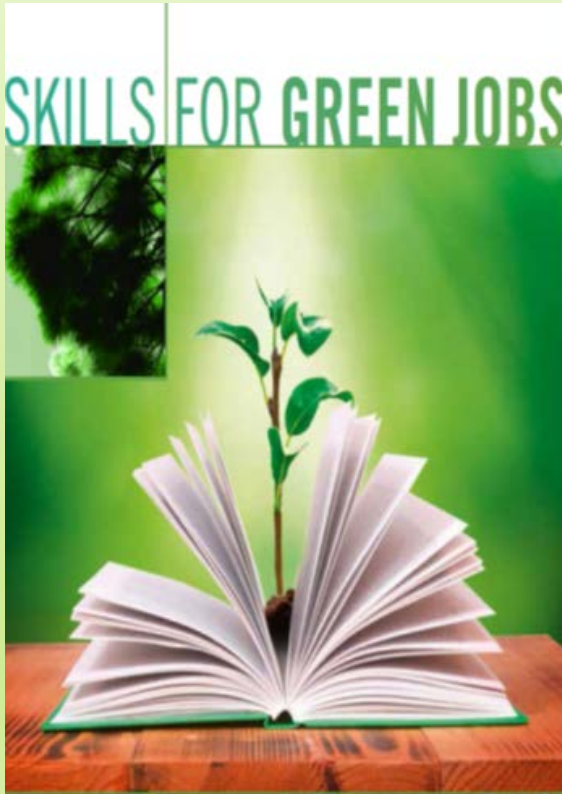
Why skills development is fundamental in green transition?

► Limiting factors:

- Skills mismatch is key bottleneck for the greening of economies in surveyed countries around the world (2017).
- Skills gaps and lack of trained teachers are major barriers in renewable energy, agriculture, green building, waste and tourism.
- Emerging countries need more support and in building capacity for mainstreaming the environmental sustainability in their skills development measures.

Skills development plays pivotal role in green transition?

Enabling factors:



- ▶ Providing workers with the right set of skills enable the transition and economic growth.
- ▶ Quality assurance & anticipation of skills needs are principal tools in just transition.
- ▶ Innovative education and training provisions aligned with the labour market and equal access to disadvantaged groups.
- ▶ **Social dialogue is imperative.**

“Greening” of the coal industry: A new paradigm to reduce the environmental costs through an effective and comprehensive phase-out of fossil fuels

Extractive industries and fossil fuel energy generation are making the transition to greater energy and resource efficiency, using:

- new green technologies,
- workers are also being diverted into renewable energies, again creating a need for retraining.
- Possibility for employment reallocation along the value chains (e.g construction, tourism, industries and etc.)

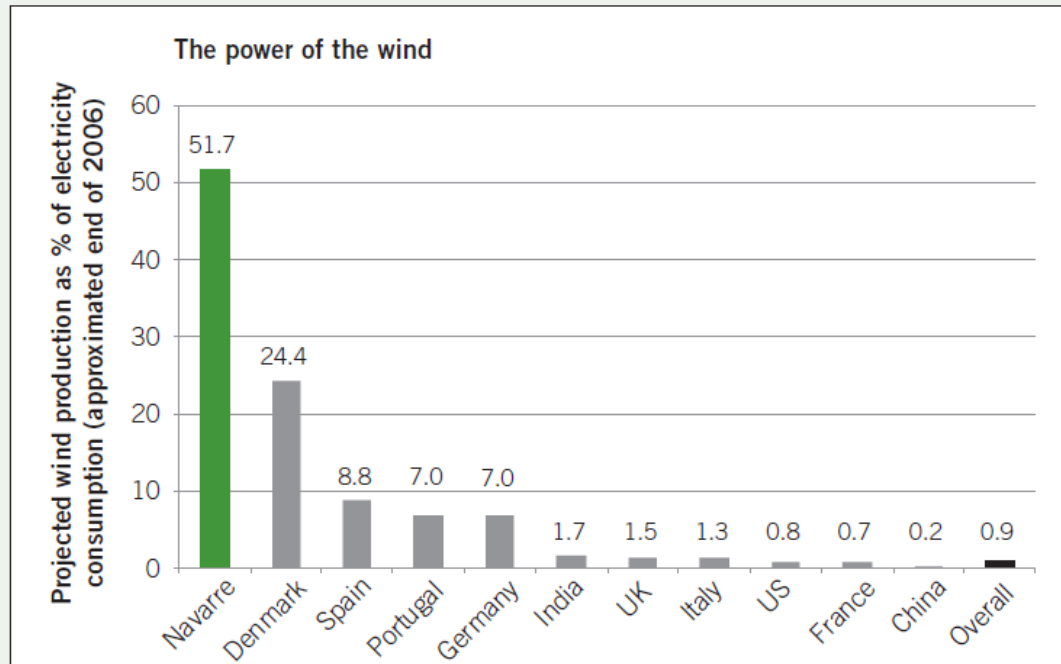


No one left behind!

- Skills upgrading (use of sustainable practices, energy and resources efficiency).
- Retraining into RE.

Green restructuring in Navarre (Spain): A successful shift to renewable energies

- ▶ Since 2002 Navarre has been implementing its ETP.
- ▶ Cooperation between social partners (CEN and NIA) and the regional government established to reduce the skills shortage.
- ▶ Graduate programme for electrical engineers in wind and solar electricity was launched at the Public University of Navarre.



Acciona's Environmental training programme:

- ▶ In 2016 the company had 1,910 employees in the renewable energy sector.
- ▶ In 2015, the programme: "Acciona University" provided **34,618 training hours** to employees in green and environmental subjects.
- ▶ Training varies from short courses and one-day activities to environmental courses of longer duration, organized in cooperation with the University of Alcalá (Madrid).

Australia's Construction, Forestry, Mining and Energy Union takes the lead in transition to a low-carbon future

- ▶ CFMEU: is balancing its commitments to reduced GHG emissions and the welfare of its workers by advocating the deployment of CCS technologies.
- ▶ It has enlisted the support of the Federal Government, which has committed 100 million Australian dollars (AUD) in funding for the Global CCS Institute (established in September 2008).
- ▶ CCS plants will be vastly more sophisticated than conventional coal-fired power stations.
- ▶ The civil construction industry will have to upskill and retool to do the work.

Towards low carbon electricity generation and green inclusive model in Australia

- ▶ The release of AGL's Greenhouse Gas Policy in 2015 provided a pathway for the gradual decarbonisation of AGL's generation portfolio by 2050.
- ▶ The company released its own battery storage device and the Nyngan and Broken Hill solar plants achieved full generation, sending 155 MW of renewable energy in the National Energy Market.
- ▶ By 2017, AGL Energy provides gas, electricity, solar PV and related products and services to more than 3.6 million customers in Australia and operates the largest electricity generation portfolio in the country.
- ▶ In July 2017, the company set a partnership agreement with Federation University with the aim of fostering innovation, education, diversification and investment.

Some examples of JT in coal mining areas



Loos-en-Gohelle

Positive results when the transition was planned with institutional support and participation of social and business organizations and local groups.

Essen (Germany)

Identification of the future development strategy.

That was key to attract public and private funds that were needed to develop a new socio-economic environment that can attract new workers and companies.

UK

Lack of planification has been the main obstacle in many mining regions.



Gelsenkirche n-Ruhr valley (Germany)



Citizens agreed to halve CO2 emissions by 2020;

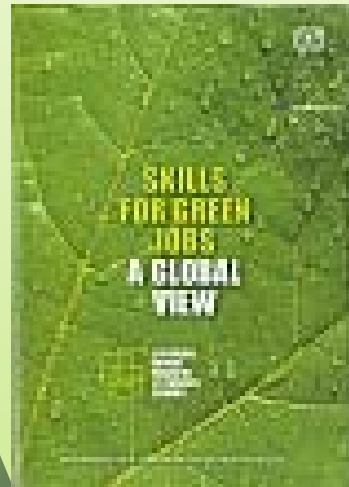
Homes of mine workers modernized using energy efficiency criteria and PV installed;

Over 70 businesses in the Ruhr region launched the 'Ruhr Initiative Group'. 125 projects relating to energy efficiency and the use of renewable energies were set up;

Participation via workshops, briefings, and additional events;

Innovation and developing new technology was the heart of this initiative

Skills for the green transition: IS POSSIBLE and URGENT!



- ▶ Forward looking at advancing green human capital.
- ▶ Existing occupations will experience the green structural changes.
- ▶ Transition is possible if the training system is enhanced.
- ▶ **Coordination and social dialogue** hold the key!

*Environmental degradation enhances inequalities,
affects the world of work and increases job loss.*

*We need to act now in building a resilient green
transition through a*

skills-environment nexus

based on solidarity, sustainability and coordination !



The Green Centenary Initiative

Thank you!