



Skills for Green Jobs

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ILO framework for skills development

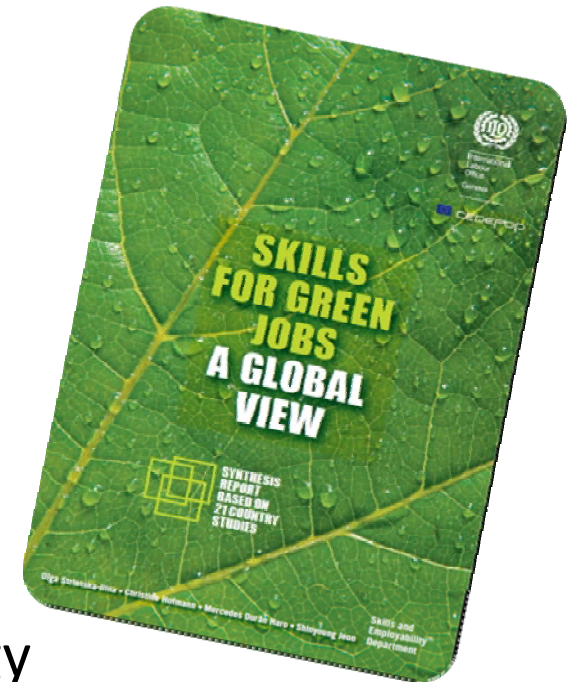


- In 2008, ILC Conclusions on:
“Skills for improved productivity, employment growth and development”
- For the green economy:
 - Meet new skill needs as part of mitigation and adaptation efforts
 - Support a fair transition to more sustainable production
 - Sustain a dynamic development process: Adjust training supply to demands of new technologies, products, energy efficiency, etc.

Research projects



- ILO-Cedefop study:
“Skills for Green Jobs. A global View”
Forthcoming.
- On-going Joint project ILO-EC:
 - Methods of Identification of skill needs
 - Occupations & skills in renewable energy
 - Occupations & skills in green buildingEnd of the project July 2011.



All part of the Green Jobs Program of the ILO



Drivers of skills change

- Change in the natural or build environment (for instance in agriculture, adapting workers' skills to prolonged dry or rainy seasons)
- Policy or regulation
- New technologies
- Markets for green industries (competitive advantage) and consumer habits



Green structural change



- Additional jobs will be created.
- Some employment will be substituted
- Certain jobs may be eliminated without direct replacement
- Many existing jobs will be redefined
- New jobs created will offset those lost
- But those who will get green jobs are not necessarily those who will have lost their jobs

*Retraining
matters*

Navarre's successful shift to renewable energies (Spain)



End 2010, Navarre :



- produced 65% of electrical energy consumption from RE sources,
- had the second lowest unemployment rate in Spain
- was the first region to have a positive GDP growth rate after the crisis

Green building – core occupations



- Research on 32 countries –including 19 European
- A wide range of existing occupations are affected, but in some cases new occupations are created
- Core occupations grouped in 6 different occupational clusters along the value chain

CONCEIVING, PLANNING, DESIGNING and ADVISING	Construction Company Managers and Business Functions		
	Architects and Civil/Structural/ Environmental Engineers		
	Architectural Technicians / Technical Drawing Specialists		
	HVAC, Electrical, Mechanical, Sanitary, RE & Building Services Engineers / Designers		
	Surveyors		
	Energy and Water Efficiency and Waste Management Analysts, Consultants and Advisors		
CONSTRUCTION, INSTALLATION, MAINTENANCE	Building Site Supervisors, Site Engineers and Site Architects		
	Conservation	Insulation / Weatherization	Bricklayers; Carpenters; Plasterers; Glaziers; Masons; Roofers; Plasterers; Painters/Decorators, as well as semiskilled occupations that assist.
		Efficient Heating & Cooling	Plumbers and Heating Installers / Maintainers
			HVAC Installers
		Conservation of Electric Power (other than electric heating & cooling)	Electricians and IT Technicians
	Electricians and Installers of Energy Management Systems (At domestic level, mostly responsibility of individual householders to choose energy efficient appliances and lighting technologies)		
	Building Level Renewable Energy (and High Efficiency Energy) Systems	Water	Plumbers
		Heating / Cooling	Installers / Maintainers of Solar Thermal Systems
			Installers / Maintainers of Wood Pellet and other Biomass
			Installers / Maintainers of Mass Heating (Large Building or District) and Combined Heat and Power (CHP) Systems
Electricity		Heat Pump Installers / Maintainers	
		Installers / Maintainers of Solar PV	
Installers / Maintainers of Small Scale Wind Energy			
CONTROLLING	Energy Auditors		
	Inspectors, Certifiers and Quality Controllers		
EDUCATION, RESEARCH FINANCING AND POLICY MAKING	Policy Makers		
	Urban Planners		
	Financing		
	Educators and Information Providers		
	Researchers		
MANUFACTURING & DISTRIBUTION	Manufacturers and Distributors of Green Building Materials and Products		
	IT & System Technicians		
GREEN BUILDING CLIENTS	Developers		
	Energy Managers		
	Public Servants Working in Procurement and Management of Buildings		
	Householders and Tenants		

Green building – skill needs



Technical skills

- environmental regulations, schemes etc.
- understanding of the environmental, social, economic issues to design effective policies
- passive design & RE in buildings
- energy efficiency analysis
- water conservation techniques
- insulation techniques
- Solar PV and thermal systems installation and maintenance
- recycled materials
- upgrade and replacement HVAC systems
- preventive maintenance, etc.

Soft skills

- environmental awareness
- innovation and leadership
- interdisciplinary skills and team work
- risk management
- understanding market needs
- communication
- analytical skills
- marketing skills, etc.

Skills and occupational changes



- A wide range of existing occupations are affected, but in some cases new occupations are created
- The impact on skills needs can be quantitative and/or qualitative
- Generic and core skills are equally important



Skills shortages already pose a major barrier to green transitions and job creation



Training response

At different levels:

- Enterprise level response
- Industry response (associations of employers, sector skills councils, joint bipartite or tripartite initiatives)
- Government solutions come mostly through the formal education and training system
- Universities usually responsive, private and public
- NGOs and donors deliver skills where formal systems don't reach out – mostly developing countries.
- Stronger in higher education and weaker in TVET

Policy coherence: The case of France: A comprehensive policy framework



Grenelle de l'Environnement

government, unions, employers, NGOs and local authorities.

Social dialogue!!

- *National Strategy for Sustainable Development 2009-2012* where **training is included!!**
- *Mobilization Plan for Green Jobs*
 - Eleven Sectoral Committees: analysis on skills and training needs in the green economy
 - Collaborative work between stakeholders at all levels **Coordination!!**

Some general conclusions



- The green change is happening → identification of skills needs and adequate provision of skills are required
- The success in response measures depends on:
 - policy coherence and the inclusion of a training component in policies for greening
 - coordination among various actors and levels: social dialogue!!



<http://www.ilo.org/skills/>

Thank you for your attention!

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