



Future skill needs for the green economy

**6-7 October 2008,
*Thessaloniki, Greece***

International workshop



CEDEFOP

European Centre for the Development
of Vocational Training



Workshop rationale and objectives

Peter Szovics
Cedefop





Overview

- Why do we focus on future skill needs for the **green** economy?
- Europe's **greening** economy and shades of **green** jobs
- Environment, employment and E&T in the EU
- Workshop objectives
- Programme



Why do we focus on future skill needs for the **green** economy?

- Reduce current and future skills imbalances
- Enable training providers and learners to anticipate demand for skills in green jobs
- Highlight sectoral changes to help displaced workers with retraining
- Facilitate better-informed investment decisions
- Assist social partners, the MS and the EC with timely information on changing skill requirements for the green economy

Policy background for skill needs - EU initiatives

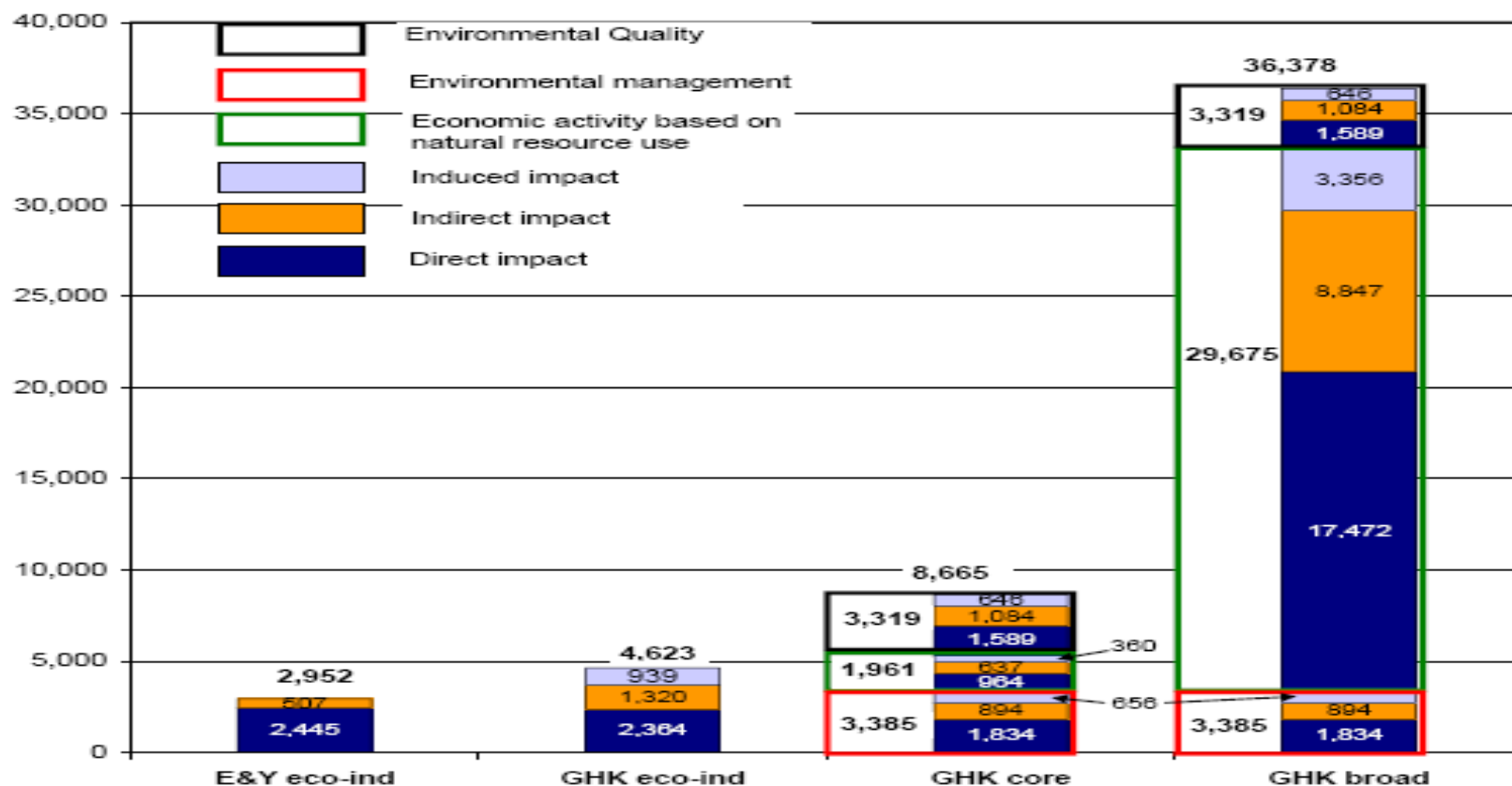
- Council resolution New Skills for New Jobs
2007/C 290/01
- Integrated Guidelines for Growth and Jobs
2008-2010 Council resolution COM (2007) 803
- June 2008 The council (EPSCO) invited the
Commission to report with its first assessment of
the future skills requirements in Europe up to
2020
- Anticipating and matching labour market needs:
New Skills for New Jobs

Green economy

- Values nature and people and creates decent, well paying jobs
- Primary sector and utilities (Agriculture, Forestry, Renewable energy...)
- Manufacturing
- Transportation
- Construction

The eco-industry

Figure 2.1b Employment by environment related economic activity, FTE '000s (2000)





Green Recovery in the US

GREEN INVESTMENTS AND JOBS

STRATEGIES FOR GREEN ECONOMIC INVESTMENT

REPRESENTATIVE JOBS

Building Retrofitting	Electricians, Heating/Air Conditioning Installers, Carpenters, Construction Equipment Operators, Roofers, Insulation Workers, Carpenter Helpers, Industrial Truck Drivers, Construction Managers, Building Inspectors
Mass Transit/Freight Rail	Civil Engineers, Rail Track Layers, Electricians, Welders, Metal Fabricators, Engine Assemblers, Bus Drivers, Dispatchers, Locomotive Engineers, Railroad Conductors
Smart Grid	Computer Software Engineers, Electrical Engineers, Electrical Equipment Assemblers, Electrical Equipment Technicians, Machinists, Team Assemblers, Construction Laborers, Operating Engineers, Electrical Power Line Installers and Repairers
Wind Power	Environmental Engineers, Iron and Steel Workers, Millwrights, Sheet Metal Workers, Machinists, Electrical Equipment Assemblers, Construction Equipment Operators, Industrial Truck Drivers, Industrial Production Managers, First-Line Production Supervisors
Solar Power	Electrical Engineers, Electricians, Industrial Machinery Mechanics, Welders, Metal Fabricators, Electrical Equipment Assemblers, Construction Equipment Operators, Installation Helpers, Laborers, Construction Managers
Advanced Biofuels	Chemical Engineers, Chemists, Chemical Equipment Operators, Chemical Technicians, Mixing and Blending Machine Operators, Agricultural Workers, Industrial Truck Drivers, Farm Product Purchasers, Agricultural and Forestry Supervisors, Agricultural Inspectors

Source: Robert Pollin et al: Green Recovery: A program to Create green jobs and start building a Low-Carbon Economy, PERI, September 2008

Green jobs

- Contribute to preserving or restoring environmental quality
- Help to protect ecosystems and biodiversity, reduce energy, materials, water consumption, de-carbonise the economy and minimise or avoid generation of waste and pollution
- Quantity and quality

DG ENV

- Kyoto protocol - UNFCCC (current period 2008-2012)
- ECCP I,II >> Emission trading - EU ETS
- Climate action and renewable energy package (2008) (GHG emission target -20 %)
- White paper on adaptation



DG TREN

- Promotion of the use of energy from renewable sources (20 %, currently app. 8.5 %)
- CO2 Capture and Storage
- Energy efficiency
- ManagEnergy
- Intelligent Energy – national energy agencies
- Energy Performance of Buildings Directive
- European transport policy for 2010 :Time to decide, Greening transport package





EU Institutions

- European Environment Agency
 - [Impacts of Europe's changing climate - 2008 indicator-based assessment](#)

JRC

- Institute for Energy
- Institute for Environment and Sustainability
- Institute for Prospective Technological Studies



Links between employment and environment policies

- Environmental policy seems to have neutral or positive impact on jobs
- Skill profile tends to be polarised
- Environmental jobs led to upgrading of skills
- Better skilled labour force perform better environmentally

Renewable energy – employment effects

RES for	Gross Employment Effects				Net Employment Effects	
	Direct Employment	Indirect Employment	Export	Import	Budget Effect	Substitution Effect
Electricity						
Heat						
Transport						

Source: International Workshop “Renewable Energy: Employment effects” – models, discussion, results, Stuttgart 2007

Employment shifts

- New jobs (pollution control devices, biofuels)
- Substitution (fossil fuels >> renewables)
- Vanishing jobs (band packaging materials)
- Redefinition (plumbers, electricians, construction workers)



Workshop Objectives

- identify and increase knowledge about the implications of climate change for educating and training professionals and associate professionals who will be involved in mitigating climate change. Relevant professionals include natural resource managers, science and engineering professionals, especially physical and earth science professionals, life science professionals, architects, planners, surveyors and designers.
- The main focus will be on **energy efficiency** and **renewable energy** implementation skills determining the core element of future green jobs.

Adaptation and Mitigation

Adaptation

- Actions taken to cope with a changing climate (see level rise, more extreme weather events - floods and draughts, heat waves, etc.)

Mitigation

- **Reducing GHG emissions through technologies and changing behaviour**
- **Greater efficiency in the use of energy, water and materials (re-spending and rebound effect)**



Programme

Monday, 6 October 2008

09.30-11.00

Welcome and introduction

Manfred Tessaring, Cedefop

Workshop rationale and objectives

Peter Szovics, Cedefop

Skills for green jobs and sustainable development

Christine Evans-Klock, ILO

Impact on employment of climate change mitigation measures in the EU-25

Sophie Dupressoir, ETUC

Discussion

11.00-11.30

Tea/Coffee break

11.30-13.00

Skill needs for green jobs and sustainable development

Skills for sustainable development: necessary but not sufficient?

Malcolm Rigg, Policy Studies Institute, UK

Emerging skill needs in a greener UK economy

Terence Hogarth, University of Warwick, UK

A model for the education and training of ecologists and environmental managers in the

UK: filling the skills gap

Max Wade, RPS Group Plc, UK

Discussion

13.00-14.30

Lunch

Programme

14.30-15.30	<u>Changing qualification needs in jobs for renewable energies</u>
	<p>Future skill needs in renewable energies identified in an integrated approach: results of the ADeBar project <i>Helmut Kuwan, HK Forschung, DE</i></p> <p>Curriculum development for green jobs in the biomass production for energy purposes <i>Ladislav Nozdrovicky, Slovak Agricultural University in Nitra, SK</i></p> <p>Discussion</p>
15.30-16.00	<i>Tea/Coffee break</i>
16.00-17.30	<u>Discussion in three parallel focus groups</u>
	<p>This session will address the key opportunities and challenges facing green jobs, in particular future skills needed for professionals in the green economy.</p> <p><i>Moderators and rapporteurs:</i></p> <ul style="list-style-type: none"> • <i>John McGrath, Training and Employment Authority, IE</i> • <i>Clive Walmsley, Countryside Council for Wales, UK</i> • <i>Olga Strietska-Ilina, Skillsnet</i>
19.00	<i>Guided tour of the city</i>
20.00	<i>Dinner at Restaurant Panellinion</i>

Programme

Tuesday, 7 October 2008

09.30-11.00	<p><u>Employment generation: renewables and energy efficiency</u></p> <p>Securing European prosperity through global leadership on climate change: future growth sectors in technology & construction; skills needs for low carbon, energy efficient and renewable innovation and infrastructure, and opportunities for global market leadership <i>Nick Mabey, E3G Third Generation Environmentalism, UK</i></p> <p>Personal skills needed for business opportunities in eco industries to leapfrog from end of pipe solutions to resource efficient eco design products <i>Sebastian Gallehr, e5-European Business Council for Sustainable Energy, DE</i></p> <p>Future skill needs in renewable energies in Spain from the perspective of enterprises <i>Javier Gómez, Union Institute of Work, Environment & Health (ISTAS), ES</i></p> <p>Discussion</p>
11.00-11.30	<p><i>Tea/Coffee break</i></p>
11.30-12.15	<p>Reports from focus groups</p>
12.15-13.00	<p><u>Moving the agenda forward</u></p> <p>Environment and labour force skills <i>Allister Slingenberg, ECORYS Holding BV, NL</i></p> <p>Discussion</p> <p>Future steps and concluding remarks <i>Manfred Tessaring, Cedefop</i> <i>Representatives from DG EMPL</i></p>
13.00	<p><i>End of the workshop</i></p>

Thank you!

Peter Szovics

Cedefop

peter.szovics@cedefop.europa.eu