



Women in green economy

A snapshot

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OUTLINE

1. Green economy: a double dividend
2. Women in the European labour market
3. Women in education and training
4. Women in green jobs?
5. Women in renewable energy sector
6. Outlook on further research perspective: the role of social dialogue
7. WiRES ...

The screenshot shows a Yippy search engine interface. At the top, there's a search bar with the text 'green economy' and a navigation menu with links like 'web', 'news', 'images', 'wikipedia', 'jobs', and 'more'. Below the search bar, there are tabs for 'clouds', 'sources', and 'sites'. A sidebar on the left lists various categories with a red arrow pointing to the 'Jobs (41)' category. The main content area displays search results, including a sponsored result for 'Free Report: Economy 2010' and a search result for 'Home page - Green Economy Initiative of the United Nations ...'.



All Results (194)

Jobs (41)

New Green Economy (19)

Grow (11)

Building A Green Economy (9)

Renewable Energy (6)

Climate change (7)

Green Collar Economy (9)

Initiative (7)

Resources (6)

Design (5)

[more](#) | [all clouds](#)

Top 192 results of at least 18,993,146 retrieved for the query **green economy** with adult filter on ([details](#))

Sponsored Results

[Free Report: Economy 2010](#) - The 2010 **Economy** could define our lifetime. Where will you end up? - [MoneyMorning.com/Economy_2010](#)

[Understanding Economics](#) - Online course illuminates today's baffling **economic** problems. - [www.henrygeorge.org](#)

Search Results

1. [Home page - Green Economy Initiative of the United Nations ...](#)

The **Green Economy** Initiative (GEI) is designed to assist governments in "**greening**" their **economies** by reshaping and refocusing policies, investments and spending towards a range of sectors, such as clean technologies, renewable energies, water ...



1. Green economy: a double dividend



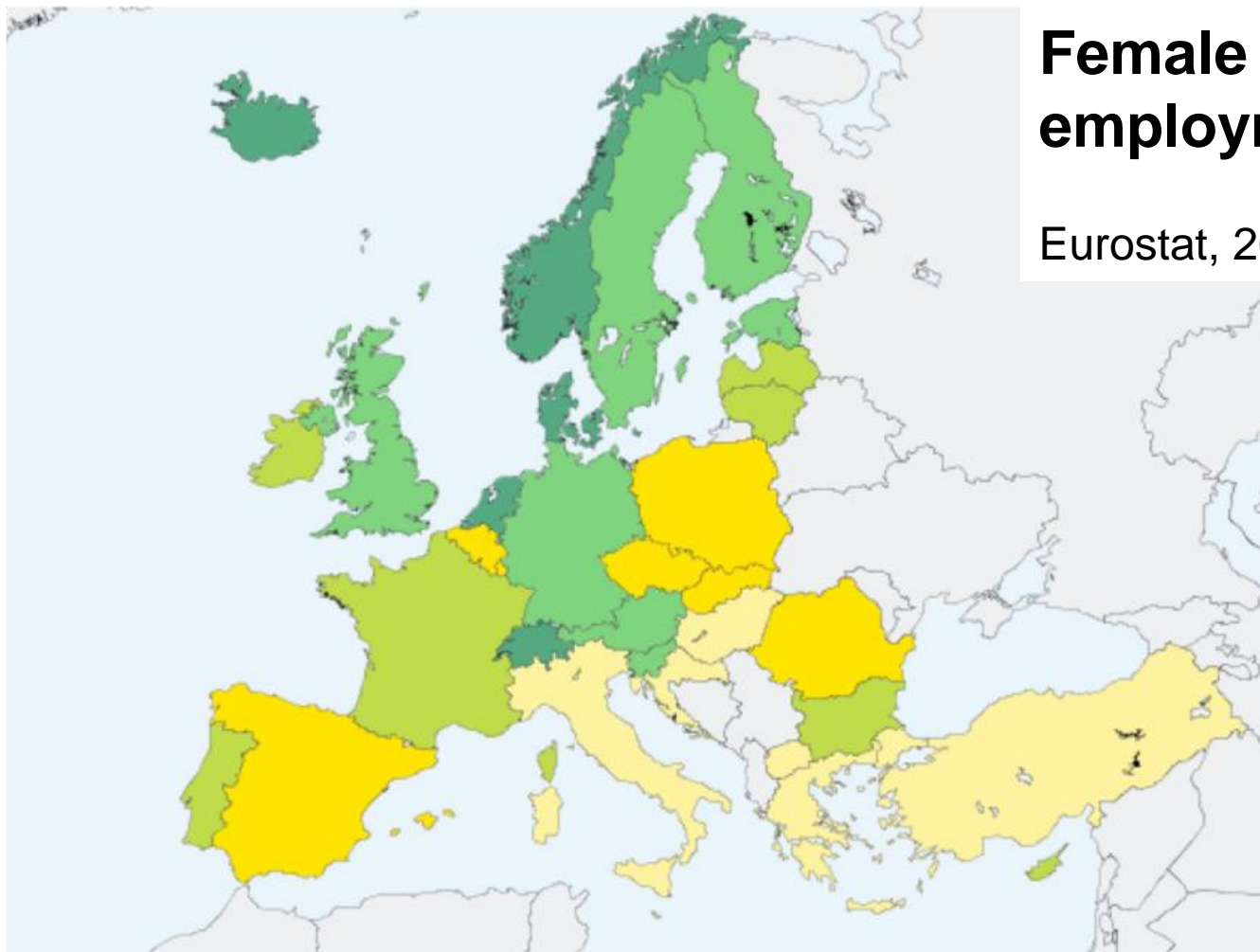
Beyond stimulus measures, there arises the issue of whether “green” policies can possibly produce a double dividend, in terms of both environmental and social goals. Some argue that world output and employment will be adversely affected by policies that make carbon gas emissions costly. Certain groups may bear the brunt of the adjustment process; and individual countries, when acting in isolation, may face competitiveness constraints. There would thus be, the argument goes, a trade-off between environmental and social goals. However, policies to address climate change also create new opportunities to grow and prosper. Much also depends on the way these policies are designed and implemented.

2. Women in the European labour market?



Female employment rate

Eurostat, 2009 (%)



Legend

24.2 - 51.0

51.0 - 57.0

57.0 - 62.5

62.5 - 70.2

70.2 - 76.5

N/A

Minimum value:24.2 Maximum value:76.5 eu25:58.9 eu15:59.9

Employment rate by gender – 2010 Lisbon Target (for women and total employment)

Eurostat, I quarter 2009

	Male	Female	Lisbon Target	Total	Lisbon Target
Italy	68,5	46,3	60%	57,4	70%
Germany	65,5	65,5		70,4	
France	68,5	60,0		64,2	
United Kingdom	75,7	65,2		70,4	
Spain	67,7	52,9		60,4	
EU 15	71,3	58,2		64,8	
EU 27	70,8	58,4		64,6	

Female unemployment (EU countries, %)

Eurostat, 2008

	Female unemployment rate (%)
Italy	8,5
Germany	7,2
France	8,3
United Kingdom	5,1
Spain	13,0
EU 15	8,2
EU 27	7,5

Employed people and employment rates in Italy (male, female, total)

Eurostat, I quarter 2009

	Employed (.000)				Employment rate (%)			
	<i>2008 average</i>	<i>% variation 2008 – 2007</i>	<i>II quarter 2009</i>	<i>% variation II quarter 2008</i>	<i>2008 average</i>	<i>% variation 2008 – 2007</i>	<i>II quarter 2009</i>	<i>% variation II quarter 2008</i>
Males	14.064	0,0	13.870	-2,2	70,3	-0,4	69,0	-1,8
Females	9.341	1,9	9.333	-0,7	47,2	0,6	46,9	-0,6
Total	23.405	0,8	23.203	-1,6	58,7	0,1	57,9	-1,2

	2002	2006	2007
European Union (a 27)	:	17.7	17.5
European Union (a 25)	:	18.1	17.8
European Union (a 15)	:	18.7	18.3
Belgium	:	9.5	9.1
Bulgaria	18.9	12.4	12.4
Czech Republic	22.1	23.4	23.6
Denmark	:	17.6	17.7
Germany	:	22.7	23.0
Estonia	:	30.3	30.3
Ireland	15.1	17.2	17.1
Greece	25.5	20.7	20.7
Spain	20.2	17.9	17.6
France	:	15.4	16.9
Italy	:	4.4	4.4
Cyprus	22.5	21.8	23.1
Lithuania	13.2	17.1	20.0
Luxemburg	:	10.7	10.0
Hungary	19.1	14.4	16.3
Malta	:	5.2	5.2
The Netherlands	18.7	23.6	23.6
Austria	:	25.5	25.5
Poland	7.5	7.5	7.5
Portugal	:	8.4	8.3
Romania	16.0	7.8	12.7
Slovenia	6.1	8.0	8.3
Slovakia	27.7	25.8	23.6
Finland	:	21.3	20.0
Sweden	:	16.5	17.9
United Kingdom	27.3	24.3	21.1

Gender pay gap

(2002, 2006, 2007)

Eurostat, 2009

Part time employment (% total employed people) – Main EU countries

Eurostat, 2008

	Male	Female	Total
Italy	4,6	28,1	14,8
Germany	9,4	45,4	25,9
France	5,8	29,4	16,9
United Kingdom	11,3	41,8	25,3
Spain	4,2	22,7	12,0
EU 15	7,7	35,0	19,8
EU 27	7,9	31,1	18,2

Female employment rates by age and family conditions (Italy, 2007)

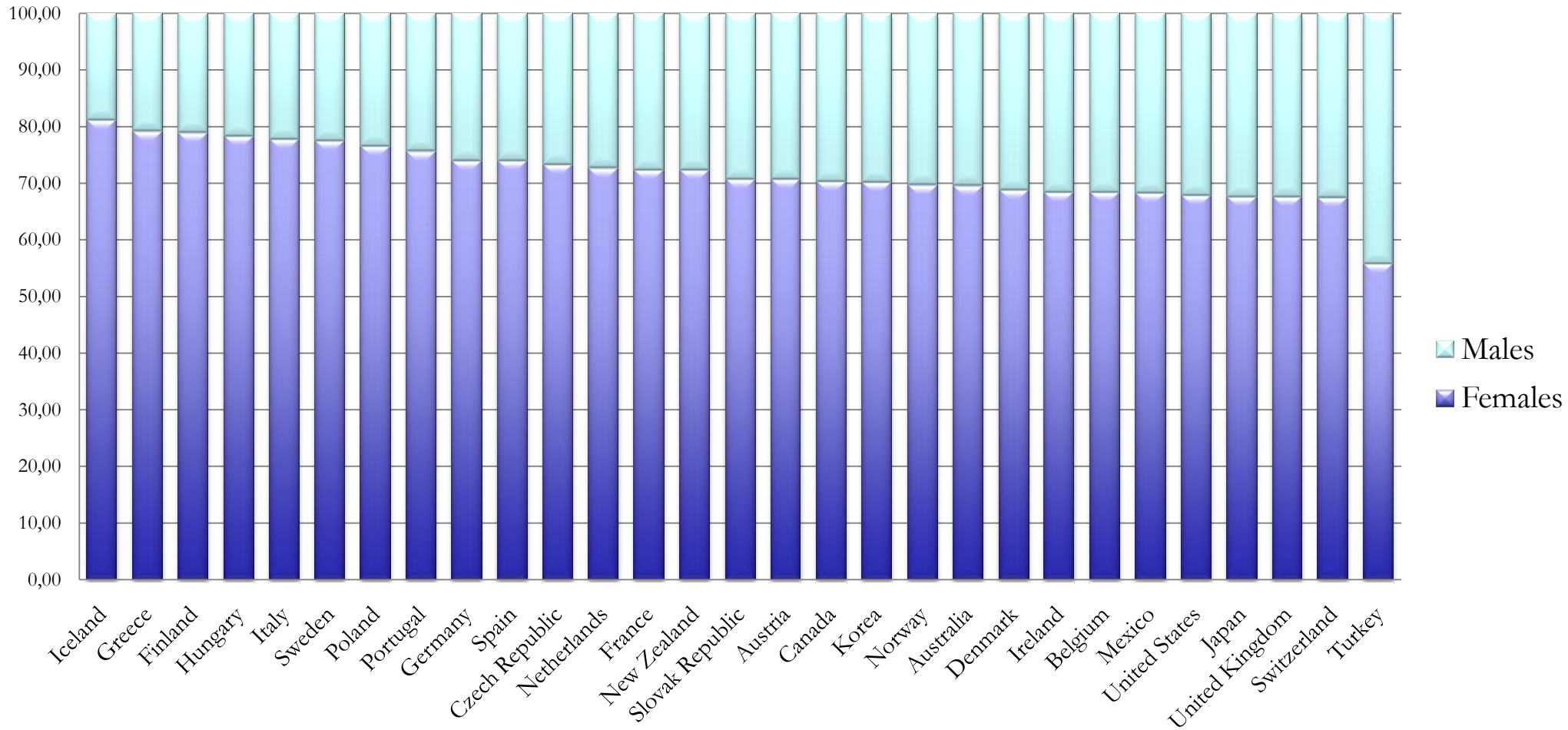
CNEL, Istat

	15-64 year olds	25-34 year olds	35-44 year olds	45-54 year olds
Single	61,0	79,0	84,0	73,5
Couple with children	44,0	52,0	57,0	53,0
Couple without children	46,0	77,0	74,0	54,8
Single mother	54,2	61,0	73,0	71,0
Total	46,6	59,0	62,0	56,9

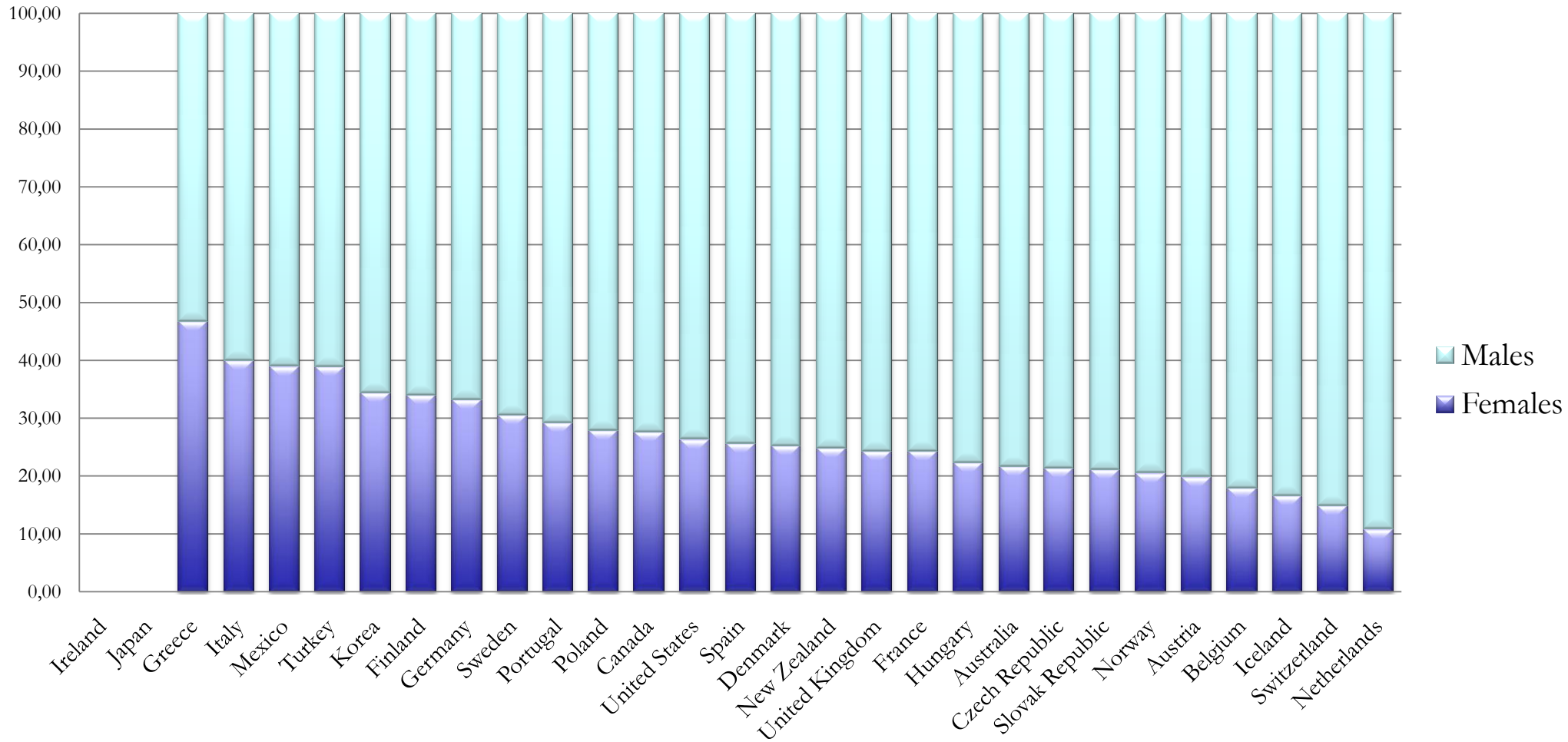
3. Women in education and training

- Higher education
- Study field: segregation
- Initial vocational education and training
- Continuous vocational education and training
- Lifelong learning. Obstacles:
 - family responsibilities;
 - conflicting work schedules;
 - the cost of courses;
 - the lack of employer support or the absence of facilities at reachable distance

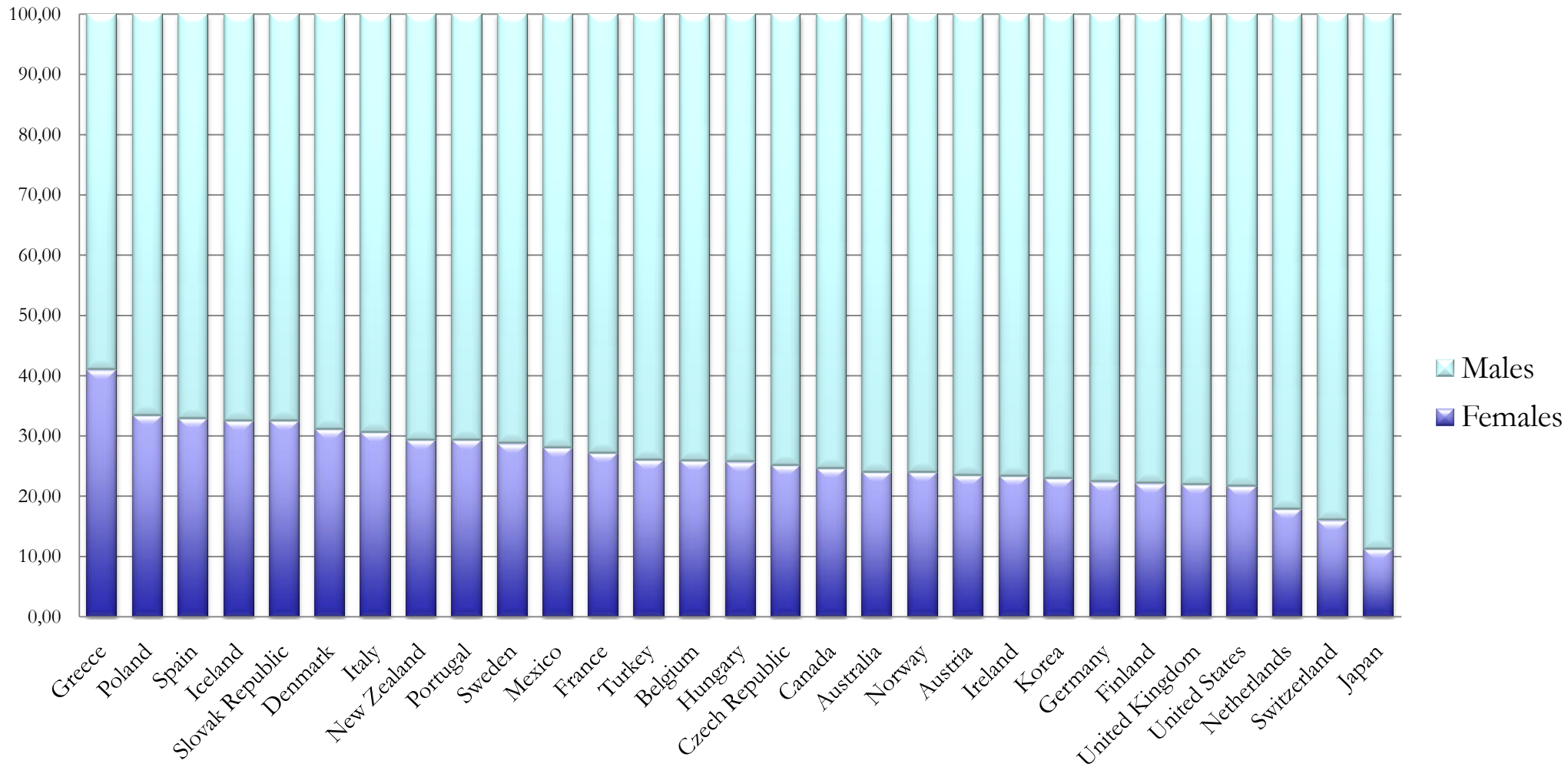
Percentage of university graduates (Tertiary - type A and advance research programmes) awarded Education, Humanities and arts qualifications, by gender (OECD, 2007)



Percentage of university graduates (Tertiary - type A and advance research programmes) awarded Mathematics, statistics and computing, by gender (OECD, 2007)

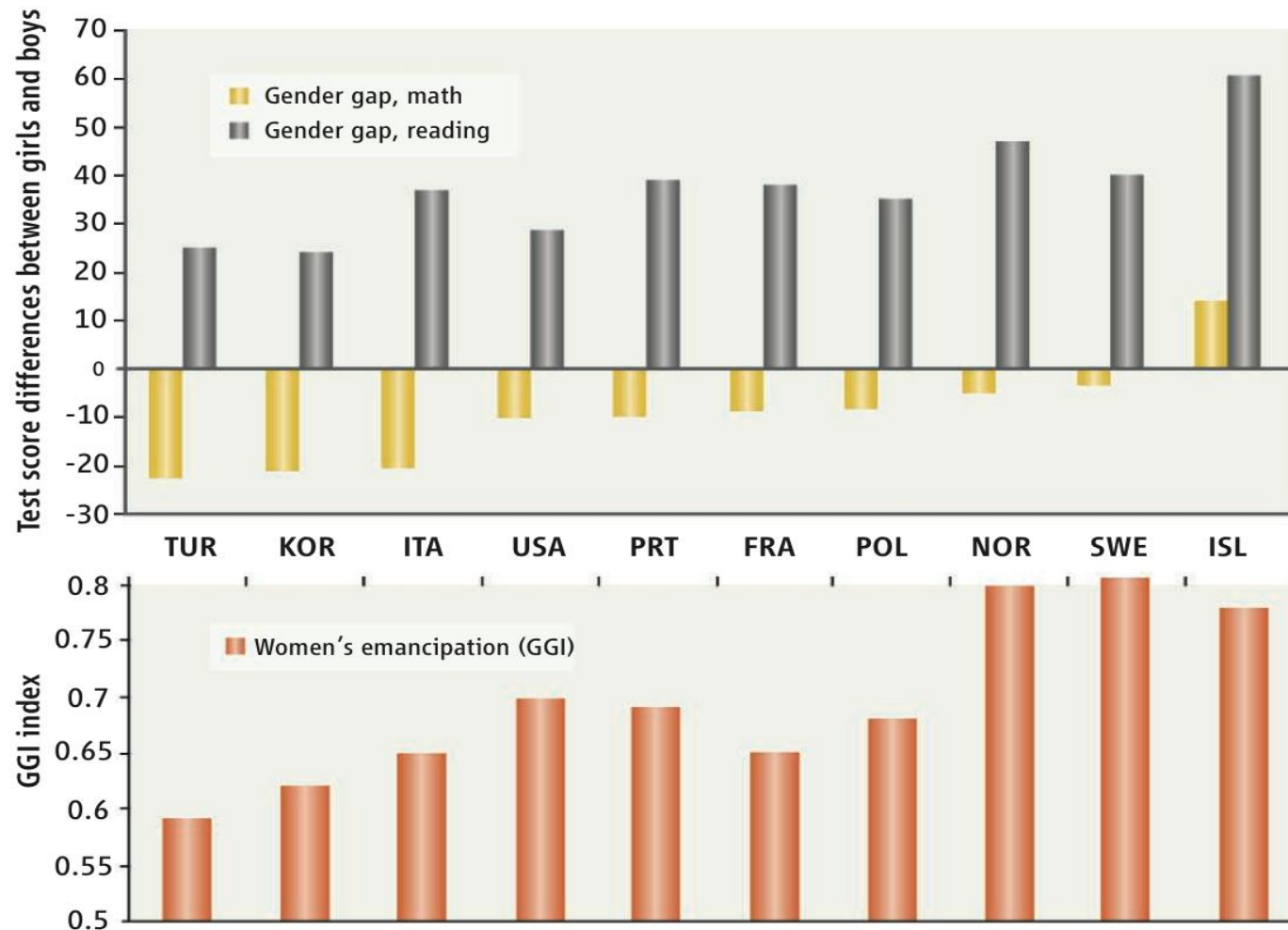


Percentage of university graduates (Tertiary - type A and advance research programmes) awarded Engineering, manufacturing and construction, by gender (OECD, 2007)



Gender gaps in math and gender equal societies

Guiso, elaboration on OECD, PISA, 2003



4. Women in green economy?

- The topic is not studied: green growth as a way out of the crisis ...
- Male dominated sectors
- Which impact on the labour market? The so called “job churn” effect
- The common variable is the change in skills
- European Commission: the preventive adoption of adequate training policies for workforce development is a priority
- In general: economic growth → job opportunities but
 - Existing imbalances
 - Risks or disadvantages?

Table 1. Women in Green Job Sectors

SECTOR	Components	Estimated share of female employees (2009)
Primary	Farming/fisheries/forestry	20%
	Natural resources	8%
Secondary	Manufacturing	24%
	Construction	9%
Tertiary	Engineering services	12%
	Financial and business services	15%
	Eco-tourism	20%
	Administrative services	68%

Source: Estimates based on ILO, 2007.

Besides quantitative analysis: Qualitative analysis

1. Which job profiles?
2. How do they rank? (EU: Job polarization?, US: middle level jobs)
3. Non traditional occupations: hints from the U.S.
4. Skills, competences, behaviors...
5. Work related stress

ARE LAWS AND DECREES FOR GENDER EQUALITY ENOUGH?

... AN OLD STORY ...

1. THE GENDER PAY GAP
2. PART – TIME WORK
3. EMPLOYMENT SEGREGATION
4. JOB PROSPECTS
5. SATISFACTION WITH WAGES
6. SATISFACTION WITH WORK – LIFE BALANCE
7. TRADE UNIONS MEMBERSHIP
8. RECESSION EFFECTS
9. UNPAID WORK (household and care responsibilities) – female-dominated

Women in green economy

FOUR CHALLENGES

1. Access: anti-discrimination laws, family friendly mandates
2. Recruitment: phase *avant contrat*, information, counselling
3. Training: not just training as such but *placement* (US: WANTO, UK: green apprenticeships, Australia, training for women..)
4. Equitable treatment: see at-poverty-risk...
5. Representation: union membership

Women in green economy

TWO ACTIONS (Italy)

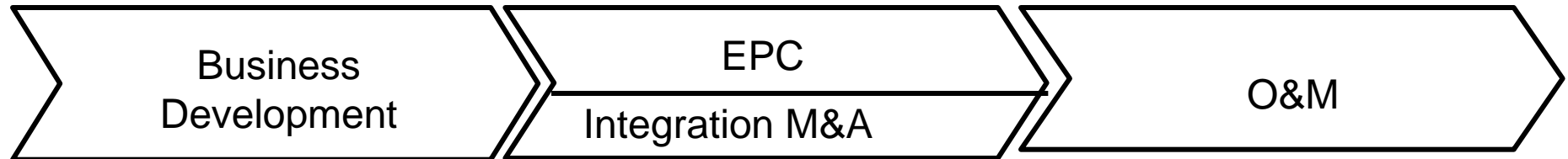
1. Boosting female employment rates in NTOs (equal opportunities to access training for those occupations)
2. Creating specific job profiles for women in traditionally female dominated sectors

5. Women in renewable energy sector?



Typical Value Chain and Development Model in a renewable energy company

Staff Functions: ICT, Communication, Corporate, AFC, Regulatory, Legal, HR, Audit, Procurement



- Project identification
- Screening
- Valuation
- Permitting
- Approval process
- CapEx allocation

- Realization of approved projects
- Integration of acquisitions
- CapEx expenditure

- Plant operation
- Production optimization
- Continuous improvement
- EBITDA generation

Industrial approach to value creation

Typical operational and strategic drivers in RES

- Investment selection (Geographical and Technological dimension)
- Development costs
- Cost and time delivery of equipments
- Cost, time and quality of E&C
- Electricity price and incentive
- Operational costs
- Useful life
- Load factor
- Efficiency (f.i. solar)
- Quality drivers (safety; environment; quality)

Green jobs profiles in a RE company

Based on value chain business drivers and value creation, main profiles are:

- Business Developer
- Project Manager
- Procurement Manager/Buyer
- Plant Manager/Operation Manager/Maintenance Manager
- Staff functions: ICT, Communication, Corporate, AFC, Regulatory, Legal, HR, Audit

In the actual development phase of the industry following transversal skills are crucial:

- Develop adequate legislative frameworks
- Communicate effectively with local communities
- Develop economic-industrial capacities to develop and sell products
- Develop Innovation and R&D capabilities

Value Chain	Job Profiles	Requirements	Qualifications
STAFF	Standards and Regulations Expert	Knowledge of company's, local and national regulations; experience in environmental sectors	Degree in law or economics
	Contract Manager	Previous experience in the field; Basic financial understanding of budgets and operating costs	Degree in Contract Management
	Marketing Specialist	Excellent communication skills; Excellent English + other languages as advantage; Good knowledge of renewable energy markets	Degree (economics, communication) + specialization
	Green IT Expert (Computer Software Engineer)	Expert in methodologies of networks' interconnection	Informatics Engineering Degree (+ Specialization in Informatics' Networks Projecting)
	Sales Manager	Experience in the sector; fluent English; other languages as advantage (French, German); Able to work from a home office and travel regularly to meet clients; Good knowledge of sustainability – related issues; Excellent communication skills; value added selling skills;	Degree in economics + specialization in RES's field
	Client Service Manager	Experience in customers and service; Excellent communication and negotiation skills; Good understanding of the RES; Availability to travel frequently to client sites; Diplomacy and strong client relationship management skills	Degree in Business Administration + specialization in RES' s field
	Consultant	Experience in delivering compliance advice to clients; good communication and client liaison skills; IT proficient;	BSc (or equivalent) in a relevant Environmental discipline + MSc in a field such as Sustainable development or Renewable Energy + membership to an appropriate professional body
Health and Safety Coordinator	Availability for travelling; Operational experience in RES; Excellent communication skills and a strong team ethos; IT skills in all Microsoft Office applications; understanding of budgetary control and accounting practice	Minimum of NEBOSH National General Certificate Membership of IOSH and/or APS (for the UK)	

Value Chain	Job Profiles	Requirements	Qualifications
BUSINESS DEVELOPMENT	Project Manager	Perfect English + another foreign language; knowledge of contracts and regulations; experience in mechanical planning and electrical sizing; experience in managing complex projects; team building, leadership, analyzing, problem solving, stress control, availability for frequent transfer;	Degree in engineering + specialization in renewable energy's sector
	Site Manager	Fluent English, MS Office, Autocad, availability for frequent transfer	Degree in civil or plant engineering; Certificate/Diploma of surveyor (with experience)
	Business Developer	Experience in industrial planting; technical and commercial experience in complex projects; knowledge of technical, economical and legal standards; fluent English	Degree in engineering + environmental specialization
	Solar PV Engineer	Experience of PV energy assessments and/or Due Diligence analysis; Strong analytical skills and an aptitude for analyzing statistical data; MS Office, PV software packages for simulating PV plants; Familiarity with PV supply chain and market technology; Excellent organizational and time management skills; fluent English; other languages an advantage; Ability to work in a pressurized consultancy environment - operating to tight timescales;	Degree in engineering + specialization

Value Chain	Job Profiles	Requirements	Qualifications
OPERATION AND MAINTENANCE	Authorizing Engineer O&M Manager	previous experience; team work; availability for shift work and on-call works outside normal working hours; excellent communication skills;	Degree in engineering (BSc)
	Assembly Technician	English knowledge, Technical design, capacity to manage electrical and electronical	Certificate in mechanical vocation (undergraduate degree)
	Maintenance Technician	English knowledge, experience,	Certificate in mechanical, electrical or electronical vocation (undergraduate degree)
	Electrician	Experience	Diploma / Certificate (Undergraduate degree)
	Installer	3-5 years experience of solar PV installations; Must have performed at least one rooftop installation	Undergraduate degree in electrical engineering

6. Outlook on further research perspectives: the role of social dialogue

- 1) Skill and training needs analysis and forecasting
- 2) Training provision
- 3) Information and support
- 4) Placement
- 5) Access to the labour market

FOCUS ON SEGREGATION...

Segregational factors (usually leading to a pay discrimination):

- Comparative biological advantages
- Under-investment in human capital (schooling and training)
- Differential income roles
- Preferences and prejudices
- Socialization and stereotypes
- Entry barriers
- Organizational practices

The most important factors of gender segregation are:

- Choice of study field
- Stereotypes
- Working hours
- Collective bargaining
- Few women in senior positions

Project co-funded by the European Commission



WiRES

Women in Renewable Energy Sector