

GENDER ISSUES IN THE EU : HOW BRUSSELS IS MOVING TOWARDS GENDER EQUALITY

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FROM NEW ORLEANS FIP SESSION

Einstein's quote, " Science is not a high status activity except as an admission card into the community of modern countries "

I would say therefore that

for **women** to be left **out of science** means to be left **out of the modern world**.

OUTLINE

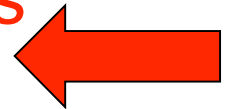
1. The EU Commission
2. EU gender trends in S&T
3. What is happening in EU
4. Examples from high energy physics

EU GLOSSARY

- European Community(EC) :
 - the Member States (MS)
- European Union (EU) :
 - MS + Community Institutions
- European Council sets the political guidelines:
 - EU heads of State + President of the EU Commission
- Institutions of the European Community

EC INSTITUTIONS

- EU Council of Ministers :
overall governance designated by Member States (MS) Governments with
presidency rotating through MS every 6 months
- EU Parliament :
consultation and co-decision with the Council of Minister
selected by people in each MS
- **EU Commission : designated by MS, is the
executive body, and normally lasts 5 years**
- Court of justice
- Court of Auditors



THE EU COMMISSION

- Is the effectively the **governing** body, proposes policy, responsible for implementing and managing Community programs
- The Commissioners are **27**, one for each MS and each **commissioner** is responsible for a Directorate-General or an area of work
- Directorates are managed by a **Director General**, which is a permanent staff

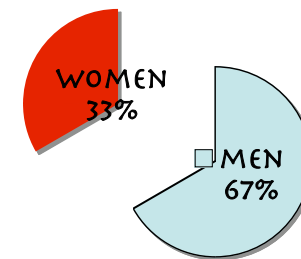
THE EUROPEAN COMMISSION

- The Commission
 - 27 Commissioners for all facets of EU life
 - 9 of them are **women**
 - Commissioner for Science and research



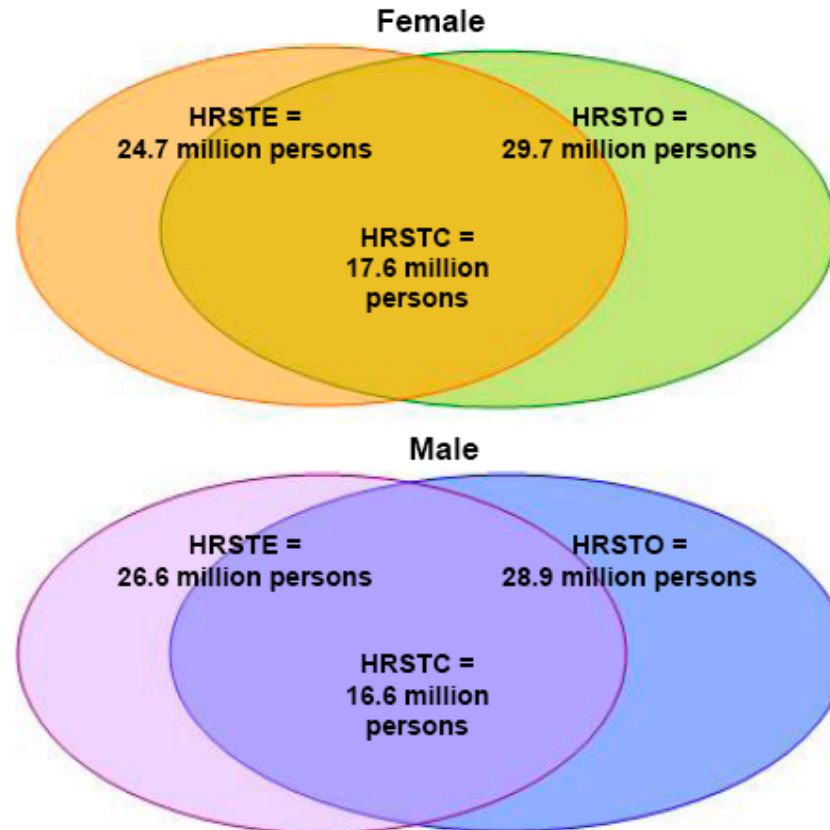
DG Research

EU COMMISSIONERS



**Employed human resources in science and technology
(HRST) by sub-population and gender**

Figure 1: Employed human resources in science and technology (HRST) aged 25-64 by sub-population and gender in the EU, 2006

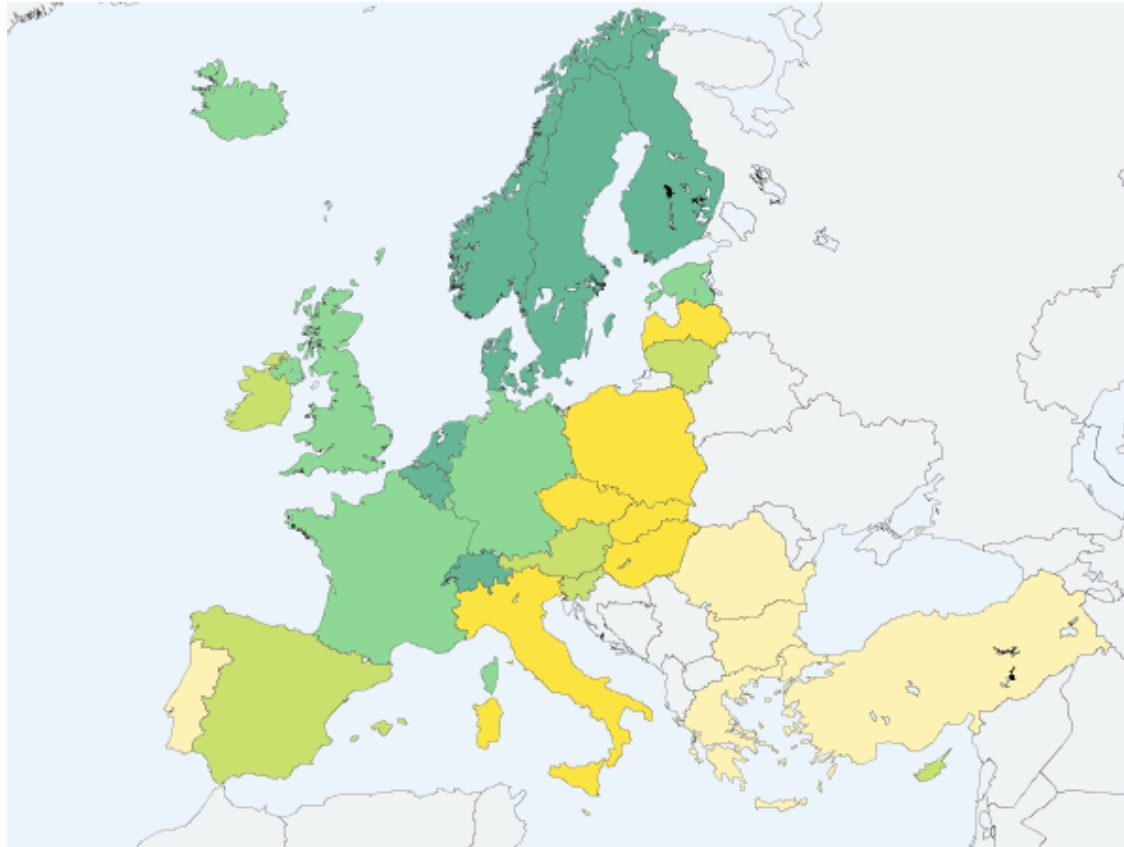


EU-27 estimates with 2005 data for BE and IE.

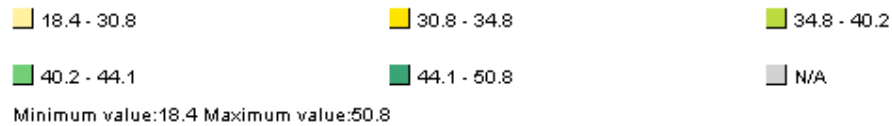
For definitions of HRST, see methodological notes (p. 7).

Source: Eurostat HRST statistics

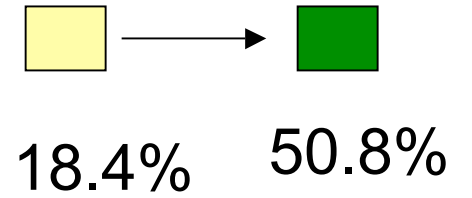
Human resources in science and technology as a share of labour force - Total (%)



Legend (Data 2006)

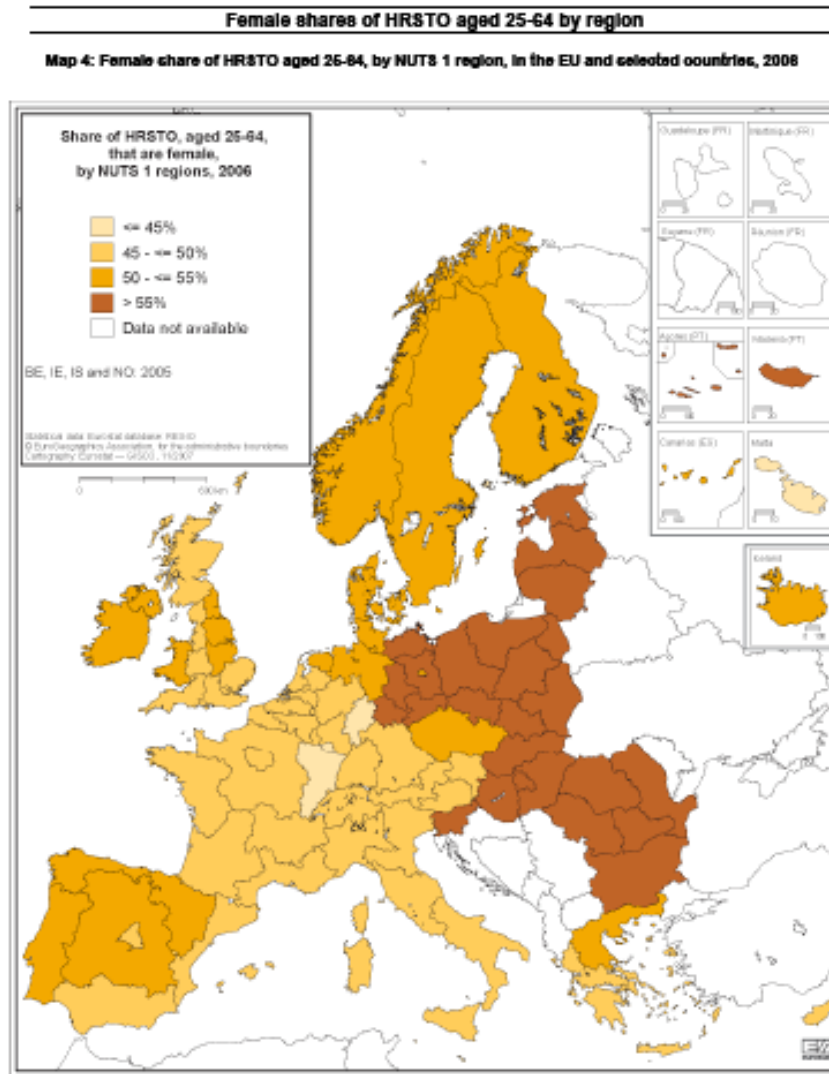


HRST as share Of the labor force

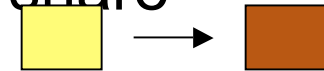


Source : EUROSTAT

HRSTO=Human Resources employed in S&T



Female share



45%

>55%



UNIT 5 OF THE DG-RESEARCH AND THE HELSINKI GROUP

- During the last year of Edith Cresson's mandate as a Commissioner of Science and Research in 1999, the spotlight was focused on **women in science** and a special unit was started, **unit 5** of the Research Directorate General, DG-XII
- A group of EU **statistical correspondents** and scientists held their first meeting in **Helsinki**
- The **ETAN** (European Technology Assessment Network) report on Women and Science was prepared by the Helsinki Group and published in early 2000
- In FP7(2007-2013) the mandate is covered by the Science and Society Unit and EUROSTAT

WHY MORE WOMEN IN S&T?

- The rationale at the Commission level is that **Human resources in S&T (HRST) can sustain and increase Europe competitiveness in S&T**
- Women were identified as human potential for further development

THE EU SCIENCE AND SOCIETY LINK

<http://ec.europa.eu/research/science-society/index.cfm?fuseaction=public.topic&id=27>



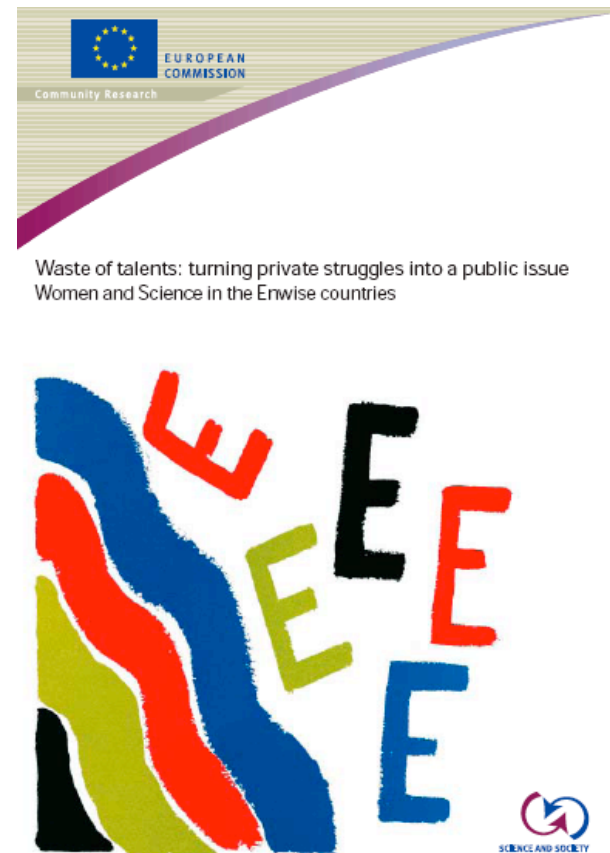
EUR22049

SHE FIGURES 2006 EXECUTIVE SUMMARY

- Across EU **29% of researchers** are women
- Only **18%** of researchers in **Business & Enterprise Sector** are women
- In **higher education** only 18% of highest academic grade are women
- In **engineering and technology** at the top only 5.8% are women

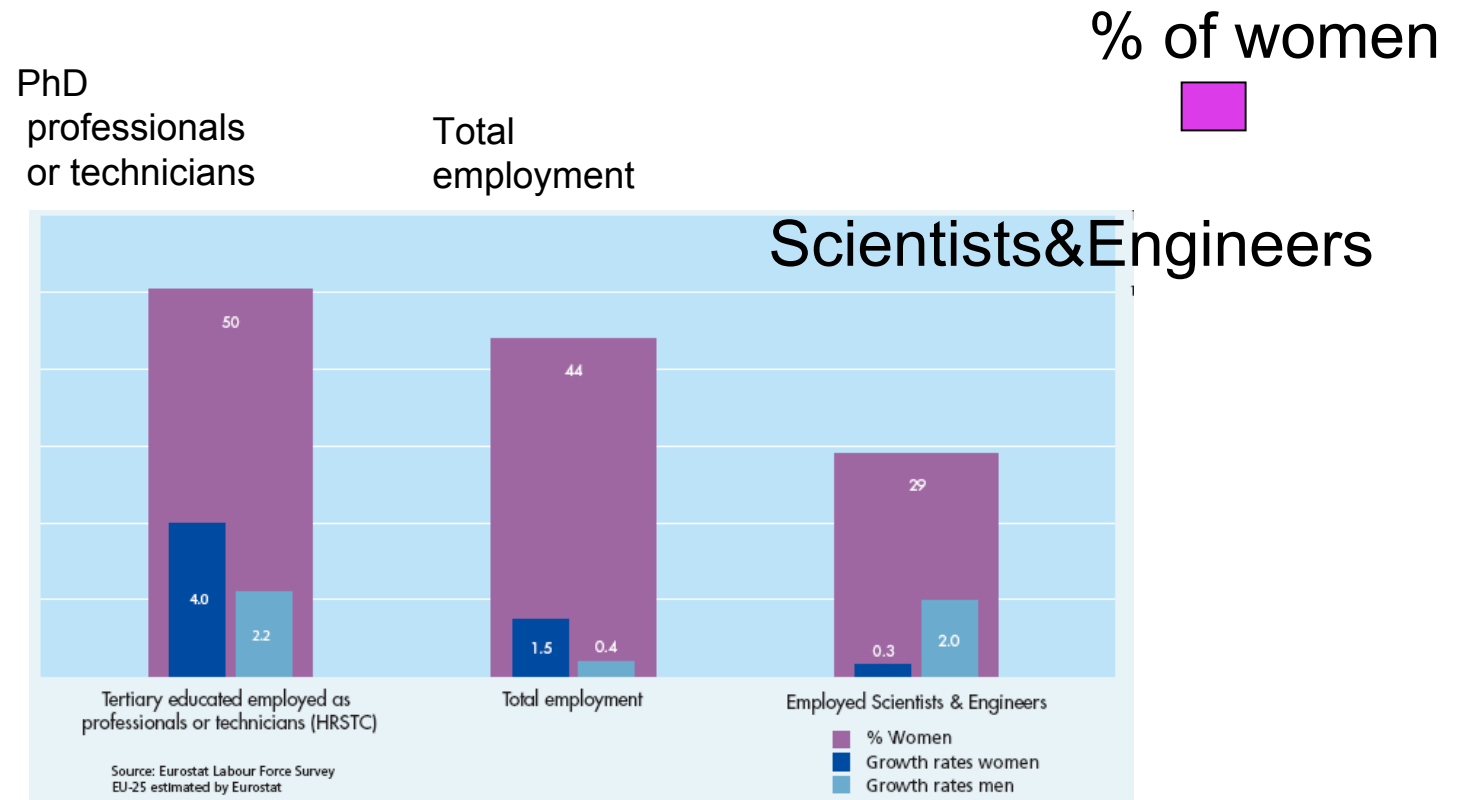
FOCUS ON EASTERN COUNTRIES

- The Enwise countries are
 - Bulgaria
 - Czech Republic
 - Estonia
 - Hungary
 - Latvia
 - Lithuania
 - Poland
 - Romania
 - Slovakia
 - Slovenia

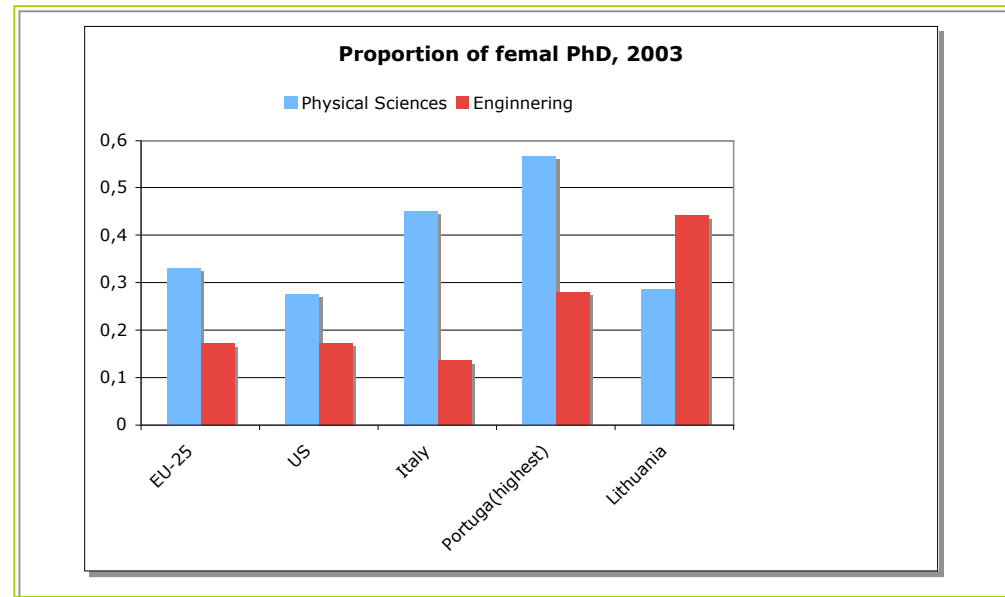


S&T STATISTICS

Employment



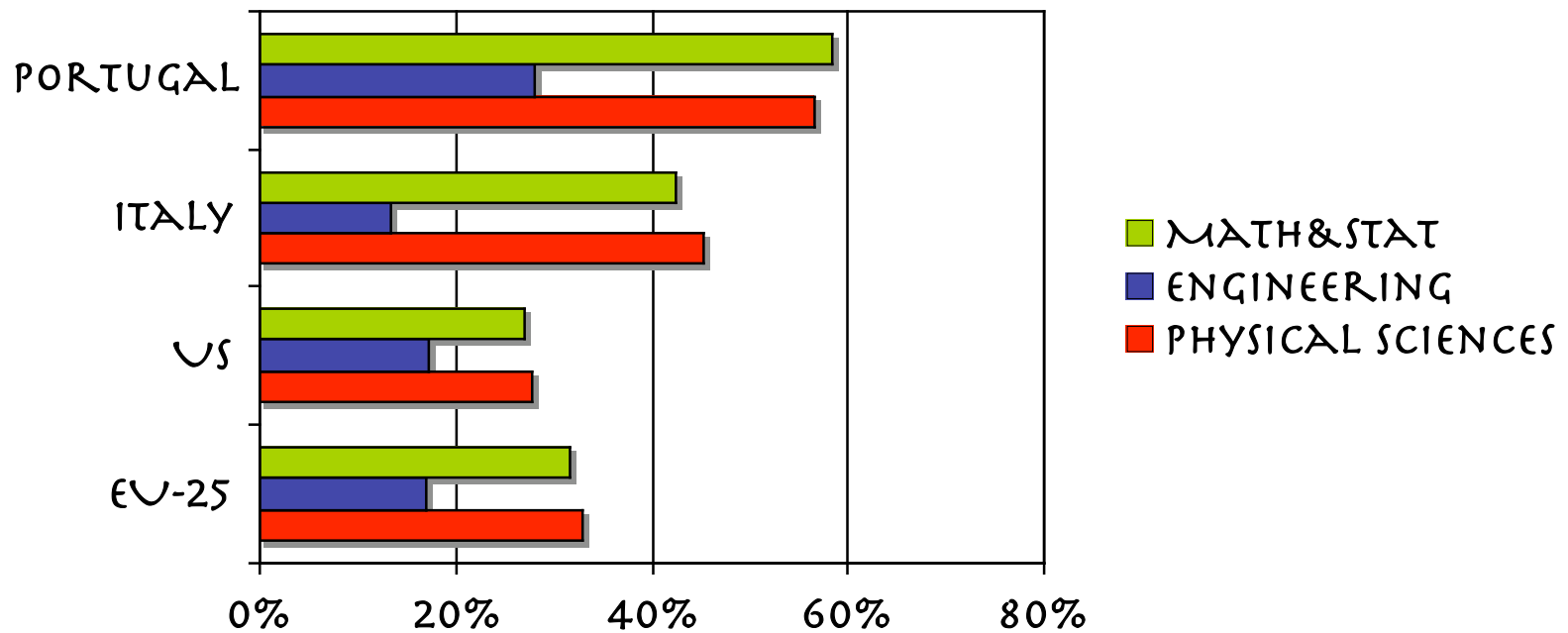
PHD GRADUATES IN PHYSICAL SCIENCE & ENGINEERING



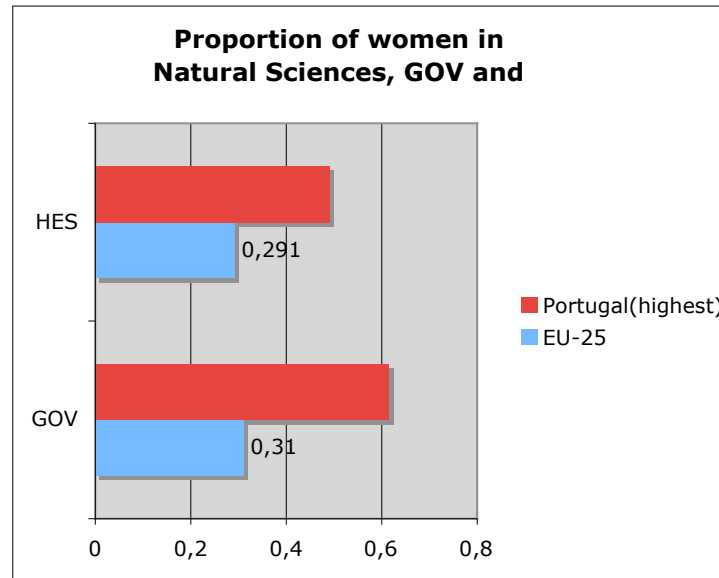
- Italy at 45% in physics
- Portugal more than 50% in physics
- Lithuania highest in Engineers

EDUCATION IN S&T

PROPORTION OF FEMALE PHD, 2003



PHD EMPLOYMENT IN NATURAL SCIENCES IN THE EU

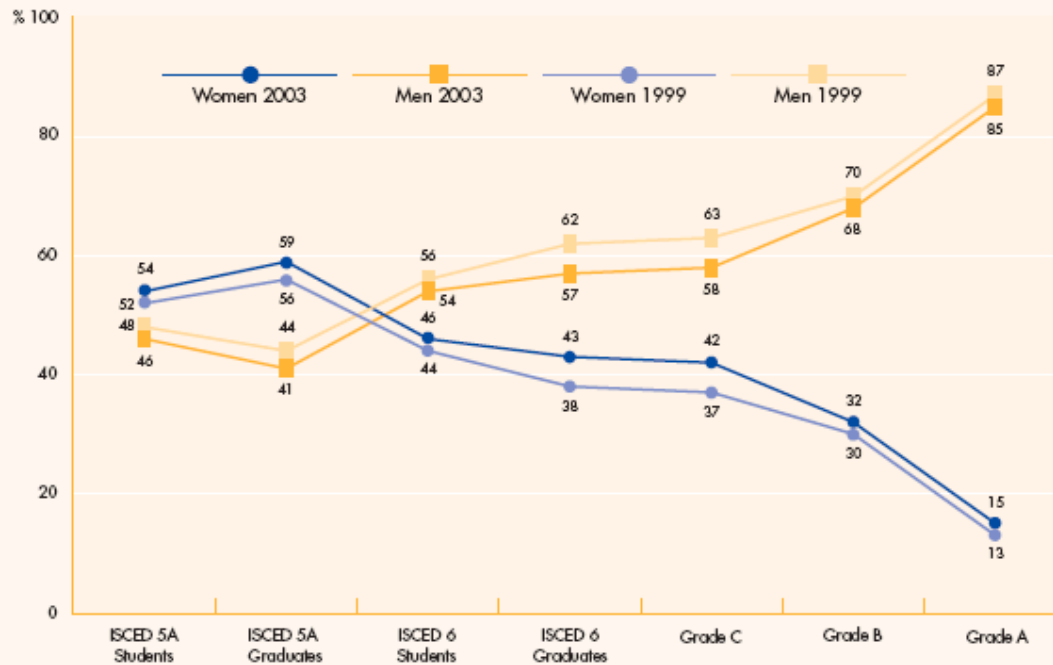


- Natural Sciences include life sciences, Math, Chemistry and Physics
- Highest numbers in Portugal
- Details are not available for all countries
- Source : eurostat S&T, DG research for EU-25

CAREER PATTERNS

- The scissor diagram
- Who reaches the top?

Figure 3.1: Proportions of men and women in a typical academic career, students and academic staff, EU-25, 1999-2003



Definition of grades:

- A: The single highest grade/post at which research is normally conducted
- B: Researchers working in positions not as senior as top position (A) but more senior than newly qualified PhD holders
- C: The first grade/post into which a newly qualified PhD graduate would normally be recruited

- ISCED 5A: Tertiary programmes to provide sufficient qualifications to enter into advanced research programmes & professions with high skills requirements
- ISCED 6: Tertiary programmes which lead to an advanced research qualification (PhD)

Source: Eurostat Education data, DG Research, WIS database seniority Grades.

2003

ISCED5A Students:

Data unavailable: FR
 Exceptions to the reference year: LU: 1999; EL: 2002

ISCED6 Students:

Data unavailable: FR, LU, DE, SI
 Exceptions to the reference year: EL: 2002

Grade C, B, A:

Data unavailable: IE, LU
 Exceptions to the reference year: CY: 2002; FR, PT: 2001; EL: 2000
 NL: FTE; SI: Data estimated; FR: Grade C unavailable

1999

ISCED 5A Students:

Exceptions to the reference year: BE, PT: 2000; EL: 2002. Data unavailable: FR
 Exceptions to the reference year: PT: 1998; BE: 2000; CY: 2001; EL: 2002.

ISCED 6 Students:

Data unavailable: DE, FR, LU, SI

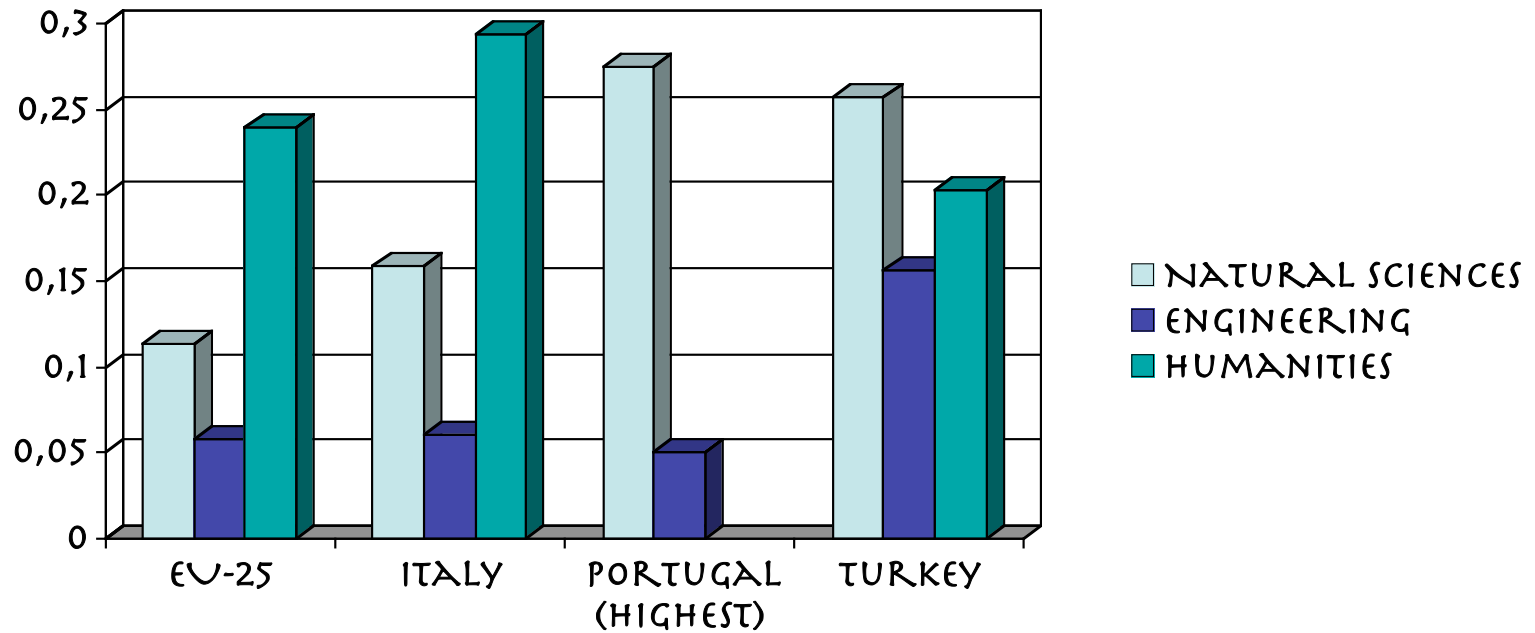
Grade C: Data unavailable: FR, Exceptions to the reference year: AT: 1998; PL: 2000; FTE: NL, BE (FR)

Grade B: Exceptions to the reference year: AT: 1998; FR, PL: 2000; FTE: NL

Grade A: Exceptions to the reference year: AT: 1998; FR, PL: 2000; FTE: NL

SENIORITY IN S&T, 2004

PROPORTION OF FEMALE GRADE A STAFF



THE EU FUNDED RESEARCH

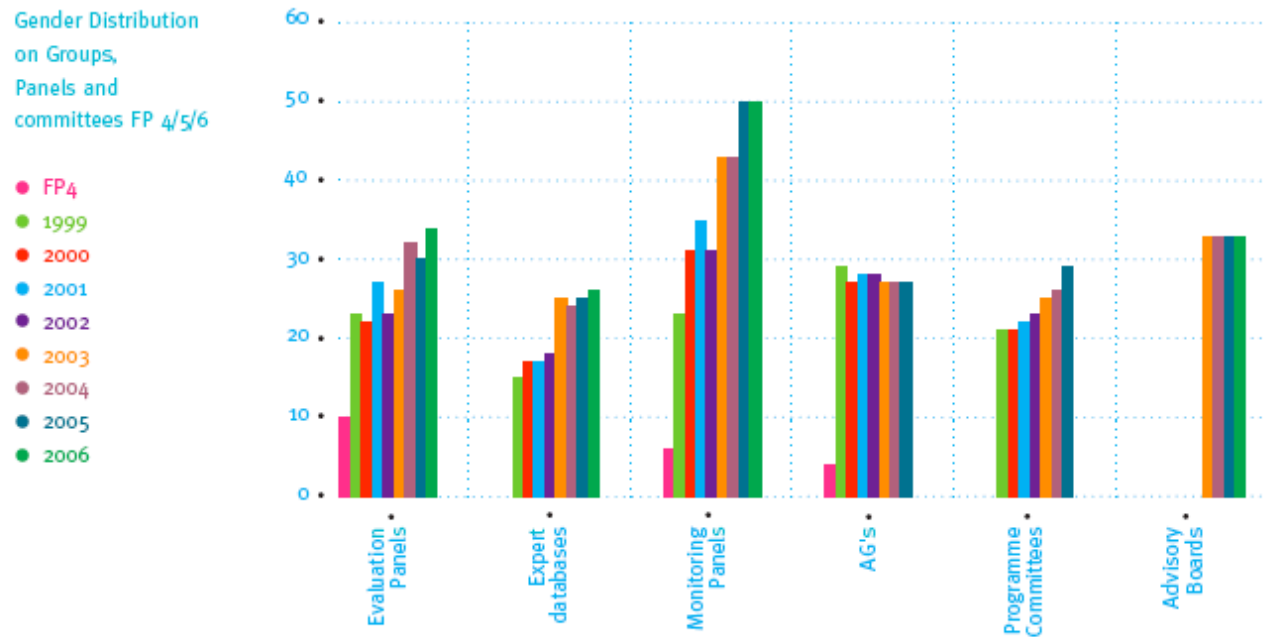
- The EU funds evaluate a large number of proposals in all fields of science and has become a very important funding source
- Among the type of projects there are
 - Individual grants and fellowships (Marie Curie)
 - Prizes
 - Research and Training Network grants - a structure “invented” by Bruxelles

THE RESEARCH AND TRAINING NETWORKS

- Networks of researchers, at least 3 different member states
- Typically 10-12 institutions from 5-8 different countries
- Average budget 4 Meuro for a 4 year period
- Chosen through an evaluation process resulting in a 10 % success rate

EU RECOMMENDATION : GOAL OF
40% WOMEN IN ALL SCIENTIFIC
PANELS

WHAT THE EU IS DOING TO EMPOWER MORE WOMEN IN S&T



Source: DG Research

- Aim to 40% presence of women in scientific panels
- Presently roughly 30%, even in physics
- Vademecum for project officers

EVALUATION PANELS

- Women are well represented at the evaluation level even in hard sciences, like physics
- Evaluation panels have a typical **30-40 % women presence**
- Evaluators are chosen among a very larger pool where women are well represented : Europe is very large with many Government research Institutions and prestigious universities -> the pool is large

IS IT DIFFICULT TO REACH A 30% WOMEN PRESENCE?



- Not difficult since the independent expert evaluators are chosen among a **large pool of scientists** mostly from Europe, both universities and industry, and there are **many excellent women**

IS THIS POLICY EFFECTIVE?

- In general, the **evaluation** process, once launched, is **gender-blind** except that one of the evaluation criteria - typically ***impact or added value - includes*** a concern with equal opportunity
- In principle it could be used to promote projects which have women in prominent network positions, like node-scientists or members of Executive Committees
- it does help to focus on the existence of **excellence among women scientists**

NEXT SLIDES WERE NOT
SHOWN BECAUSE OF TIME
LIMIT

TWO EXAMPLES OF GENDER DISTRIBUTION IN HIGH ENERGY PHYSICS

- CERN
 - DELPHI experiment at LEP
 - ATLAS experiment at LHC



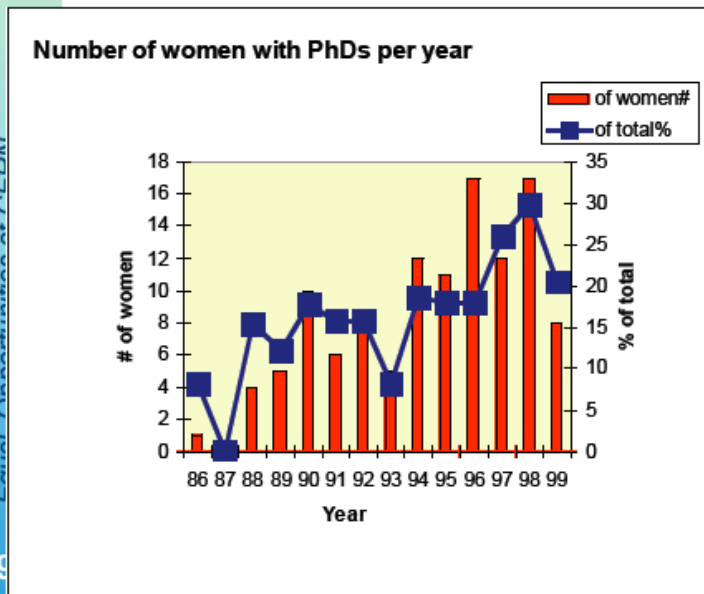
Equal Opportunities at CERN



Tiziano Camporesi - Chair of the Equal Opportunities Advisory Panel

AT CERN

Women have appeared in the research job market lately



Study performed within the DELPHI experiment at LEP (more than 750 thesis over the life of the experiment!)

Early 1980's: <5% women students. 2000: 25% of students are women

The CERN hiring statistics in recent years shows that these women physicist and engineers have equal chances (in fact slightly better) than their male colleagues

HIGH ENERGY PHYSICS IN A WORLD-WIDE EXPERIMENT

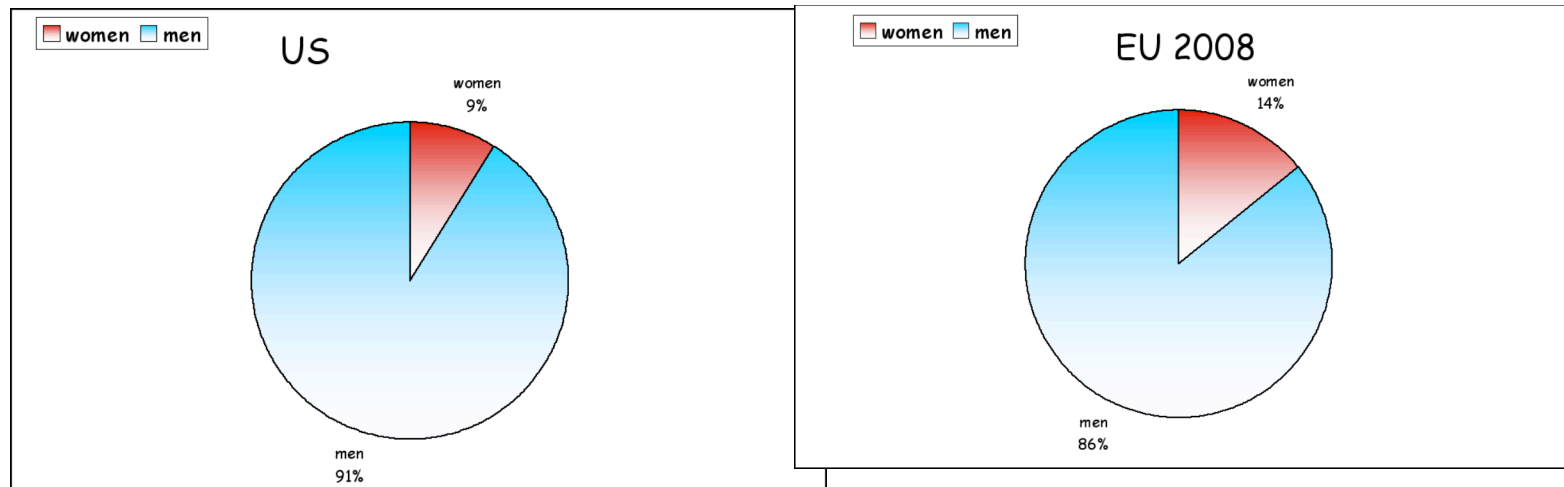


- ATLAS is a Large hadron Collider experiment with over 2000 high energy physicists from everywhere in the world and its gender composition sheds light on how different countries are represented in proportion of women scientists

HIGH ENERGY PHYSICS : THE ATLAS EXPERIMENT

<https://twiki.cern.ch/twiki/bin/view/Atlas/AtlasWomenPage?>

US VS EU IN ATLAS 2008



- Women from EU are present in larger proportion than from US
- Possibly also because of need to commute from US to Europe (family is a problem)

(SOME) WOMEN IN ATLAS(2008)

