


**GENDER-NET:**  
Promoting Gender Equality in Science and Research  
**Workshop «Stereotypes»**  
Olga Vinogradova, SCHR/ICFG

NCCR PlanetS General Assembly  
Grindelwald, 25 January 2017



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### Aim of the workshop

- To promote gender equality in Science
- To share experiences and knowledge on how to overcome barriers such as gender-based stereotypes
- “Highlights”



30.05.2016, Olga Vinogradova, IZFG



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### Overview

1. Introduction & Context: Gender Equality & Structural Change in S&T at an institutional level
2. GENDER-NET Project: Key finding and recommendations
3. Challenging gender-based stereotypes in STEM
4. Summary and conclusions, next steps

(75' minutes....)



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1. Introduction & Context:  
Gender Equality & Structural Change in  
science and research at an institutional  
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1. Introduction & Context: Gender Equality

- Gender equality and non-discrimination – human rights imperative
- We still struggle with number of barriers - de jure – de facto

**Global Overview**




143 out of 195 countries guarantee equality between women and men in their constitutions as of 2014

YET, DISCRIMINATION AGAINST WOMEN PERSISTS IN MANY AREAS, DIRECTLY AND INDIRECTLY, THROUGH:

- laws and policies
- gender-based stereotypes
- social norms and practices

Gender equality before the law does not necessarily mean that women in practice have equal opportunities.

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1. Introduction & Context: Gender Equality in S&T

Legal – policy:  
Women of all ages have the right to enjoy the benefits of scientific progress and its applications, which includes

- access without discrimination to the benefits of science and its application, including scientific knowledge;
- opportunities to contribute to the scientific enterprise and freedom indispensable for scientific research;
- participation in decision-making and the related right to information;
- And an enabling environment fostering the conservation, development and diffusion of science and technology (S&T).

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### 1. Introduction & Context: Gender Equality in S&T


**Barriers**

- Gender stereotypes,
- Cultural barriers,
- Institutional barriers and
- Low quality of education

continue to affect the full and equal access to and participation of women and girls in science, technology and innovation, their career choices and opportunities in science, technology, engineering and mathematics (STEM) fields, as well as women's access to and use of information and communication technologies (ICT).

- The various obstacles that women face may also impact their access to research funding.

**GENDER-NET**  
European Union Horizon 2020 Marie Skłodowska Curie Actions




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### 1. Introduction & Context: Gender Equality in S&T

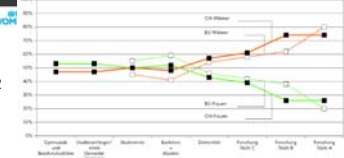
**Realities 1**

**EDUCATION**

All developing regions have or have almost achieved gender parity in primary education.

But the gender equality gap at the secondary and tertiary school levels in many countries.

Die 'Gender-Parität' in der Schulpflicht  
 Hochschulquote nach Abschlüssen und Geschlecht  
 in den OECD-Ländern




**Realities 2**

Quelle: Infographics UN Women

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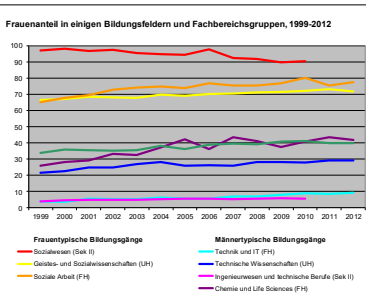
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### 1. Gender Equality in science and research

**Realities 3**

**Frauenanteil in einigen Bildungsfeldern und Fachbereichsgruppen, 1999-2012**



**Frauentypische Bildungsgänge**

- Sozialwesen (SoK II)
- Geistes- und Sozialwissenschaften (LH)
- Soziale Arbeit (FH)

**Männertypische Bildungsgänge**


- Technik und IT (FH)
- Technische Wissenschaften (LH)
- Ingenieurwesen und technische Berufe (Bak I)
- Chemie und Life Sciences (FH)
- Exakte und Naturwissenschaften (LH)

SoK II: berufliche Grundbildung auf Sekundarstufe II  
 FH: Fachhochschule (Tertiärlauf)  
 LH: Universität/Technische (Tertiärlauf)

Quelle: Bundesamt für Statistik, Statistik der Schülerinnen, Schüler und Studierenden, SS15

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Source: Bundesamt für Statistik




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### 1. NCCR PlanetS Context: gender situation for 2015

	Female % of total	Male %
<b>ETHZ (all departments)</b>		
Ph.D.	31%	69%
Postdoc	28%	72%
Oberassistent	25%	75%
Senior Scientist	15%	85%
Full Professor	11%	89%
<b>UniBe (Fakult. Phil_Nat.)</b>		
Ph.D. (abscht)	39%	61%
Postdoc	N/A	N/A
Unterer Mittelbau	36%	64%
Oberer Mittelbau	22%	78%
Full Professor	8%	92%
<b>Unige (Faculte des Science)</b>		
Ph.D.	44%	56%
Postdoctorant-e	32%	68%
Coll.enseignement et recherche	33%	67%
Professeur-e ordinaire	7%	93%
<b>Uniz</b>		
Ph.D.	52%	48%
Postdoc	N/A	N/A
Mittelbau	43%	57%
Ordentlicher Professor	15%	85%

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### 1. Introduction & Context: Gender Equality in S&T

Eliminating gender discrimination in access, use and control of S&T incorporates three main aspects:

1. the participation of women and girls in S&T education and employment;
2. their access to and use of technology;
3. and the need to integrate a gender dimension into research content and product design.

To this end, all necessary frameworks, including legal, policy and programme frameworks at national level, as well as measures at the institutional level, are to be promoted, including addressing the issues of recruitment, retention, promotion and recognition of women in S&T employment as well as integration of a gender dimension into S&T research.

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### 1. Introduction & Context: Gender Equality & Structural Change

- Gender equality and promotion of women in the S&T -  
- 3 Approaches to respond to the barriers and challenges :

1. "Fix the Women"
2. "Fix the Institution"
3. "Fix the knowledge"

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1. Introduction & Context: Gender Equality & Structural Change

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"Fix the Women" - NO



"Fix the Institution" - YES

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1. Introduction & Context:  
Gender Equality & Structural Change

- **Structural (institutional) change =**  
approach to respond to the challenges at the institutional level in strategic and systematic way.
- **Essential elements of Structural change:**
  - making decision-making practices more transparent
  - removing unconscious bias and stereotypes from institutional practices
  - promoting excellence through diversity
  - modernising human resources management and the working environment

*"Structural change in research institutions: Enhancing excellence, gender equality and efficiency in research and innovation"  
(European Commission 2011)*

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1. The European context: Science and Technology

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- Gender equality and non-discrimination = human rights
- Gender equality part of the European research and innovation policy
- Number of women graduates growing faster than number of men
- Subject segregation
- Women underrepresented in top positions:
  - Grade A professors
  - Decision-making positions and on boards
  - Heads of institutions

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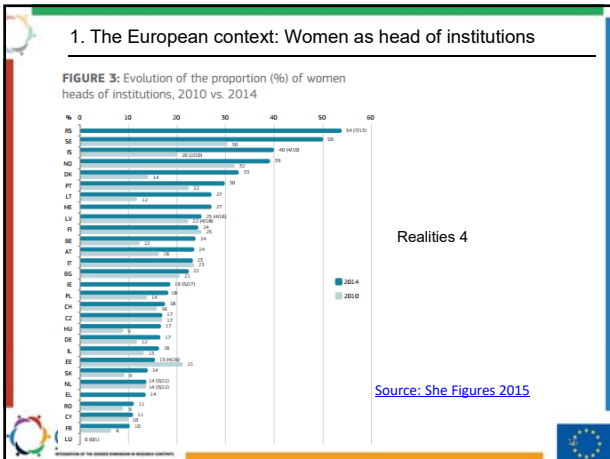
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### I The GENDER-NET Consortium

**Coordinator:** CNRS

**14 Partners:**

- 5 Ministries / State Secretariats (France, Spain, Slovenia, Switzerland, Israel)
- 7 National RFOs (Norway, Ireland, Belgium, Cyprus, Canada, US)
- 1 National RPO-RFO (France)
- 1 National charity organisation (UK)

**10 Observers** (Germany, Canada, Austria, Norway, Czech Republic, Iceland, US, NordForsk)

**International Expert Advisory Board**

**GENDER-NET Swiss Team =** SBF/swissuniversities/ IZFG

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### 2. GENDER-NET Project: Gender Equality in Research Institutions through Structural Change –

**Key finding from mapping and analysis, recommendations**

Plans and initiatives in selected research institutions aiming to stimulate gender equality and enact structural change

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## 2. Key findings from mapping and analysis

- Scope of the mapping and analysis:**
  - National/ Regional level** → GENDER-NET partner & observer countries (Deliverable analysis report 2.5)
  - Institutional level** → academic institutions selected by GENDER-NET participants from countries with existing national initiatives (N= 50 institutions: universities, universities of applied sciences, research institutions) (Deliverable [analysis report 2.6, Vinogradova et al., 2015](#))
- 5 Thematic areas** based on essential elements of structural change:
  - Decision-making** structures and procedures at regional and national levels
  - Anchoring gender equality issues at **leadership level**
  - Recruitment, retention and advancement** of women researchers
  - Improving work environment, **work-life balance** and dual careers
  - Facilitating in-/outgoing researcher **mobility** for women researchers

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## 2. Key findings from mapping and analysis (cont.)

- Strategic objectives** regarding gender equality indicated by institutions:
 

Strategic Objective	Percentage
To increase the number and proportion of women in professional academic/ research/ full-time careers/ staff	22%
To increase the number and proportion of women in senior management positions	10%
To change structure on all levels towards greater gender equality	62%
To increase the number of female scientists in technology and science research	61%
To ensure work environment and work-life balance	67%
To manage personnel issues to ensure gender equality	52%
To extend the gender equality best practices within the whole institution	41%
To improve gender equality in career path, including researcher promotion, scientific awards	12%
To achieve significant progress in implementing the GEF	10%
To include gender dimensions in research content	72%
To introduce gender equality monitoring mechanisms	22%
To introduce more gender equality measures and promote change process with impact on gender equality	4%

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## 2. Key findings from mapping and analysis

- Enabling structural change at institutional level**
  - The summary map of **Most Common and Innovative Practices (MCIPs)** implemented in **52** selected institutions from CH, DE, ES, FR, IE, NO and UK provides an overview of **84** actions classified according to five areas (for full list please refer to Annex 1 of the report 2.6)
  - Selection of measures could vary and should be **tailored to the concrete needs of an institution**; while some initiatives and measures are **low-cost and easily implemented**, others will require **dedication of sufficient and long-term funding**; some measures may also be **transferable to other countries and contexts**.

Annex 1: Mapping Most Common and Innovative Practices (MCIPs) in selected institutions

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## 2. Key findings from mapping and analysis (cont.)

- **Fostering structural change**
  - ❑ **Institutional Gender Action Plan (GEP), also called Transformational Gender Action Plans (T-GAP) and Gender Equality and Diversity Action Plan (D-GEP) could be an instrument** enabling the structural change at institutional level in a strategic way, e.g. addressing all its essential elements, increasing institutional capacity to ensure gender equality, as well as eliminating organisational and structural barriers, transforming structures and practices, incorporating targeted measures into daily business
  - ❑ **Gender equality units and networks of practitioners** (at national, institutional, international levels) play a crucial role regarding the implementation of GEPs

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## 2. Key findings from mapping and analysis

- **Fostering structural change**
  - ❑ **Leadership involvement** is vital, but few measures specifically target leaders
  - ❑ **Working environment and work-life balance: some promising measures** specific to research careers (e.g. grant extension/relief from teaching after parental leave, dual-career)
  - ❑ Although **researcher mobility** is crucial for the ERA, **very few national initiatives** exist that address gendered challenges
  - ❑ **Gender equality monitoring**, through appropriate quantitative and qualitative indicators is an important instrument in ensuring the long-term, sustainable and effective institutionalisation of gender equality at an institutional level

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## 2. Key findings from mapping and analysis

- **Factors that contribute structural change**
  - **Top-leadership support** on gender equality issues at an institutional level, including approval of GEP at the top level
  - Visibility of **women researchers** and their active involvement as **agents of change**
  - **Cooperation** between different structural units, especially between top leadership officers and the gender equality officer/adviser at an institutional level
  - Collection, analysis, strategic use and dissemination of **gender-monitoring data**
  - **Gender-balanced commissions** at all levels (including boards)
  - **Systematic awareness raising and capacity-building concerning gender stereotypes**
  - **Integration of gender-equality aspects** into the leadership programme for the management, training courses for academic and non-academic staff

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## 2. Key findings from mapping and analysis

- Example: T-GEP of CNRS France

... and "Absolutely Everybody"

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## 3. Challenging gender-based stereotypes in STEM

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## 3. Challenging gender-based stereotypes in STEM

**Factors** that contribute structural change:

- Systematic awareness raising and capacity-building concerning **gender stereotypes is crucial.**
- Targeting change in mind-sets and institutional culture (e.g. creation of ownership, "absolutely everybody" approach)
- Unconscious biases – Stereotypes - Discriminatory behaviour

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### 3. Challenging gender-based stereotypes in STEM

Factors that contribute structural change:

- Systematic awareness raising and capacity-building concerning gender stereotypes is crucial.
- Targeting change in mind-sets and institutional culture (e.g. creation of ownership, "absolutely everybody" approach)
- Apart from the structural barriers much of inequalities come from our perceptual obstacles
- Unconscious biases – Stereotypes - Discriminatory behaviour



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### 3. Challenging gender-based stereotypes in STEM

- Unconscious biases – Stereotypes - Discriminatory behaviour



UK National Academy of Science  
Link to video: <https://royalsociety.org/topics-policy/publications/2015/unconscious-bias/>



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

### 3. Example: Gender bias in hiring in science faculties



Staff in science faculties have been **consciously** biased and deliberately chose the male candidate because they wanted a man

Staff in science faculties have been **using policies and procedures that are structurally biased in favour of male candidates**

Staff in science faculties have been **biased**, but they were **unaware** they were doing it



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### 3. Challenging gender-based stereotypes in STEM

- Gender stereotypes are oversimplified assumptions about women's and men's characteristics, abilities, behaviour and value.
- Gender stereotypes are common in all societies.
- They are often culture- and religion-based, and reflect underlying power relations.
- Rigid gender stereotypes hinder women's and men's ability to fulfill their potential by limiting choices and opportunities, and deprive them of equal knowledge, exercise and enjoyment of rights and fundamental freedoms.



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### 3. Challenging gender-based stereotypes in STEM

**Exercise:**

- **counter argument** for each statement
- Write done
- Report back
- Time for group work 15+ minutes
- Time for report back and discussion 15+ min



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### 3. Challenging gender-based stereotypes in STEM

1. Different proportions of women and men are found among people with very highest levels of math ability.
2. Women and men differ naturally in their scientific interest.
3. Women and men differ in their willingness to devote the time required by such "high-powered" positions.
4. Women and men differ in their willingness to spend time away from their families.



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4. Summary, conclusions, next steps after this workshop

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4. Summary, conclusions, next steps

- **Check** your gender-based stereotypes – please complete the Test, link will be send to you by NCCR Gender Equality Officer
- **Read** the Gender Equality Action Plan & Act
- **Additional Training** – please contact your NCCR Gender Equality Officer and Gender Equality Units of your home institution
- **Additional materials, fact and figures** – workshop materials, list of recommended materials and readings will be send per email.

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**Contact**

**Thank you very much for your attention!**

**For more information:**  
Analysis report online <http://www.gender-net.eu/spip.php?article55&lang=en>  
Olga Vinogradova: [olga.vinogradova@izfg.unibe.ch](mailto:olga.vinogradova@izfg.unibe.ch)

SCHR: [www.skmr.ch](http://www.skmr.ch)  
ICFG: <http://www.izfg.unibe.ch>  
Gender-Net Project: [www.gender-net.eu](http://www.gender-net.eu)

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