

Review of the Implementation in the EU of area K of the
Beijing Platform for Action: Women and the Environment

Gender Equality and Climate Change

Main findings



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Foreword

Climate change is a multiplier of environmental changes and has major impacts on the lives of women and men. These impacts and consequences are not gender-neutral. Women and men have different needs, priorities and possibilities of mitigating the effect of the impact and adapting to climate change. Therefore policies on climate change and actions taken can be more effective and enhance equality if they take into account gender aspects.

The following publication summarises the main findings of EIGE's Report on implementation of one of the twelve areas of concern of the Beijing Declaration and Platform for Action for Equality, Development and Peace (BPfA). Like the second report, it continues the series of EIGE reports, prepared in support of the Presidencies of the EU Council, in the follow-up of the BPfA. The topic of the Report selected by the Danish Presidency of the Council of the European Union is gender equality and climate change and it focuses on the participation of women and men in decision making in the public sector, related to climate change and education in scientific and technical fields.

Given that this area is considerably broad and unexplored, the analysis and discussions have been focused on women's involvement in decision making related to climate change and segmentation of education by gender. It presents data on women's participation in decision making on climate change in the public sector, demonstrating a low level of participation by women, whether it is on national, EU or international level. The report also presents the latest available sex disaggregated data on women's enrolment rates in natural sciences and technology related tertiary education in the EU Member States. EIGE proposes to introduce new indicators in this area.

The findings demonstrate that women are less likely than men to choose scientific and technological subjects. The proportion of women tertiary graduates is particularly low in engineering and transport – two fields particularly related to the transport and energy sectors that are important for climate change.

In 13 Member States women occupy at least one-quarter of the high level positions in the three public sectors analysed – transport, energy and environment; the environment sector being more gender balanced than the transport and energy sectors. In four Member States the representation by women is even less than 15%.

As was concluded by the Ministers of the Nordic Countries in 2009, "we need the talents and resources of everyone. Men and women think in different ways and contribute differently to solutions. In order to ensure this diversity, men and women must have equal opportunities to influence and benefit from the investments that are made to address climate change (adaptation/mitigation). This process will make men and women equal and full-fledged collaborative partners and citizens."¹

We are grateful to everybody who contributed to this publication and especially to the European Commission Directorate-General for Justice and EIGE's Working Group on Beijing indicators. The publication brings additional substantiated evidence to the debates on gender equality and equal opportunities for women and men in the European Union.

Virginija Langbakk
Director

The European Institute for Gender Equality (EIGE)

The European Institute for Gender Equality is an autonomous body of the European Union, established to contribute to and strengthen the promotion of gender equality, including gender mainstreaming in all Community policies and the resulting national policies, and the fight against discrimination based on sex, and to raise EU citizens' awareness of gender equality. Further information can be found at www.eige.europa.eu

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Introduction

The 4th World Conference on Women, held in Beijing in 1995, officially adopted the Beijing Declaration and Platform for Action for Equality, Development and Peace (BPfA). The BPfA outlines strategic objectives and actions to be taken by the international community, national governments and civil society for the promotion and protection of human rights for women and the girl child as inalienable, integral and indivisible elements of universal human rights and fundamental freedoms of all women throughout their lives.

By signing up to the document, the 27 Member States of the European Union (EU) officially acknowledged their responsibility for taking action to implement the BPfA and undertook to monitor and report on progress in each of the areas of concern. Although primary responsibility for the advancement of women lies with national governments, the EU was involved in drawing up the Beijing Declaration and supports its Member States in taking action.

Since 2010 the European Institute for Gender Equality (EIGE) has been supporting the Presidencies of the Council of the European Union in the follow-up to the BPfA. Denmark, which holds the Presidency of the Council of the EU during the first half of 2012, decided, in cooperation with the Commission, the High Level Group on Gender Mainstreaming and EIGE to review the area entitled Women and the Environment focusing on gender equality and climate change and thereby to propose indicators in this area. Two important dimensions of objective K.1 have been considered: women's participation in climate change decision-making at the national, EU and international levels, and the proportion of women tertiary graduates in scientific and technical fields related to climate change.

This summary presents the main findings of the report.²

The gender dimension of climate change

Climate change is one of the greatest challenges of the modern era. It is an important area of policy intervention in the European Union. The EU has adopted an integrated approach to climate and energy policy and plays a leading role in strengthening global efforts to protect the climate. Moreover, the EU is committed to striving for equality between women and men in all its activities. EU commitment to gender mainstreaming calls for actions and concrete measures so that a gender equality perspective is incorporated in environmental policies and programmes at all levels and at all stages by the actors involved in policy-making.

Climate change is a statistically significant variation in either the mean state of the climate or its variability, persisting for an extended period. According to the Intergovernmental Panel on Climate Change (IPCC),³ there is no doubt that warming of the climate system is actually taking place, according with the evidence of global average air and ocean temperatures increases, melting of snow and ice in the northern hemisphere and rising sea levels, all affecting natural and human environments.

Anthropogenic or human-induced climate change, caused by greenhouse gas (GHG) emissions, is widely acknowledged as one of the greatest challenges of our time. The expected impacts of climate change in the EU include more frequent extreme weather events, high temperatures and drought (in particular in Southern Europe), retreat of glaciers and reduced snow cover. Consequenc-

es will include increased risk of flash floods and coastal flooding, increased erosion, more frequent wildfires, extensive species loss, reduced water availability and crop productivity. These geo-physical impacts will result in socio-economic impacts such as effects on human health and pressure on economic activities such as tourism.

In Europe, the energy and transport sectors are responsible for the bulk of GHG emissions; therefore, they are key to mitigation, or the prevention of future climate change. According to data from the European Environment Agency (EEA),⁴ the most important sources of GHG emissions across the EU-27 are that of fuel combustion for energy transformation, transport, and a range of industrial activities. Also important are agriculture and waste. It is noteworthy that the share of transport in overall GHG emissions increased from 13.8% in 1990 to 20.2% in 2009.

The EU has taken the lead in developing ambitious climate change policies and has put in place various initiatives.⁵ In addition to these initiatives within the EU, international negotiations are taking place within the UN Framework Convention on Climate Change (UNFCCC). These aim at an agreement on further commitments and mechanisms to reduce global warming, to cope with its inevitable impacts and to provide financial support to developing countries.

The gender dimension of climate change has so far been relatively absent from these debates and policy initiatives in the EU and other developed

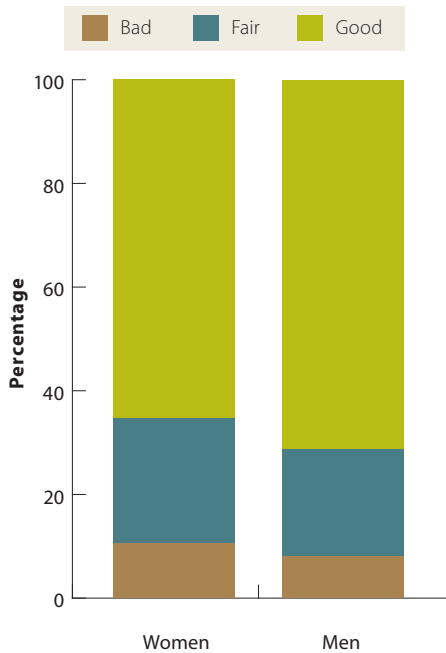


countries. This is an important issue to be considered as socially constructed roles and identities as well as underlying power dynamics affect the way women and men contribute to, experience and respond to climate change.

Women and men are, firstly, affected differently by the impacts of climate change. Gender-differentiated roles and responsibilities in families and households as well as gender segregated labour market and income gap, cause differentiated vulnerabilities of women and men to the effects of climate change (Figures 1, 2 and 3). They include more casualties among women

during extreme weather events and stressful experiences of recovering from disasters. Economic disparities lead to differences in adaptive capacity. On average, women's salaries and assets are lower than men's. This may place single mothers and elderly women in a disadvantaged position when expensive adaptation measures are required. Furthermore, care work may increase due to health impacts of climate change, or due to natural disasters, putting additional burdens on those who are mainly responsible for caring.

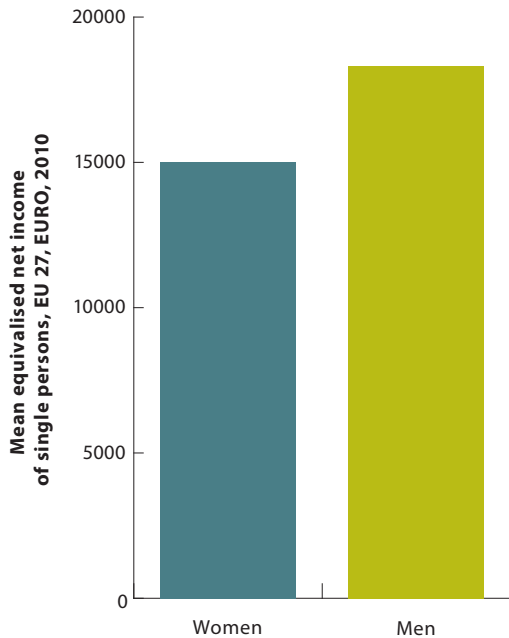
Figure 1: More women assess their health as bad



Climate change impacts on well-being and in particular on health

Source: Eurostat, EU-SILC (hlth_silc_01)

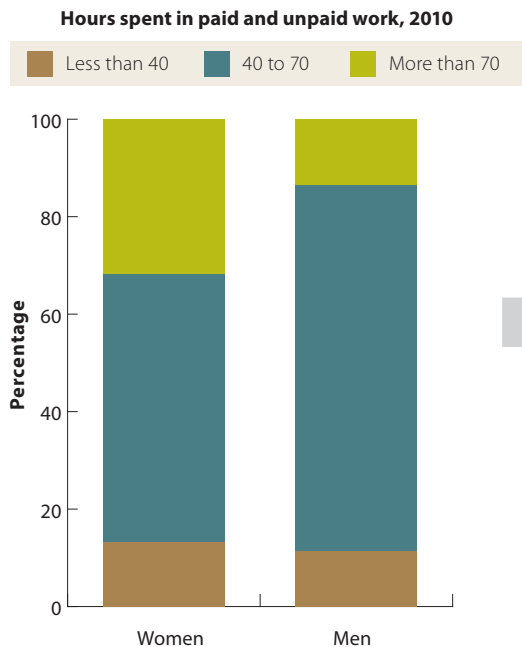
Figure 2: Women have lower income, especially single mothers and the elderly



Women are likely to be particularly disadvantaged when expensive adaptation measures are required as they may not have the means to address climate change and protect themselves

Source: Eurostat, EU-SILC (ilc_di04)

Figure 3: Women work more in paid and unpaid work including caring for family members, housework etc.



Care work may increase due to health impacts of climate change, or due to natural disasters, putting additional burdens on those who are mainly responsible for providing care

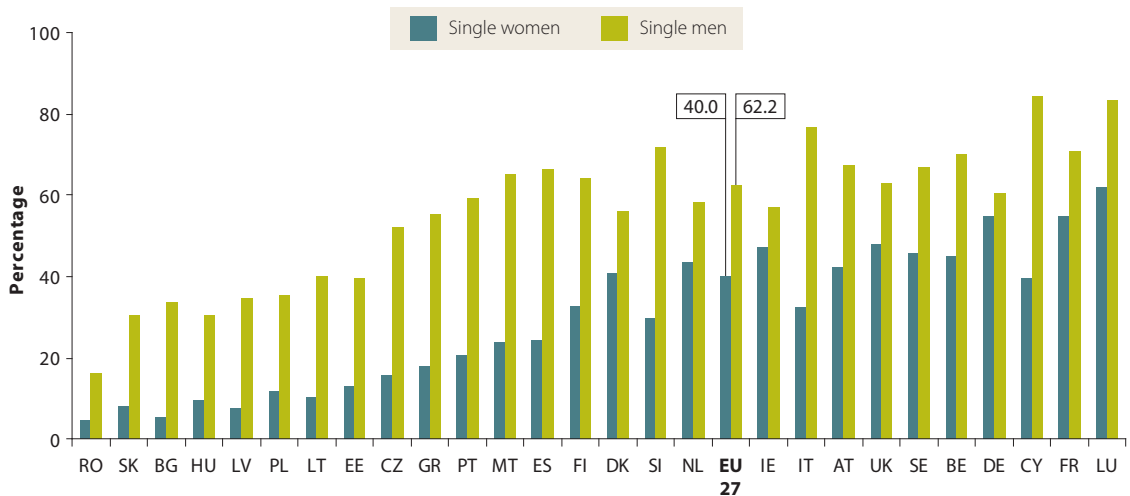
Source: European Working Conditions Survey



Secondly, there is evidence that women and men living in Europe contribute differently to GHG emissions, and thus to climate change. These differences are based on gender roles and identities that affect the behaviour and consumption patterns of women and men. The few quantitative data that are available indicate that women, on average, generate less gas emissions than men, in particular in the transport sector. Significant stud-

ies have shown that women and men have different travel patterns, and that women tend to travel in a more sustainable way than men. Nutrition is another example, as women's daily meat consumption tends to be lower, and raising livestock contributes to agricultural GHG emissions. Women also tend to be more aware of environmental and health issues, and more willing to change their behaviour in response to environmental pressures.

Figure 4: Percentage of single person households by car ownership, 2009



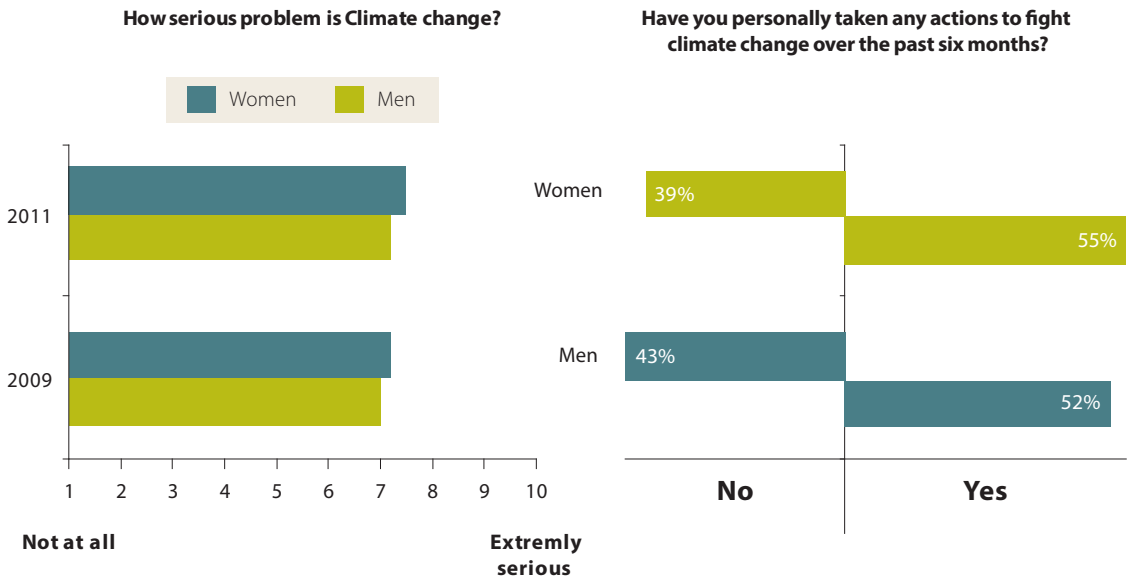
Source: Eurostat, EU-SILC (data calculated by Eurostat at the request of EIGE)

Thirdly, women and men have different capabilities to mitigate and adapt to climate change at the individual level. Research has shown that the options available to women and men to convert to a low-carbon lifestyle are shaped by education, gender roles, division of labour in the household and income. For instance, women tend to spend more time indoors as they more often have care responsibilities in their families, and thus depend to a greater extent on space heating. For mobility, women depend on access to public transport to a larger degree (Figure 4), due to lower levels of car ownership and because of their preferences for the use of environmentally-friendly solutions (public transport). Owing to their lower incomes, women have a greater risk of energy poverty than men, and have fewer options for investing in low carbon options such as energy efficiency and re-

newable energies. Moreover, women feel less well informed about such options and express a greater need for adequate information.

A fourth aspect is that women and men have different perceptions of and attitudes towards options for climate change mitigation (Figure 5). Women, in general, are more concerned about climate change. They feel a greater need for action to tackle climate change, and are more likely to be willing to change their behaviour. Men generally have more trust in technological solutions. The preferences of women and men in terms of energy supply options vary significantly. For example, women are more likely than men to reject nuclear power. Women are more in favour of policy measures to reduce car use than men.

Figure 5: Attitudes towards climate change, 2009 and 2011



Source: Eurobarometer survey

Report: Climate change, http://ec.europa.eu/public_opinion/archives/ebs/ebs_372_en.pdf

Note: the EU-wide average values are sex-disaggregated and they might not show the sex-based differences that can be substantial in some countries

Finally, women and men are affected differently by the socio-economic impacts of climate policy. Women and men – largely owing to their gender roles, power relations, incomes and assets – have differing vulnerabilities to climate change and contribute in different ways to harmful global GHG emissions. They have differentiated capabilities to

mitigate emissions as well as differing coping and adaptation strategies and distinct perceptions and preferences regarding policies and measures to reduce emissions. All of these gender differences need to be taken into account when developing climate change policies, measures and instruments.



Cross-cutting all these dimensions is the issue of power relations and participation in climate policy, addressing the question of who is planning and deciding, and how the planning and decision-making are carried out. An equal representation of women and men in decision-making positions, in climate change research, technology development and in international negotiations is an important prerequisite for gender-responsive climate change policy.

The limited consideration this dimension of climate change policy has received to date can be partially explained by an overall lack of awareness of the aspects mentioned above. In addition, there is a lack of research that provides stronger evidence to consider the gender aspects in climate change policy making in the EU. Climate change is often still considered as a “gender-neutral” policy.

The link between gender-sensitive climate policy and gender equality in decision-making has not been sufficiently researched. Nevertheless, gender equality in decision-making is a question of democracy and justice, and thus is a goal in itself. The higher enrolment of women in science and technology related fields that lead to careers in the energy and transport sectors is a prerequisite to obtaining entry to the institutions and power structures which control and support climate change policy making.

This report proposes indicators to measure the extent of women’s participation in decision-making in public sector on climate change policies at national, EU and international levels in the sectors of environment, transport and energy in the Member States and at the EU level, and segmentation of education by gender in the areas of natural sciences and technologies.

Gender equality and climate change: new indicators

The proposed indicators measure the involvement of women in decision-making on climate change in the public sector and segmentation of education in fields related to environment and climate change. To address these issues, the indicators cover the proportion of women in climate change decision-making bodies at national, EU and international level and the proportion of women tertiary graduates in natural sciences and technologies at the EU and Member States level.

Proposed indicators address national, EU and international political decision-making levels. While climate change decision-making undoubtedly occurs at the local and regional levels as well, the data sources for this are very dispersed and difficult to collect. Moreover, as there is great variety in types of local and regional authorities across the EU Member States, establishing a comparable basis for data collection would be very difficult.

Climate change is by its nature a multi-sectoral issue, and impacts the work of a wide range of sectoral institutions. In the EU, competence for policy making that directly addresses climate change (e.g. GHG emissions targets, overall adaptation strategies, etc.) is typically located within environmental authorities. The transport and energy sectors are together responsible for the majority of GHG emissions and have important roles in determining responses to climate change. The proposed indicators therefore focus on these three sectors and, where possible, on specific departmental re-

sponsibilities that are related to climate change, including sustainable transport and energy.

Education is one of the factors grounding a career path for decision-making positions. In line with the decision to focus on the energy and transport sectors, the fourth indicator considers the proportion of women graduates in natural sciences and technologies, focusing on tertiary education – the degrees that are necessary for high-level professional qualifications. Natural sciences cover subjects like biology, chemistry and physics, which are often the educational background for professions in the environment sector – but can also relate to the energy sector, particularly with regard to renewable energy technologies. Technologies include the study of all engineering disciplines, including electricity and different energy sources, transportation services and engineering, civil engineering and building, and environmental protection. Technical education in these fields prepares graduates to contribute to policy making on the regulation and use of processes and technologies to combat climate change; these include energy efficiency in buildings, renewable energy markets, automotive solutions, urban public transport, and many others.

The four indicators addressing the role of women in climate change decision-making in the public sector and women graduates in scientific and technological fields are presented below, along with the key data to support them.



Participation in climate change decision-making

Besides the various gender dimensions of climate change and its impacts that were previously introduced, it is important to address the question of who determines how the planning and decision-making processes take place, and how research informs and shapes them.

Indicator 1:

Proportion of women in climate change decision-making bodies at the national level in EU Member States

This indicator provides information on the percentage of women and men in national authorities with the highest level of decision-making competences (typically ministries) in environment/climate change, transport and energy policy.

Ministerial positions within three sectors across 27 Member States (81 institutions) were classified into three hierarchical levels of decision-making. Level 1 covers the highest levels/positions in the Ministry (political level), Level 2 covers the top level of managerial or administrative decision-making in the Ministry, and usually the civil servant who is the head of the Ministry and Level 3 will cover the heads of sectoral departments or divisions.

Women are slightly less likely to hold level 1 positions than levels 2 or 3: only 18.2% of positions (or 29 of 159) on level 1 are held by women, while 27.0% of positions (or 41 of 152) on level 2 and

27.6% of positions (or 132 of 479) on level 3 are held by women.

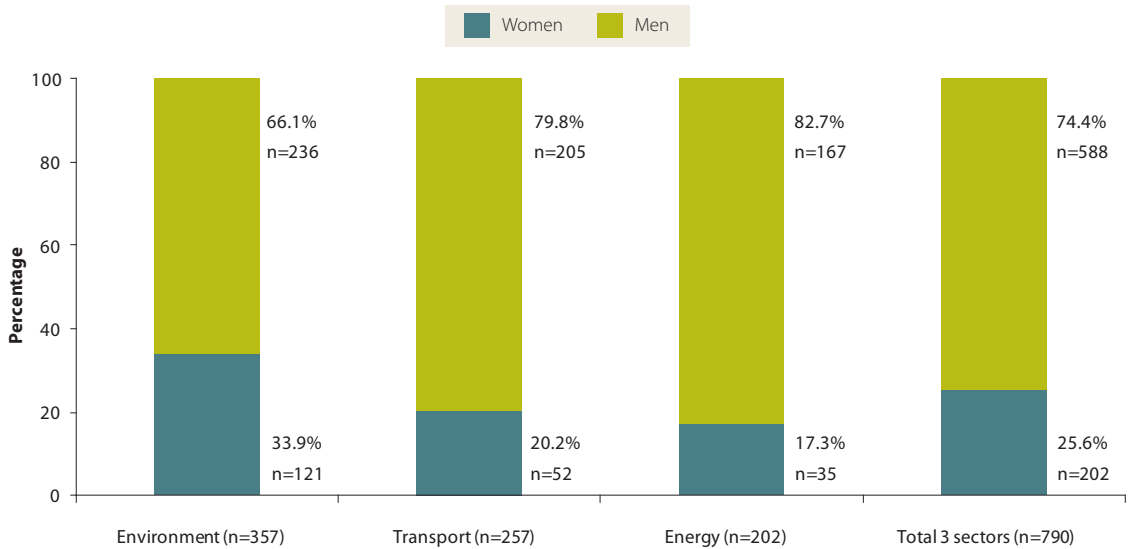
The indicator shows the extent to which women occupy positions relevant for climate change decision-making, which is an indicator of their overall role in decision-making. Data is broken down into the three sectors, and the total figure calculates the sum of all positions considered in 2011.

At the national level, women in EU Member States appear to play a greater role in high-level decision-making in the environment sector, as opposed to transport and energy. In 2011, women occupied more than one-third (33.9%) of high-level positions relevant to climate change in the environmental sector; the respective figure for the transport sector stands at 20.2%, and 17.3% for the energy sector (Figure 6). The average figure for all sectors is just above one quarter (25.6%).

The role of women in climate change-related ministries varies considerably across the Member States (Figure 7). Only Finland and Sweden have equal number of women and men (50.0%) occupying high-level positions related to climate change decision-making in the environment, transport and energy sectors. Other Member States with figures above the average are Bulgaria, Cyprus, Denmark, Estonia, France, Greece, Ireland, Latvia, Poland, Romania and Spain.

On average, women occupy 25.6% of high-level decision-making positions in the environment, transport and energy sectors in the Member States. Women's role in political decision-making (level 1) is lower in proportion to operational or department head positions (level 2 and 3).

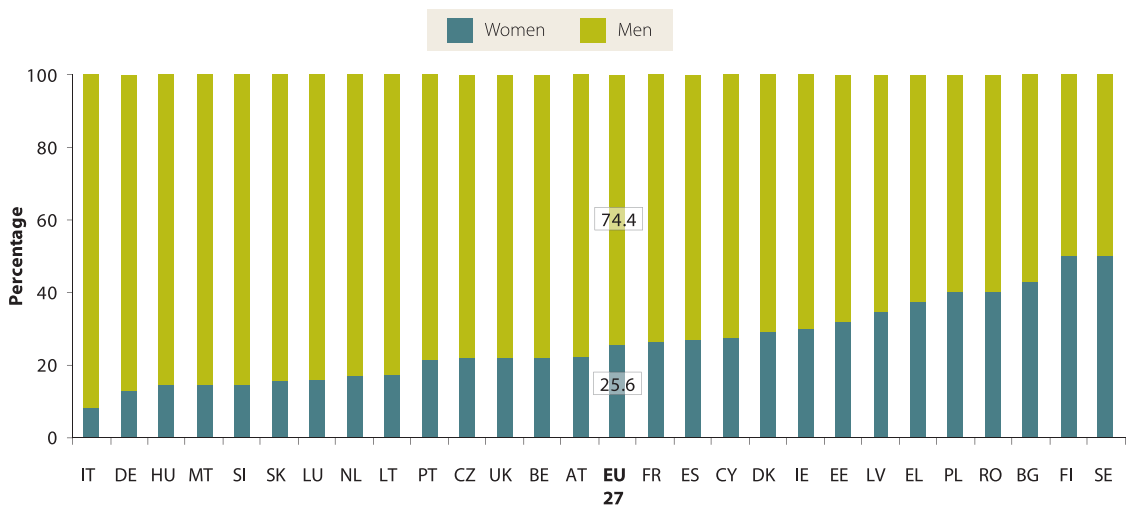
Figure 6: Women in high-level positions related to climate change in national ministries competent for environment, transport and energy by sector, EU-27



Source: Data collected from Member States in August - October 2011.

Percentage of women in high-level decision-making positions related to climate change in ministries responsible for the sectors of environment, transport and energy. For Italy, the level 2 position in the energy authority was vacant at the time when the report was prepared. For the energy sector in Romania, level 2 data have not been confirmed and level 3 data were not available from the institution. “n” is the total number. According to the available data by sectors, in ten Member States (BE, EE, EL, FR, HU, LU, MT, NL, PT and SE) some ministries or institutions work in several sectors. Therefore, when information on the relevant individuals was collected, the individual concerned was included under all relevant sectors. When calculating the numbers by levels or total (all three sectors together), these individuals were taken into account only once. Summarising numbers by sectors and by levels or total can therefore give different results.

Figure 7: Women in high-level positions related to climate change in ministries responsible for environment, transport and energy, by Member State



Source: Data collected from Member States in August - October 2011.

Note: Total percentage of women in high-level decision-making related to climate change in Ministries responsible for the sectors of the environment, transport and energy, by Member State. For Italy, the level 2 position in the energy authority was vacant at the time when the report was prepared. For the energy sector in Romania, level 2 data have not been confirmed and level 3 data were not available from the institution.



Indicator 2:

Proportion of women in climate change decision-making bodies at the EU level

The key institutions for policy making at the EU level are the European Commission and the European Parliament. These are the institutions responsible for preparing, evaluating and approving EU policies and laws. Although the Council of the European Union (or Council of Ministers) also has a role in defining and deciding on EU laws and policies, the membership of the Council is comprised of national ministers (according to topic), and this data has already been tracked in Indicator 1.

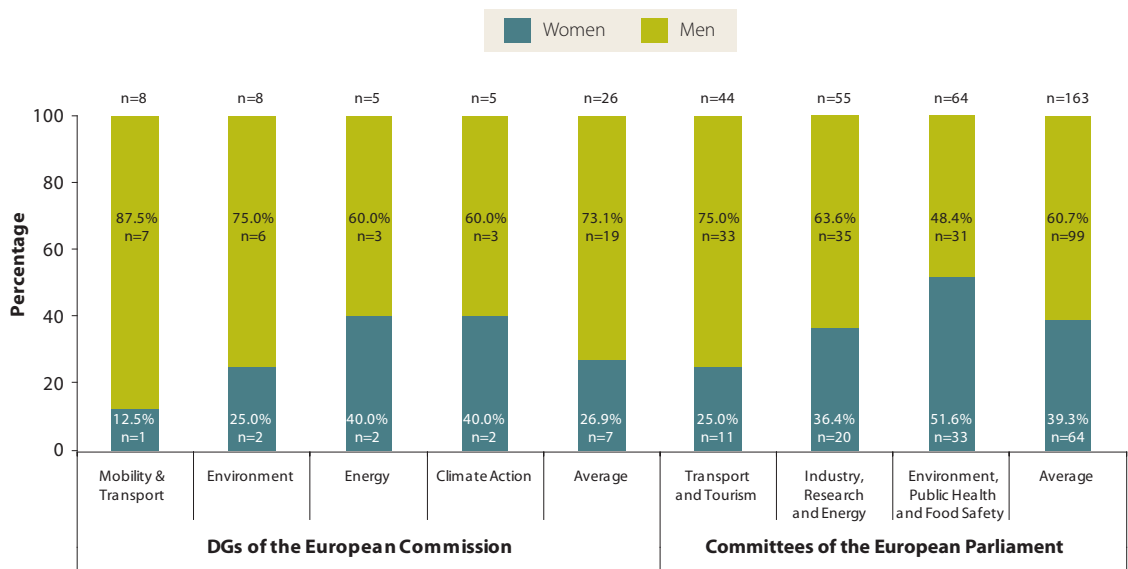
For the European Commission, four Directorates-General (DGs) are considered: DG Climate Action, DG Environment, DG Mobility and Transport, and

DG Energy. Here, in contrast to the situation at national level, women play a greater role in high-level decision-making (40% of positions in each are held by women). In DG Environment, women hold 25% of the high-level positions, and in DG Mobility and Transport, this figure is reduced to 12.5%.

It should be noted that the overall data sample within the European Commission is relatively small, meaning that individual fluctuations within the positions have a great effect on the overall figures. Further data collection over time to establish a trend would provide a more reliable indicator of women's role in EU-level climate change decision-making.

For the European Parliament, participation in the three committees most closely related to the environment, transport and energy sectors was considered: Environment, Public Health and Food Safety; Transport and Tourism; Industry, Research and Energy.

Figure 8: Percentage of women in high-level positions in relevant Directorates-General of the European Commission and in the Committees of the European Parliament, 2011



Sources: European Commission Directory and Who's Who of the EU Institutions and Parliamentary Committees (August 2011).

Note: The positions included in the European Commission are: Commissioner; Director General and the Directors of each sub-Directorate. "n" is the total number.

The data collection revealed that out of the 64 permanent members within the Environment,

Public Health and Food Safety Committee 51.6% of these are women. For the Industry, Research and Energy Committee, the percentage of women is significantly lower: out of 55 members, 36.4% are women. Finally, the percentage of women recorded for the Transport and Tourism Committee is even lower, with only 25% of women occupying high-level positions out of a total of 44 members. The average women/men ratio across these three Committees is 64 to 99. Women therefore represent on average 39.3% of the members of these Committees (Figure 8). Within the European Parliament as a whole, 256 out of 736 MEPs today are women, or 35%.⁶

These figures are similar to those for the national ministries, with the environment sector being more gender balanced than the transport and energy sectors.

Indicator 3:

Proportion of women in climate change decision-making bodies at the international level

International climate change decision-making takes place within the United Nations Framework Convention on Climate Change (UNFCCC), including the annual meetings of the Conference of the Parties (COP) and its supporting bodies. The COP delegations carry out the political negotiating and decision-making on international climate change policy, including agreeing targets for reduction of GHG emissions. The COP negotiations are supported by the work of two additional bodies, known as Subsidiary Bodies (SBs). There is one SB for Scientific and Technological Advice, which advises the COP on matters of climate, environment, technology and method. Another SB for Implementation helps review how the Convention is being applied, and deals with financial and administrative matters. Typically, the COP meets annually and the SB meets twice per year; once simultaneously with the COP and then at a second time during each year.

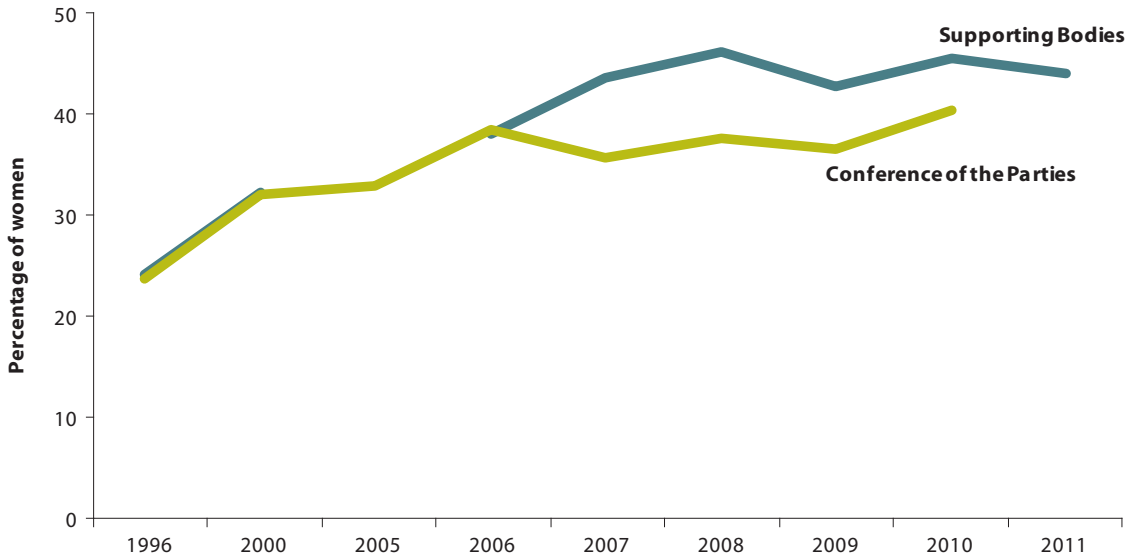
Data on the gender of participants on the COP and SB delegations, as well as head of delegations is available from the UNFCCC website once the sessions are complete. Overall, the participation of women in the UNFCCC negotiations and support work, including ministry representatives, advisors and policy consultants, has increased since the process began in the early 1990s.

For the COP delegations, the average proportion of women on the EU Member States' delegations and the EU delegation over the past five years is 37.6%. The figures vary by Member State; the highest figures are found in Latvia (57.4%), Finland (56.8%), Sweden (49.5%), Bulgaria (47.4%) and Lithuania (45.6%). Of course, it is important to bear in mind that the size of these delegations varies significantly between the Member States; in 2010, the total size of delegations ranged from 4 or 7 for six Member States (BG, CY, LV, LT, MT, SK) to delegations 10 times larger for France and Germany and 104 delegates for Belgium which sends delegations both for the federal government and by region.

Overall, between 1996 and 2010, women's participation in national delegations to the UNFCCC has been increasing (Figure 9). For example in COP 2 in 1996, the average women's participation across all EU Member States and the EU delegation was 24.3%. This average increased to 32.4% in COP 6 (2000), and continued to increase steadily to 40.5% in COP 16 (2010).



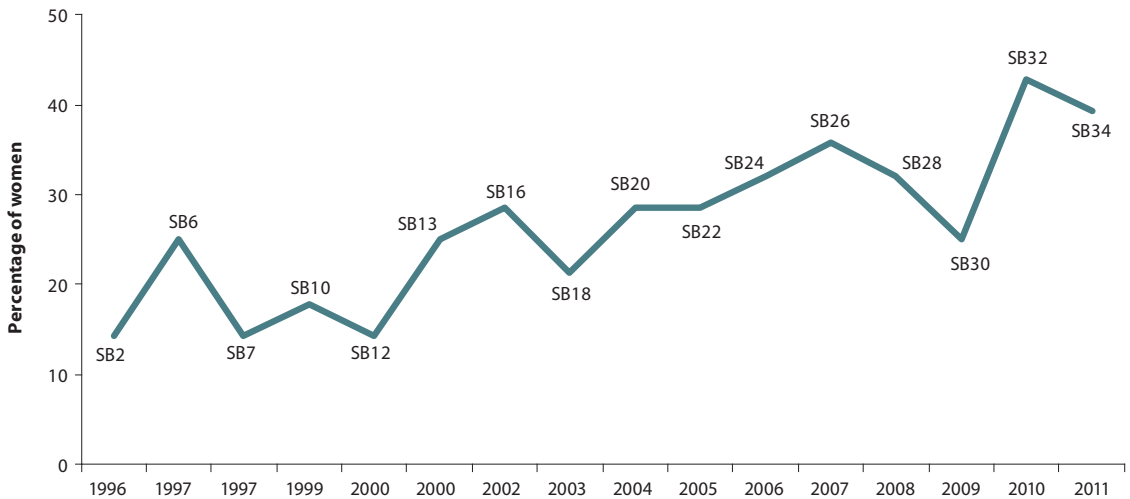
Figure 9: Share of women in COP and SB delegations from the EU and Member States, past five years



Source: <http://unfccc.int> (lists of participation of EU and Member States, collected in August 2011).

Note: for COP the meeting years are 2006 – 2010; for SB 2007 – 2011, as these were the most recent years available at the time of report preparation.

Figure 10: Percentage of women heads of delegation to SBs, 1996-2011



Source: <http://unfccc.int> (lists of participation of EU and Member States, collected in August 2011).

Note: Summarises the data totals for the percentage of women. Data are for SB meetings that were held independently from COP meetings; therefore the years are not sequential. No data available for SB8 1998.

Women’s participation within the working-level Subsidiary Bodies is slightly higher overall than for the more politically-oriented COP delegations (Figure 9). Overall, the proportion of women over the

past five years is 44.3%. Very high proportions of women delegates to the SBs were recorded in the three Baltic States – Estonia, Latvia and Lithuania – each with 75% or more. Other countries with 50%

or more women on the SB delegations over the past five years are Slovakia (73.9%), Spain (65.7%), Italy (62.7%), Hungary (61%), Finland (59.6%), Bulgaria (57.1%), Sweden (52.7%) and Cyprus (50%).

Like the COP delegations, the SB delegations have also shown an upward trend over the same period (Figure 9). In 1996, the average women's participation in EU SB delegations was 24.6%. This average showed a steady increase until SB28 in 2008, where women's participation reached 46.2%. Since SB28, the average decreased slightly to 42.7% for SB30 in 2009, and was recorded at 44% for SB34 in 2011.

Heads of SB Delegations (SB HoDs) were also considered, as these positions represent high-level decision-making power in a position not reserved for a head of state or minister, but rather a distinguished technical expert. Figure 10 shows a general upward trend in the proportion of women SB HoDs for each SB meeting that did not coincide with a COP since 1996.

Results of analysing the women participators in decision-making positions in the international climate change negotiations show that during the last five years proportion of women in COP delegations has increased and in 2010 was 40.5%. The proportion of women in the SB delegations is only slightly higher than for the COP delegations (44% accordingly in 2011).

Segmentation of education

Education is an important intervention area for achieving the Beijing objectives. BPfA declares that one of the key actions to be taken by governments, at all levels, including municipal authorities to achieve objective K.1 is to "facilitate and increase women's access to information and education, including the areas of science, technology and economics, thus enhancing their knowledge, skills and opportunities for participation in environmental decisions".⁷

Indicator 4:

Proportion of women tertiary graduates of total graduates (ISCED levels 5 and 6) in natural sciences and technologies at the EU and Member States level

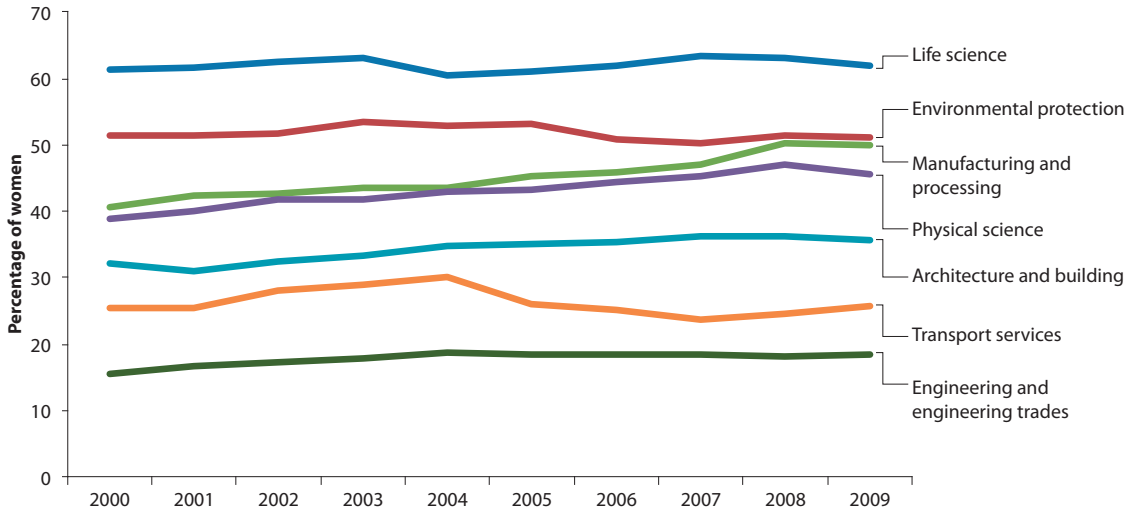
This indicator reflects the proportion of women awarded degrees in the scientific and technological fields relevant to climate change. Analysis of women tertiary graduates in natural sciences and technologies in the EU Member States shows that women are less likely than men to choose scientific and technological fields. The proportion of women tertiary graduates is particularly low in engineering and transport services – two fields particularly related to the transport and energy sectors.

Data on EU graduates, disaggregated by sex, are available at the Member State level by field of education from Eurostat for reference years 2000-2009.⁸ These data are available for ISCED levels 3 to 6, which cover upper secondary through second stage tertiary academic programmes.⁹

The analysis shows significant differences in the proportion of women graduates in the selected fields over the past decade (Figure 11). From among these fields, life sciences and environmental protection are the most popular choices for women (respectively 61.8% and 51.1% in 2009) where they account for more than half of the tertiary graduates for the majority of reference years.



Figure 11: Women tertiary graduates in selected fields, 2000 – 2009



Source: Eurostat, Education Statistics (educ_grad5)

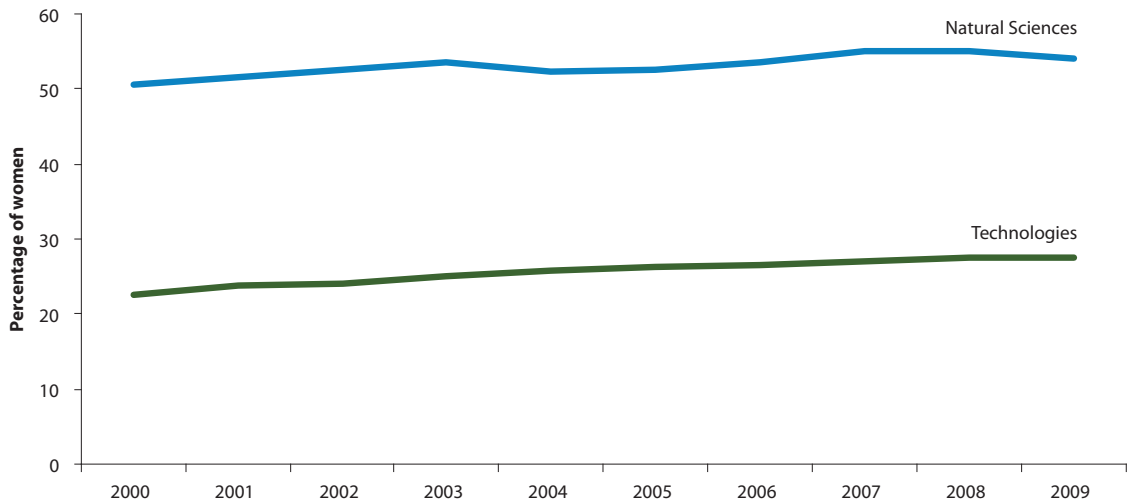
Note: The data show the percentage change of women graduates from 2000-2009 for each of the seven fields most relevant to natural sciences and technologies.

For the proposed indicator, the data have been combined into two composite sets as follows:

1. "Natural sciences": *Life sciences and Physical sciences*
2. "Technologies": *Engineering and engineering trades, Manufacturing and processing, Architecture and building, Transport services and Environmental protection*

Baseline data for women graduates in 2009 are 54.0% for natural sciences and 27.6% for technologies, and there has only been a slight change over the past decade (Figure 12).

Figure 12: Women tertiary graduates in fields related to natural sciences and technologies, EU-27, 2000-2009



Source: Eurostat, Education Statistics (educ_grad5)

Note: Graduates in fields related to Natural sciences: Equals the total percentage of women graduates in the Eurostat fields Life sciences and Physical sciences

Graduates in fields related to technologies: Equals the total percentage of women graduates in the Eurostat fields Engineering and engineering trades, Manufacturing and processing, Architecture and building, Transport services and Environmental protection

While women actually make up the majority of graduates in natural sciences – 54% (but, as the more detailed data show this is mainly in life sciences and less so for physical sciences), their numbers, although they have risen slightly during the past decade, are much lower in technological fields with the exception of environmental protection, where women graduates have been slightly above 50% during the last decade.



Conclusions

EIGE's report analyses the gender dimension of climate change in the EU with regard to the different impact of changing climate on women and men and their different efforts to mitigate climate change. As this is a relatively new field of research, the report marks the first effort to propose indicators that measure progress in the EU in the area of women and the environment. For this reason, it was important to investigate data sources and determine which data were most readily available to support future monitoring of progress. The results of the collection and analysis of data not only shaped the proposed indicators, but also highlighted a number of conclusions and recommendations for further research in this area.

The report reveals important links between gender and climate change and the necessity to take gender into account in policy making so as to improve the overall responsiveness of climate change policies to the real needs of women and men, and society, in general. Women and men are affected differently by the impacts of climate change; they contribute differently to GHG emissions; they have different capabilities to mitigate and adapt to climate change at the individual level; they have different perceptions of and attitudes towards options for climate change mitigation; and, finally, they are affected differently by the socio-economic impacts of the climate policy. Such factors should become an integral part of climate change policy debates and decisions.

Women's participation in climate change decision-making is an important factor for more gender responsive and efficient climate change policies. The research shows that women's involvement in climate change decision-making at local, national and international level is still low. Higher numbers of women were found among the heads of sectoral departments of Member States' ministries than at higher political and administrative levels. The

reasons are rooted in organisational structures and cultures, traditional gender division of care work, tensions related to reconciliation of work and private life as well as gender-based educational choices.

In international climate change decision-making, the number of women in UNFCCC delegations from the EU Member States has been growing since the early 1990s. This has been encouraged by the international non-governmental networks on gender and climate change. At the national level women tend to participate in environmental policy making to a higher degree when the issues are less technological in nature. In general, women's participation in decision-making in the energy and transport sectors, both public and private, is relatively low compared with their overall participation in the workforce.

Women's higher enrolment in science and technology-related educational fields leading to careers in the energy and transport sectors is one of the prerequisites for obtaining access to institutions and power structures that support and control climate change policy making. Climate change is a relatively new policy area, therefore many people in senior decision-making positions, such as environmental authorities, were educated in a variety of fields, including social sciences, economics or law (where there are much higher rates of women graduates). Scientific and technological degrees in fields like engineering, physical and life sciences or transport services might be important for gaining high-level positions in decision-making in the energy and transport sectors. However, further research is needed to substantiate the link between education and decision-making positions.

The literature review carried out for EIGE's report revealed the shortage of studies and research on gender and climate change. To address this, **the**

gaps within the existing body of research must be identified and strategies for integrating gender research into policy-making processes developed. For example, in order to maximise the value of the collected data, specific goals and quantitative targets for women's participation in decision-making could be introduced in gender equality and climate change-related policies.

Awareness about the relevance of gender issues for climate change must be raised to overcome the low priority given to justice and equality issues in the context of the urgent drive to mitigate climate change, which often continues to be considered a "gender neutral" policy field. In order to address the impacts of climate change and the need for fundamental changes to way of life, immense efforts and leadership from governments, the private sector and civil society will be required. Gender sensitivity and gender responsiveness are prerequisites for such efforts.

Genuine progress towards more effective and gender-just climate policies will require more than just the integration of gender wording into policy documents. In fact **a more profound and systemic change involving not only gender-mainstreaming but also a transformation of gender relations and societal structures will be necessary** to underpin climate change policies. Reluctance to face up to far-reaching implications may be the reason for the lack of recognition of gender issues in the climate change field.

Area K of the BPfA contains three objectives for women and the environment; EIGE's report covers only one of them. The second objective aims at increasing the integration of gender concerns

and perspectives in sustainable development policies, and the third objective seeks to establish mechanisms to assess the impacts of environmental policies on women. The work in this area could benefit from further research on the links between women's participation in decision-making and the actual policy outcomes. The **research of qualitative aspects of policies from a gender perspective could certainly bring an additional value to the area.**

Climate change is a broad field and cuts across many sectors as well as institutions, some of which were not considered in the report for reasons of time, scope and data availability. These include **national legislative bodies, local and regional governments, the private commercial sector, civil society organisations or research and academic institutions**, which all are very important contributors to climate change policies and implementation of those policies. Further research would be needed to better understand the roles of these institutions in climate policies, the prevalence of women in decision-making and the extent to which it shapes policy outcomes. Moreover, future research should also investigate other climate change-related sectors, which contribute significantly to GHG emissions and play a relevant role in climate change policy making, such as agriculture, industrial processes and waste.



Endnotes

1. Nordic Summit Declaration, Nordic Council of Ministers, 2009
2. Review of the Implementation in the EU of area K of the Beijing Platform for Action: Women and the Environment. Gender Equality and Climate Change. Available for download at www.eige.europa.eu
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5. Adapting to climate change: Towards a European framework for action, European Commission White Paper, COM (2009) 147 final from April 2009, at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0147:FIN:EN:PDF>;
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6. European Climate Change Program (ECCP), since June 2000, at: http://ec.europa.eu/clima/policies/eccp/index_en.htm
7. Data for 1st quarter 2011, Database on Women & Men in decision-making, available at http://ec.europa.eu/justice/gender-equality/gender-decision-making/database/index_en.htm
8. Beijing Platform for Action: <http://www.un.org/womenwatch/daw/beijing/platform/index.html>
9. The database of Eurostat, at: http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database.
Statistics used for this analysis can be found under the Education Statistics, tableeduc_grad5. Data were last updated on 01.10.11 and the last year of reference is 2009.
10. International Standard Classification of Education: ISCED 1997, UNESCO, 1997 http://www.unesco.org/education/information/nfsunesco/doc/isced_1997.htm

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