
Gender and Climate Change in Macedonia

Applying a Gender Lens to the Third National Communication on
Climate Change

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Introduction

As the UNFCCC states, It is increasingly evident that women are at the centre of the climate change challenge. Gender roles, geographical, household responsibilities, level and sector of employment, access to resources and participation in decision making all affect women and men and members of differing socioeconomic and ethnic groups differently.

The Republic of Macedonia is a party to the United Nations Framework Convention on Climate Change (UNFCCC) and has acceded to the Copenhagen Accord. In 2014 the Third National Communication on Climate Change (TNC) was published in 2014 by the Ministry of Environment and Physical Planning, Republic of Macedonia¹. It contains an assessment of the national situation relating to climate change in a range of key sectors. It also overviews the national and international contexts of climate change policy; as well as surveys of the National Greenhouse Gas Inventory, vulnerability and adaptation to climate change in the country; climate change mitigation analysis and opportunities, national communications strategy on climate change and assessments of technology transfer, R&D, capacity strengthening and financial resources in the country.

However, beyond the Social Vulnerability Index, the NCC is missing a detailed analysis of what the gender differences are in climate change contributions, adaptation and mitigation, as well how men and women are differentially affected by climate change impacts. We believe that the country is missing an opportunity to build on one of its greatest strengths: the capacities, potential and resilience of its women. This report is an attempt to address this gap by analysing gender trends and opportunities for the country as it continues to develop its response to climate change.

At the same time, as **Emma Watson** argued in her HeforShe speech at the United Nations in September 2014, **"It is time that we all perceive gender on a spectrum not as two opposing sets of ideals."** Gender is inextricably intertwined with vulnerability which is related to ethnicity, class, and socio-economic status. Progress can only be achieved when gender approaches involve both women and men in the most vulnerable groups.

UNDP views climate change as one of the defining challenges of our time. The effects of climate change, including retreating forests, changing rainfall patterns and rising sea levels, will exacerbate existing economic, political and humanitarian stresses and affect human development in all parts of the world.

Gender equality and the empowerment of women are core elements of UNDP's development mandate. It recognizes that unless women and girls are able to fully realize their rights in all spheres of life, human development will not be advanced. A gender approach to climate change includes: sustainable development pathways; inclusive and effective democratic governance; and resilience-building.

This report is written for government agencies and departments as they develop their climate change strategies, as well as for stakeholders in other sectors of society: researchers, civil society, the international system as well as Macedonian citizens. Understanding how women and men are affected differently by climate change, how they respond, what they can contribute to adaptation and mitigation, as well as ensuring their active participation in discussions and decision making will greatly increase the success and sustainability of climate change responses in Macedonia.

Implementing a strong and effective gender and climate change policy in the country will enable Macedonia to provide leadership in Europe and globally in this area.

¹The First and Second National Communications on Climate Change were submitted to the UNFCCC Secretariat in 2003 and 2008.

Context: Climate Change and Gender Equality

1. Third National Communication on Climate Change

The Republic of Macedonia is a party to the United Nations Framework Convention on Climate Change (UNFCCC) as a non-Annex I country, and party to the Kyoto Protocol, without a quantified emissions limits and reduction commitment. It has acceded to the Copenhagen Accord and submitted a list of non-quantified mitigation actions. The First and Second National Communications on Climate Change were adopted by the Government of Macedonia and submitted to the UNFCCC Secretariat in 2003 and 2008 respectively.

The Third National Communication on Climate Change (TNC) was published in 2014 by the Ministry of Environment and Physical Planning, Republic of Macedonia. It contains an up to date assessment of the national situation relating to climate change in a range of key sectors. It also overviews the national and international contexts of climate change policy; as well as surveys of the National Greenhouse Gas Inventory, vulnerability and adaptation to climate change in the country; climate change mitigation analysis and opportunities, national communications strategy on climate change and assessments of technology transfer, R&D, capacity strengthening and financial resources in the country (Ministry of Environment and Physical Planning, 2014).

The goal of the TNC and First Biennial Update Report (FBUR) are to assist the country in mainstreaming and integration of climate change consideration into national and sectoral development policies by providing continuity to the institutional and technical capacity strengthening process, partly initiated and sustained by National Communications.

Gender perspective of climate change in the country has not been analyzed in detail. It is recognized that women are meaningfully involved as beneficiaries, the affected and as active participants in decision-making processes related to climate change activities and impacts. However, differences in social roles and economic status affect and are affected differently by climate change, and are not well understood. A clearer understanding will help to improve actions taken to adapt to and mitigate climate change.

Linking gender to climate change is high in the agenda of the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations and the international community.

This report provides an assessment of the gender implications of climate change impacts, mitigation, adaptation and policy in Macedonia. It will focus on key sectors identified in the TNC as well as key factors to ensure that gender dimensions and differential trends for men and women in the country are recognized and addressed in planning and implementation of climate change strategies. The sectors identified as having substantive gender implications relating to climate change are: energy, agriculture, transportation, tourism and disaster-risk reduction (DRR), population health and social vulnerability. The strategies and factors for ensuring that gender considerations are taken into account in national climate change planning and implementation are policy and programmes relating to communication and information; decision making at local, national and international levels; financing instruments, and gender approaches and tools for climate change assessment, adaptation, mitigation and technology transfer.

2. International Policy Context

The promotion of gender equality and the empowerment of women is central to the mandate of UNDP and intrinsic to its development approach. Gender equality and the empowerment of women are core elements of UNDP's development mandate². UNDP considers gender equality a matter of human rights as well as a driver

² See Appendix One for a list of UN gender definitions.

of development on the assumption unless women and girls are able to fully realize their rights in all spheres of life, human development will not be advanced. The UNDP strategic plan for 2014-2017 outlines three main areas of work, all of which provide the context for a gender approach to climate change: sustainable development pathways; inclusive and effective democratic governance; and resilience-building.

- **Sustainable development pathways** – Empowering women and girls to become agents of change and equal partners with men will promote inclusive, just, equitable and sustainable growth. Engaging women will increase success in eradicating poverty, promote sustainable consumption and production, and encourage sustainable management of natural resources.
- **Inclusive and effective democratic governance** - Women’s and men’s equal participation in governance and equal benefits from services are preconditions for inclusive and effective democratic governance. UNDP works to advance women’s legal rights and empowerment, strengthen their access to justice, ensure gender responsive and equitable service delivery, and promote their equal participation in decision making.
- **Resilience-building** - Gender equality and women’s empowerment are central to building individual, institutional and societal resilience. Systemic inequalities overall – especially those between women and men in the economic, social and political spheres – exacerbate the impact of economic, disaster and climate-related and political shocks, impeding sustainable development and durable peace. Women’s priorities must inform the agenda for, among other things, early recovery from crises, resilience and sustainable development.

The UNDP Gender Equality Strategy identifies two strategic entry points for climate change and disasters:

1. **Increasing women’s access to environmental goods and services** (including climate finance) by integrating gender considerations and expanding women’s participation in inclusive sustainable development plans and policies; ensuring their full participation in decision making on the use, management and protection of natural resources; ensuring equal ownership and access to these resources; and increasing women’s access, ownership and sustainable management of ecosystem goods and services (including through climate finance, policies and programmes to remove structural barriers to equal opportunities for women in green business and in upcoming climate adaptation and mitigation industries).
2. **Reducing conflict and lowering risk of natural disasters**, including from climate change, through mainstreaming gender equality and women’s empowerment in disaster and climate risk reduction policies and plans, as well as in the budgetary frameworks of key sectors (such as water, agriculture, energy, health and education); strengthening the participation of women in decision-making processes on climate adaptation, mitigation and disaster risk reduction; and ensuring that disaster risk reduction, climate mitigation and adaptation programmes specifically support women in developing their resilience to disasters and climate change, including ensuring access to clean and green alternative livelihoods.

The UNDP Gender Equality Strategy approach on climate change and disasters is in line with the major international commitments and conventions on as well as gender equality.

International Commitments on Gender Equality

The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). The 1979 Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) provides a comprehensive framework to guide all rights-based action for gender equality. Under this treaty, gender inequality is understood to be the result of discrimination against women. CEDAW defines discrimination and the range of steps that states must take to eliminate it, affirms women’s rights in specific areas, and makes provisions for ratification, monitoring, reporting and other procedural matters.

The Beijing Platform for Action. The 1995 Beijing Platform for Action is “an agenda for women’s empowerment” signed by all governments that is seen as a “necessary and fundamental pre-requisite for equality, development and peace.” The Platform includes gender analysis of problems and opportunities in 12 critical areas of concern, and clear and specific standards for actions to be implemented by governments, the UN system and civil society, including, where appropriate, the private sector. The Platform provides the first global commitment to gender mainstreaming as the methodology by which women’s empowerment will be achieved.

The Millennium Development Goals. The MDGs, in effect, consolidated previous agreements, including those on women's rights, women's empowerment and gender equality, into a single set of core goals, targets and benchmarks for the development community. The Millennium Declaration from which they were drawn took a clear position that gender equality is both a right in itself and a driver of development. The development community is in the process of reviewing lessons learned and progress toward the achievement of the MDGs with a view to accelerating progress before the 2015 MDG deadline and elaborating on a post 2015 development agenda.

The Hyogo Framework For Action. The 10-year 2005 Hyogo Framework for Action (HFA) is the first plan to explain, describe and detail the work that is required from all different sectors and actors to reduce disaster losses. The HFA provides a tool for integrating a gender perspective in all forms of disaster-risk management, including risk assessments and early warning mechanisms.

Aid Effectiveness Commitments. Through the 2008 Accra Agenda for Action, which built on the 2005 Paris Declaration on Aid Effectiveness, developing countries and donors commit to ensure that their respective development policies and programmes are designed and implemented in ways consistent with their agreed international commitments on gender equality, human rights, disability and environmental sustainability. The Busan Partnership for Effective Development Cooperation endorsed in 2011 agreed to accelerate and deepen efforts to address gender equality and women's empowerment in all aspects of development efforts, from accountability mechanisms to peacebuilding and state building.

The United Nations Conference on Sustainable Development (Rio+20). The outcomes of the 2012 conference included a number of references to the role of women and the need for their full and equal participation and leadership in all areas of sustainable development. It called for promotion of gender equality and improving the situation of women and girls, as well as unlocking the potential of women as drivers of sustainable development. It committed to equal rights and opportunities for women in political and economic decision-making and resource allocation and removing barriers that prevent women from being full participants in the economy; while promoting equal access of women and girls to education, basic services, economic opportunities and health-care services, including addressing women's sexual and reproductive health. It also called for the integration of gender in the decision making international organizations, UN agencies, international finance institutions and the private sector.

Source: UNDP, 2013 and IISD, 2012

2.1 UN Framework Convention for Climate Change (UNFCCC)

The differences between women's and men's roles in society, access to resources, responsibilities and obligations condition their adaptive and mitigation capacity, which plays a key role in influencing the outcomes of climate strategies. The IPCC identifies gender as one of the socio-economic factors that influence "the capacity to adapt to changing environmental and economic conditions" (UNDP, 2011; UNFCCC, 2007). The UNFCCC notes that "it is increasingly evident that women are at the centre of the climate change challenge." They are disproportionately affected by climate change impacts, such as droughts, floods and other extreme weather events, but they also have a critical role in combatting climate change and the effects of climate change. It is also recognized that climate change impacts will affect women and men and members of differing socioeconomic and ethnic groups differently (UNFCCC, 2014).

The gender dimensions and areas for women to contribute in the UNFCCC five key areas were identified in terms of:

- The key determining factors affecting impacts and the ability of groups to respond to stresses and changes caused by climate change. They include access to resources (training, capital, information), ownership and/or control over land and other assets, awareness of climate change induced trends and stresses, and participation in decision making on strategies to address climate change mitigation and adaptation.
- Differences and trends in labour, domestic and productive responsibilities, resources, decision making, assets, education and other sectors
- Ensuring that women and men are equally involved in consultation, support, and financial programs (UNFCCC, 2014).

The Cancun Agreements emerging out of the UN Framework for Climate Change COP-16 in 2010 were the first global climate change policy to include multiple references to gender equality. Since then, more gains have been made to foster women's participation in negotiations and entrench gender equality in UNFCCC outcome documents as well as in the Green Climate Fund, the Adaptation Fund and Climate Investment Funds. At COP-18 in Doha in 2012, a decision

was adopted to promote gender balance and improve the participation of women in UNFCCC negotiations as well as in the representation of Parties in bodies established pursuant to the Convention or the Kyoto Protocol.

The UNFCCC five key areas are:

Gender and adaptation

Integrating considerations of gender into medium- and long-term adaptation can help to ensure that adaptation is effective and implementable on the ground. It can help to ensure that the implementation of adaptation activities will not exacerbate inequalities and other vulnerabilities, it can help to fulfil the specific needs of the most vulnerable, and it can ensure the equal participation of men and women in the decision-making and implementation phases of these activities. Women can act as agents of change at different levels of the adaptation process.

Gender and mitigation

Action to mitigate climate change has the potential to also bring about local gender-positive impacts. This may be achieved by the general nature of a mitigation project or programme, such as clean energy for household lighting or cooking, or by gender equity impacts being specifically considered early in the project planning stage e.g. considering where revenues will flow. Projects under the Kyoto Protocol's flexible mechanisms, CDM and JI, have shown themselves to have potentially positive impacts on the lives of women – by improving livelihoods and health and allowing time for the pursuit of additional opportunities.

Gender and financial support

A gender perspective needs to be taken into account when developing resource mobilization strategies, applying climate finance instruments, and ensuring equal participation in the deployment of financial resources, particularly at the local level.

Gender and technology support

The development and transfer of environmentally sound technologies represent an opportunity to increase efforts on gender mainstreaming with regard to technology access and information and training on the use of appropriate technologies.

Gender and capacity building support

A gender-sensitive approach to creating, developing and strengthening institutional, systemic and human-resource capacity-building can foster gender balance in decision-making on, delivery of and access to means and tools of implementation for mitigation of adaptation actions.

3. How Does Gender Relate to Climate Change?

According to UNDP, the effects of climate change, the ability to respond to stresses, changes and shocks resulting from climate change, as well as participation in adaptation and mitigation strategies are all influenced by social status, gender, economic status, power, and access to and control over resources. Women and men of varying ethnic groupings have varying levels of socio-economic status, political participation, and access to resources, all of which affect their ability to cope with and respond to climate-change induced change (UNDP, 2013).

Women's role in families and communities, as well as their local knowledge in rural areas of environment, soils, water and production, are valuable resources for reduction and adaptation strategies—making them effective actors and agents of change (UN WomenWatch, 2009). For example, it is known that communities are better off during natural disasters when women play a leadership role in early warning systems and reconstruction. Other studies have found that women tend to share information related to community well-being, choose less polluting energy sources and adapt more easily to environmental changes when their family's survival is at stake (International Union for Conservation of Nature and Natural Resources, 2007; Women's Environment and Development Organization, 2007).

In general, greater female participation in economic development poses an asset to a community's and country's ability to recover and sustain growth in times of change and stress. It is estimated, for example, that if women's paid employment rates were raised to the same level as men's, the gross domestic products of the United States, the European Union and Japan would see increases by 9, 13 and 16 percentage points, respectively (Aguirre et al, 2012).

We also know that compared to men, women face huge challenges in accessing all levels of policy and decision-making processes, giving them less opportunity to influence policies, programmes and decisions that impact their lives. Socio-cultural norms can disadvantage women from acquiring the information and skills necessary to escape or avoid hazards (e.g. swimming and climbing trees to escape rising water levels). Dress codes imposed on women can restrict

their mobility in times of disaster, as can their responsibility for small children who cannot swim or run (Röhr, 2006; UNDP, 2013).

3.1 Gender and Climate Change Adaptation and Mitigation

Climate change is both an environmental and a social issue, taking place in a context of gender relations as well as differences in ethnicity, age and social status. Gender issues relating to climate change are more than vulnerability; they are not determined by differing levels of economic and decision making power. Understanding how the economic and social relationships of women and men influence the ways that households, communities, countries and the global community are affected by, and respond to, climate change helps to understand why different social groups contribute differently to greenhouse gases and are affected differently by climate change than others. This also provides us with a way to analyse climate change mitigation and adaptation and promote strategies and actions that can lead to greater equality and improved lives for women and men. To do this solutions will need to draw on the skills, knowledge, resources and experiences of both (European Institute for Gender Equality (EIGE), 2012).

Adaptation

The UNFCCC defines adaptation as “adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts.” It involves changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change. Adaptation activities consist of five general components: observation; assessment of climate impacts and vulnerability; planning; implementation; and monitoring and evaluation of actions.

Integrating considerations of gender into medium- and long-term adaptation can help to ensure that adaptation is effective and implementable on the ground, as well as to ensure that adaptation activities will not exacerbate inequalities and other vulnerabilities on the ground. To achieve this, UNFCCC calls for adaptation activities to incorporate the equal participation of men and women in decision-making and implementation. As well, women can act as agents of change at different levels of the adaptation process.

Mitigation

The capacity to mitigate the predicted increases in temperature resulting from climate change will depend on socio-economic and environmental circumstances and the availability of information and technology.

Action to mitigate climate change has the potential to bring about local gender-positive impacts. This may be achieved by the general nature of a mitigation project or programme, such as clean energy for household lighting or cooking, or by gender equity impacts being specifically considered early in the project planning stage e.g. considering how benefits will present themselves and revenue flow. Green economy projects such as the promotion of alternative energies and energy subsidies which target women can provide cascading benefits in other areas. For example, the Barefoot College trains rural women as solar engineers to build, install and maintain solar panels in villages that have no other energy systems (Lal, 2008).

Tools and resources for adaptation and mitigation

Climate finance refers to local, national or transnational financing from public, private and alternative sources of financing. Large-scale investments will be required to significantly reduce emissions, notably in sectors that emit large quantities of greenhouse gases. It is equally important for adaptation, to allow countries to adapt to the adverse effects and reduce the impacts of climate change. UNDP argues that climate finance architecture must become more inclusive of women – in addition to promoting global climate benefits, it should also promote sustainable development and ensure that benefits accrue to women and men across economic sectors. This requires integration of gender analysis and gender-sensitive tools into all elements of climate change financing to benefit the lives and livelihoods of both women and men. Only then will climate finance promote the necessary behavioural, institutional and policy changes that are essential for achieving climate and economic growth objectives.

A gender perspective is needed to be taken into account when developing resource mobilization strategies, applying climate finance instruments, and ensuring equal participation in access to, use of and control over financial resources, particularly at the local level.

Promoting and enhancing action on the development **and transfer of environmentally sound technologies** is critical to supporting action on mitigation of greenhouse gases and adaptation to the adverse effects of climate change. The development and transfer of environmentally sound technologies represent an opportunity to increase efforts on gender mainstreaming with regard to technology access and information and training on the use of appropriate technologies.

A gender-sensitive approach to creating, developing and strengthening institutional, systemic and human-resource capacity-building can foster gender balance in decision-making on, delivery of and access to means and tools of implementation for mitigation of adaptation actions.

A lack of sex disaggregated data in all sectors (e.g. livelihoods, disaster preparedness, protection of environment, health and well-being) often leads to an underestimation of women's roles and contributions. This can lead to a where gender-blind climate change policy and programming does not take into account the gender differentiated roles of both women and men (i.e. their distinct needs, constraints and priorities), producing inefficiencies and misuse of resources. It can also lead to the disadvantaging of certain social groups.

In its review of gender and climate change in the European Union, the European Institute for Gender Equality emphasizes the importance of understanding and addressing gender in climate policy in terms of equality: both women and men need to be equally and meaningfully involved in planning and decision-making. Concomitantly, legislation, policies and programmes need to be based on sex-disaggregated data and gender assessments so that climate change and policy doesn't exacerbate existing inequalities. Climate change strategies will only be effective if they take into account the situations of all citizens and target change among all social groups.

“Only inclusive and gender-sensitive climate policies will be able to reach a majority of citizens (European Institute for Gender Equality (EIGE, 2012)”.

Gender Equality Profile of Macedonia

1. Demographic information

The total population of Macedonia in 2012 was 2.06 million, with data from the last available country census in 2002 indicating a population breakdown of 64.2% Macedonian, 25.1% Albanian, 3.0% Turk, 2.7% Roma, 1.8% Serb, 0.8% Bosniak, 0.5% Vlach, and 1.0% 'Other'. In 2002, 45% of the population lived in rural areas, and 55% in urban areas – this ratio may have changed during recent years. The gender ratio is roughly equal, at 50.1% male and female 49.9% (State Statistical Office, Republic of Macedonia, 2005). This goes against global trends which see a slightly greater percentage of females, given their longer life expectancy.

2. Education and literacy

According to UNESCO, the adult literacy rate for Macedonia is estimated at 97.4% of the total population. Enrolment in primary schools has remained consistently high with 98% coverage of the primary school age population. There is an increasing trend of enrolment among females at the secondary level, while at the tertiary period there has been an increase of female graduates since 2008.

Currently, in the Republic of Macedonia the number of women enrolled and graduated in the first, second and third cycles is generally higher in social sciences, humanities and medical sciences, while for technical and technological sciences the number of women is lower in comparison with men. At the undergraduate level, females make up 59% of natural sciences and mathematics students, and 75% of medical science students, while making up 31% of technical and technological sciences students. We also find that at higher levels of education, i.e. postgraduate education, PhD and Masters, the percentages of women decrease. Data on employment in these sectors in 2012 indicate that females made up 44% of persons employed in professional scientific and technical activities, 15% in electricity, gas, steam and air conditioning supply, 11% in water supply, sewerage, waste management and remediation activities, 13% in transportation and storage and 30% in information and communication related professions. These numbers may mean that women are adequately represented in environmental sciences, including biodiversity and environmental management, but they are poorly represented in the energy, water, telecommunication and transport sectors (SSO 2013).

3. Health

Macedonia has an aging population, but is still a relatively young country with an average age of 37.5 years – 36.7 for males and 38.3 years for females. Life expectancy at birth is 74.81 years, with females having a higher life expectancy at birth (of 77.0 years) than males, whose life expectancy at birth is 72.7 years. The most frequent causes of death are circulatory diseases, accounting for 59.2% of the total number of deaths, followed by neoplasms at 18.2%, and endocrine, nutritional and metabolic diseases at 3.9%. Men die of

cardiovascular diseases more often than women, while women suffer from breast and cervical cancer. The national fertility rate is low, at approximately 1.5 children per family.

High priority environmental health issues in the country include access to safe drinking water in rural areas, access to sanitation, inadequate waste and waste water management at the state level, uncontrolled use of chemicals and pesticides, and inadequate housing and air quality indoors (associated with poverty and children’s exposure to environmental tobacco smoke) (MEPP, 2014).

4. Women and men in the economy

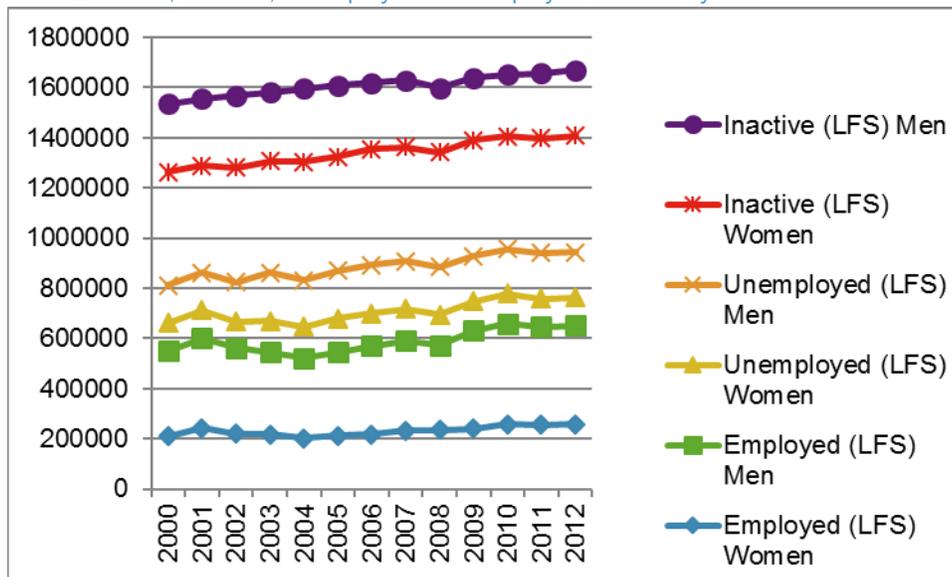
The national economy is significantly integrated with the EU market. Foreign trade accounts for over 90% of the country’s GDP in 2012 (SSO, 2013a) and in the same year around 60% of all trade was with EU countries (SSO, 2012). FDI levels also decreased from €506 million in 2007 to €72 million in 2012 (Ministry of Finance website). Additionally, around 20% of families benefited from private transfers from abroad (remittances) in 2012, up from 16% in 2008 (Petreski and Jovanovic, 2013).

Agriculture provides employment to 36% of the workforce and contributes 16% of GDP, with industry making up a slightly larger proportion of the GDP at 18s%.

The country’s unemployment rate remains one of the highest on the European continent, in particular among young people and the less educated, and has remained high for more than a decade. Although economic growth is projected to pick up, earlier trends show that it is decoupled from unemployment levels. A particularly worrying phenomenon is the share of youth who are neither employed or in education / training (NEET) – which in 2012 was 30% (Elder, 2013).

The labour market is characterized by a gender imbalance in favour of males. In 2012, the employment rate for women was 39.6%, which is significantly lower than the 60.4% rate for men. While the unemployment rates for women (31%) and men (32%) were quite close, the activity rate for women (46%) is significantly lower than for men (64%). This is particularly the case in rural areas, and probably indicates a much greater reliance by women on the informal economy where risks are higher and wages and benefits are lower.

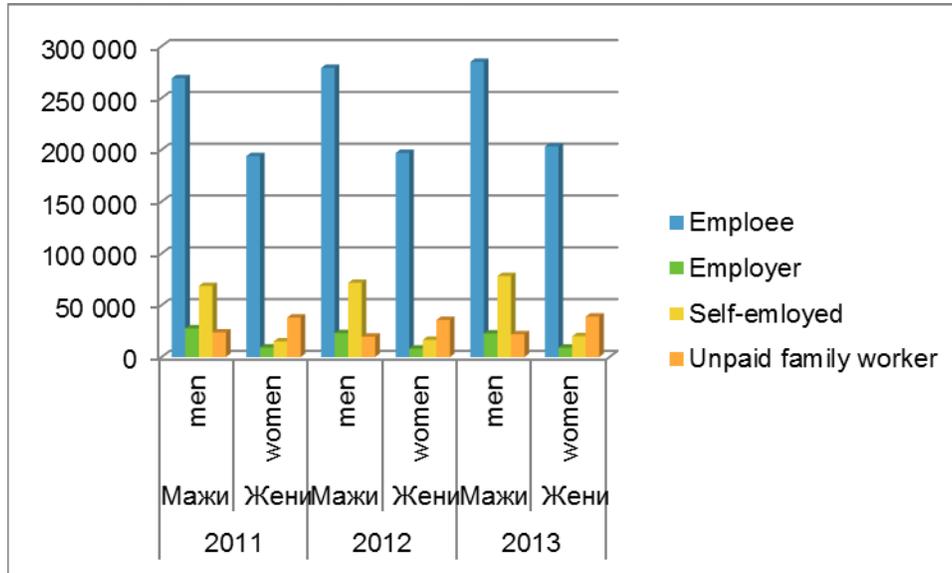
Chart 1: Active, inactive, unemployed and employed workers by sex



Source: Men and women in Macedonia, 2008-2014 & Makstatdatabase, all years

Particularly in recent years, employment rates of men have increased significantly, while the rates for women grew much more slowly, widening the gender gap. Actual unemployment may be overstated as the informal sector is estimated to contribute to 30% of the total economy, higher than the European average.

Chart 2: Employment status by sex and age



Source: Men and women in Macedonia, 2012-2014 & Makstatdatabase, all years

Gender gaps exist in status of the employed. In recent years the number of women employees has been increasing slightly while their number as employer and self-employed has continued at the same level, lower than men. Employment status among men has been the same over the last three years except for the number of self-employed, which is slightly increasing (see Chart 2). Finally, the gender gap between men and women unpaid family workers sees substantial disparity in favour of women.

In terms of sex distribution in the workplace per sector we can again observe gender segregation in favour of males in sectors such as fishing, mining, electricity, gas and water supply, construction, public administration, defence, transport, storage and communication. Sectors such as health care and social work, education and extraterritorial organizations, predominantly employ females. Women tend to perform jobs that are considered close to the work they perform in the home (textile, service sector, education and social work). In addition to horizontal segregation (across sectors), there exists a vertical segregation (within sectors) where women are usually employed at lower level jobs, with the higher-paid and senior positions almost exclusively filled by men. Jobs such as sales assistants, technicians, professionals and clerks are mostly delegated to women, while their share in the managerial, legislative and senior job positions was around 27% in 2009 (Elder, 2013).

Women's employment in the labour market affects remuneration levels. In the wage bracket 5000-8000 denars, salaries are approximately equal – 51% employees that received a wage in this wage bracket were male and 49% were female. In higher wage brackets the ratio becomes uneven in favour of males. It is especially alarming that in the 16001-20000 denars wage bracket the share of male employees increases. The most uneven structure can be observed in the wage bracket of 40001 denars and more where the trend increases in the 2009-2013 period – the share of male employees increased from 76% to 80%, compared to 24% in 2009 and 20% in 2013 for females (Kazandziska et al, 2012).

Table 1: Share of employment per sex by wage bracket in 2009 and 2013 (in denars)

Wage brackets	2009				2013			
	Structure by sex		Structure by net wage		Structure by sex		Structure by net wage	
	Men	Women	Women	Men	Men	Women	Men	Women
up to 5000	66.1	33.9	3.2	3.5	63.9	36.1	4.0	3.7
5001-8000	51.0	49.0	20.9	12.2	51.8	48.2	6.5	10.0
12001-16000	66.9	33.1	19.9	22.5	68.2	31.8	21.9	16.9
16001-20000	68.8	31.2	12.4	15.3	64.0	36.0	16.5	15.4
30001-40000	71.0	29.0	1.1	1.5	73.8	26.2	2.7	1.6
40001 and more	76.3	23.7	0.8	1.5	80.8	19.2	2.0	0.8

Source: State Statistical Office (2010a, 2014)

4.1 Women's domestic work
The issue of gender differences in

work inside and outside of the home will affect climate change adaptation and mitigation in two ways. Women

who work in the home will have lower levels of resources to change behaviour or to deal with disasters when they arise. Women also generally work longer hours which will also affect their ability to reduce climate change emissions or take on new information and training for adaptation activities.

64.1% of the female population in Macedonia is married and makes up almost 56% of all “inactive” women. However, analysis indicates that women not necessarily are inactive but instead are unpaid family workers, occupied with mostly family care and domestic activities (CRPM, 2012). Women’s share of full time employment is one third lower than men, and they make up 50% of those employed on part-time contract. This is seen as a result of the need to balance family life (care responsibilities) and work.

The burden of care work at home is considered the purview solely of women. Time use survey data show a clear pattern of gender division of labour in the home. Food preparation, dish washing, house cleaning and the physical care and supervision of children are primarily female activities as they spend in average more time on this than men. Laundry, ironing and production of handicrafts and textiles tend to be women’s responsibilities. Construction, repairs and maintenance and taking care of pets constitute primarily men’s responsibilities, which take up less of their time overall (SSO 2010b).

Taking care of a family member is another reason for inactivity, particularly for women. This adds to their vulnerability in cases of disaster and shocks – a result of both their lower levels of income to adapt and respond to disasters, and the need to help other family members during a disaster (see below). 21% of the inactive population who are not looking for a job due to family care reasons are male, 79% are female. This affects women’s income – 74% of Albanian and 45% of ethnic Macedonian women have no personal income at all (Centre for Research and Policy Making (CRPM), 2012).

The CRPM Baseline Study of Rural Women indicates that the main decision making power in Macedonian families lies with males who make almost all decisions concerning the household. Women have decision making power only in assigning working tasks to the children, which is consistent with the idea of the woman as a housewife and main child care giver. According to the survey of rural women by UN Women, in the majority of households women and men together make the important decisions concerning children (CRPM, 2012).

5. Poverty and social protection

An independent study (Gerovska Mitev, 2012) shows that material deprivation, poverty and social exclusion are widely present in the country, as 31% of all surveyed households could not provide four or more of nine basic items. The third most frequent item that households could not provide was a meal with meat, chicken, fish or a vegetarian equivalent every second day (39%), indicating food poverty among one third of the households in the country. The study also makes poverty estimations using Eurostat methodology, concluding that 45% of households are at risk of poverty. Material deprivation is almost double the at-risk rate in the EU (23%) but the risk of poverty or social exclusion is greatest by far for Roma (89%) and Albanian (55%) populations. According to data from the UNDP-WB-EC regional survey on the Roma, material deprivation among this ethnic group is particularly worrying with 97% of Roma being materially deprived (lacking 3 of 9 items in the economic strain and durables dimension), and 93% of Roma being severely materially deprived. Among the non-Roma those rates were 74% and 64%, respectively (European Union Agency for Fundamental Rights and UNDP, 2011). Severe material deprivation is also captured by the 2011 Survey of Income and Living Conditions (SILC). A total of 40.7% of the population is considered severely materially deprived, lacking at least 4 out of 9 items in the economic strain and durables dimension.

Data on those ‘at-risk-of-poverty’ (AROPE) in the Republic of Macedonia are seen in Tables 3 and 4.

Table 2: National data on poverty levels

Indicator	2010	2011	trend
AROPE	27.3	27.1	-0.2
AROPE before social transfers	42.8	47.1	-1.1
AROPE among 18-64 age group	26.9	25.9	-1.0
s80/s20	10.3	12.0	+1.7
Gini coefficient	40.8	39.2	-1.6

Source: SILC 2010 and SILC 2011

When disaggregated by gender and age we see that women are at higher risk of poverty when they are young (0-17 years of age) and elderly (65 and over).

Table 3: At-risk-of-poverty rate by age and gender, in percent, 2011

Age	Total	Male	Female
Total	27.1	26.7	27.5
0-17	35.6	34.1	37.1
18-64	25.9	25.8	25.9
65 and over	21.0	19.6	22.2

Source: Survey of Income and Living Conditions, SSO 2013

The at risk of poverty rate for women who are employed and retired is significantly low, and lower than that of men with the same activity status, but higher for women who are not actively searching for jobs, compared to men with the same status. Unemployed men also are at higher poverty risk than the unemployed women (Table 4), presumably because unemployed women are supported by their husbands.

Table 4: At-risk-of-poverty rate by most frequent activity status and by gender, 2011

	Total	Male	Female
Employed	10.0	11.0	8.3
Unemployed	48.7	56.8	36.9
Retired	12.8	16.6	6.5
Other inactive population	35.2	26.6	36.9

Source: Survey of Income and Living Conditions, SSO 2013

To improve economic indicators and increase the number of employed, in 2005 the Government adopted a new policy framework comprising a Law on Labour Relations, Law on Employment and Insurance, Employment Policy, and an Action Plan for Employment. It includes general and branch-specific collective agreements. Measures that directly contribute to women's economic independence as well as their role as supporting workers with family responsibilities are in the areas of education, time-saving infrastructure and childcare wage policy. In this respect the framework aims to encourage better balance for workers between paid and unpaid family responsibilities by strengthening women's role and reintegration in the labour market. Elements include:

- The right to special protection and a working environment that allows them to "smoothly align" and balance their family and professional responsibilities.
- Provisions for leave to care for family members who are ill
- The option of part-time work for parents of a child with special education or development needs.
- The right to paid maternity / paternity leave of 9 months
- Approved absence due to disease or injury, pregnancy, childbirth, parenthood, and care for a family member as one of the unfounded reasons for termination of an employment contract.
- A guarantee that an employee can return to the same or equivalent job upon completion of parental leave.

Childcare is provided in the form of kindergarten and is an important element of the Government's policy on balancing paid work and family responsibilities. However, since this network was developed in the Socialist period, kindergartens tend to be located in urban areas of economic production (MakStatDatabase).

Funding for social protection has been decreasing as a result of economic crises. A large number of people (133,539) receive social cash benefits, of which slightly more men than women household members are beneficiaries. Only one fourth of direct cash beneficiaries (heads of households) are women. A gender analysis of social protection programs of the Ministry of Labor and Social Policy in 2009 showed that employees in the Centers for social work responsible for administering applications for social cash benefits tended not to approve applications made by women heads of household.

6. Access to and use of ICT

According to recent data from the Statistical Office (2012), access to computers and internet sees a slight gender gap. In 2012, of the total number of computer users (965 747), 46.8% were women and 53.2% men. Of the total number of Internet users (926 903), 46.9% were women, and 53.1% men. Data by age groups

show that the gender gap concerning computer and Internet usage is lowest among those aged 15-24 (0.9 and 0.2 percentage points, respectively, in favor of men) and highest among those 55-74 (7 points). By educational group the gap is lowest among the individuals with tertiary education (around 1 percentage point in favor of women). ITU data from 2010 indicates that 51% of the population overall has access to the internet, making it one of the least connected countries in Europe.

The CPRM survey of Rural Women indicates however that women in rural areas have low levels of computer literacy, with 25.2% using computers independently and 45.9% not using computers at all. Comparatively, 41.5% of men use computers independently (CRPM, 2012).

7. National level decision making

In Macedonia the representation of women in Parliament and in the municipal councils is related to a change in the election law which introduced gender quotas (in 2002 and subsequent amendments). The implementation of the law led to significant change in the representation of women in these bodies overall – 35% of Parliament members and 30% in these bodies overall. They had little influence on the election of women at higher levels. While women make up 30% of council members, only 4 out of 25 Mayors are female. Representation of female Ministers is lower – of 24 Ministers of Government two are women. One manages the Ministry of Interior, a non-traditional portfolio for a female.

The upward trend and increasing participation of women in national decision making can be observed especially in Parliament from 2008 to the 2011 early elections, when 8 women were appointed to leadership positions in Parliamentary bodies, such as Head of Caucus. After early elections in 2011 women held 32% (9) of key positions in the Macedonian Parliament, including Chairperson, Deputy Chairpersons, Chairpersons of Council and Committee bodies.³

In central public administration although women and men are close to evenly represented, gender gaps exist only in the vertical segregation, in particular the State Advisor rank, as presented in Table 8. Namely, in all other tiers of the civil service on central level gender balance is observed. That suggests that men are in the majority at the political appointee level of the administration: State Secretary, Director, Deputy Minister and Minister.

Women in Macedonia play a significant role in climate change decision making at the national level. Climate change policy is developed by the Ministry of Environment and Physical Planning (MEPP), which was until recently headed by a female State Secretary, with two (out of four) female State Advisors⁴. Women are in the majority the Head of Sector positions as well, with 6 of 9 sectors led by a woman (66%). The National Climate Change Committee (NCCC) is headed by a woman and has 32 members, of which 16 are men and 16 are women (50%). Macedonia fares well in this area in comparison with EU countries, with a 33.9% average of women in high-level positions relevant to climate change in the environmental sector.

The energy sector is managed by the Ministry of Economy. The energy sector in the Ministry, however, is characterized by close to gender parity. Of 13 employees in the sector six are women, of which one is Head of the sector, one is Deputy Head of Sector and two manage departments (units) within the sector.

At this time the Management Committee for disaster reduction is headed by a woman, Minister of Interior Gordana Jankulovska.

Table 5: Gender distribution of ranks in central public administration, 2013

Civil service rank	Female	Male	Total
State advisor	59	77	136
Head of sector	120	109	229
Assistant head of sector	113	81	194

³ Before the 2011 early elections, women MPs held the following leading positions: one serves as Vice-President out of 3), 2 chaired Council bodies (out of 3) and 5 out of 21 hold Chair positions on Committees. After the 2011 early elections to parliament, women occupy these leading positions: two serve as Vice-Presidents, two Chair Council bodies and 5 out 21 serve as committee Chairs.

⁴ It is not yet known who will be appointed to replace her.

Head of unit	383	307	690
Advisor	1108	1225	2333
Senior associate	179	182	361
Associate	224	214	438
Young associate	1233	1460	1693
Assistant	892	1075	1967
Senior clerk	181	113	294
Clerk	303	246	549
Young clerk	333	808	1141
Total	5128	5897	11025

Source: Central Registry of Civil Servants, 2013

7.1 Women in local decision making

The territory of Macedonia is divided into 81 local self government units or municipalities. The Mayor and the Municipal Council are executive bodies of these municipalities. In every municipal council, council members are represented as a result of direct elections.

Gender quotas implemented in 2002 led to increased female representation in municipal council over the last three rounds of local elections. This trend continues upward with the election of 405 female council members in a total of 1347 in 2013 – 30%. However, the percentages are lower with respect to Mayor of a municipality. In 2014, of 25 women candidates four were elected as Mayor. At the level of local government, women make up half of municipal administration employees (out of 8733 employees in 68 municipalities 3014 were women. At higher levels in municipal administration women hold one third (201 women compared to 609 men) of management positions in 68 surveyed municipalities⁵.

8. National Policy Context

8.1 Gender equality policy

Equality is mentioned in the Preamble of the Constitution of Macedonia. Article 9 in more detail regulates that the citizens have equal rights and freedoms regardless of sex, race, color of their skin, national or social origins, political or religious beliefs, their material or societal position. This forms the foundation of the gender equality framework that is connected to other national policy frameworks. The National Strategy for Equality and Non-discrimination, to improve the status of the most vulnerable groups in Macedonian society, and promote equality and nondiscrimination. The Strategy encompasses objectives and activities for the mid- and long-term and provides a framework for a one year action plan that outlines the time frame, expected results, and indicators for monitoring results.

The National Strategy for Gender Equality 2013-2020 has been adopted in order to enhance equal opportunities for men and women in the period 2013-2020. This Strategy builds on the National Action Plan for Gender Equality 2007-2012, continuing the country's efforts towards achieving gender equality. The strategy is however not budgeted but it was decided to be executed with annual operational plans, which received criticism in CEDAW committee 2013 recommendations. The Strategy set goals of gender equality that were expanded with cross-sectoral and horizontal perspectives for achieving universal social and political priorities. Environment was included in the 2007-2012 National Action Plan, but was dropped for the current Strategy since there is currently no capacity to measure gender and environment.

The Law on Equal Opportunities for Women and Men (LEO) was adopted in 2006 and regulates the basic and specific measures for establishing equal opportunities between men and women in the country. In 2012 the LEO extended the list of situations which might be considered discriminatory, regulating discriminatory basis as well as introducing conceptual reforms such as gender responsive budgeting (GRB). It defines specific obligations for central and local level institutions with regard to gender responsive budgeting (Art. 11 and Art. 14) and requires establishment of a consultative advisory inter-sectoral working group on gender equality within which a sub-group on GRB was established.

⁵ Analysis available at: http://www.mtsp.gov.mk/WBStorage/Files/informacija%20za%20analiza_lokalna%20samouprava.pdf, last visited 13/06/2014

The LEO in this regard aligns Macedonian legislation with the EU and regulates an institutional network which has been established to support the Law. It encompasses

- the Department on Equal Opportunities (DEO) that was established within the Ministry of Labor and Social Policy in March 2007;
- Gender Focal Points (GFP) in all line ministries and municipalities, also called Coordinators on Equal Opportunities ;
- the Parliamentary Commission on Equal Opportunities of Men and Women which is tasked with monitoring legal regulation proposed by the government and implementing the National Strategy for Gender Equality;
- Commissions on Equal Opportunities on Women and Men (EOC) within the local government units that develop and adopt local action plans on gender equality.

The Republic of Macedonia started to promote the concept of Gender Responsive Budgeting (GRB) in 2008. Several pilot activities were implemented aimed at its application and raising the awareness among the relevant stakeholders on the importance and benefits from the application of this concept. In accordance with Article 11 of the Law on Equal Opportunities for Women and Men: "The state administration bodies are obliged to incorporate the principle of equal opportunities for women and men within their strategic plans and budgets; to monitor the effect and impact of their programs on women and men and to report within their annual reports". In order to include the gender component in the processes for planning and budgeting of the programs and the projects of the Government of the Republic of Macedonia it is necessary to have a defined framework with included strategic areas, objectives and activities for systematic introduction of gender responsive budgeting and meeting the aforementioned obligation under the Law.

The Strategy for GRB has been enforced since 2012 with a change in the budget circular for central level budget users. Its operationalization was assisted with the introduction of gender in budget analysis of revenues and expenditures, the use of gender indicators in the budget circular, and a mandate to report on budget execution using sex-disaggregated data. The Ministry of Finance selected the following institutions to pilot the GRB methods: the Ministry of Health, the Ministry of Labor and Social Policy with the Agency for Employment and the Ministry of Agriculture. They are required to select a program for GRB analysis and develop gender sensitive output indicators to measure the effect of programs on men and women. The institutions selected by the circular were mentored in this process to ensure that all relevant actors are involved and actively contribute and that the programs fully comply with the mandate. Budget statements were used to justify the indicators. A GRB manual was developed and mentoring initiated in the Ministries and the Agency for Employment to support the process. In addition, a working group was established, made up of representatives of the Ministries and the Agency. It is using the budget statements as a basis for the preparation of the GRB methodology, and is currently in the final phase of development (Hadžiahmetović, A., T. Đuric-Kuzmanović, E.M. Klatzer, and M. Risteska, 2013).

There are no specific laws restricting women's rights to own property or their freedom to run a business. Macedonian law does not discriminate against women's access to or ownership of land, or the right to own property other than land. However, women experience limited opportunities to acquire and manage land and other forms of property because property is usually registered in the husband or a male relative's name. This is particularly the case in rural areas. Joint property, is property acquired jointly during the marriage and both spouses have the right to administer and dispose of their joint property, by mutual consent. The couple may declare in writing who is responsible for administering their joint property and who can dispose of it. Property acquired individually before the marriage remains under the control of the owner (OECD, 2012). The highest level of house ownership of married rural women is recorded in the East and South East region varying between 8.3 %-8/9% (Risteska et al, 2012).

8.2 Energy policy

Theoretical and practical models of gender mainstreaming show that women's participation in decision making allows for women's perspectives in the subject matter to be taken into consideration when making the decision. These include aspects on how the proposed policy measure affects women, whether their interests are included and if their needs are to be met with the adoption of the measure. Therefore participation of women in policy making is used as indicator in assessing the gender aspect in energy sector; and (ii) are women consulted in the process of development of the policy proposals in sector energy.

The energy sector is managed within the Ministry of Economy. The Ministry's decision making structure is male-dominated, with only one of the top five positions is filled by a woman – State Advisor for European Integration. The energy sector in the Ministry, however, is characterized by close to gender parity. Of 13 employees in the sector six are women – one is head of the sector and two manage departments within the sector.

The Strategy for Improvement of Energy Efficiency in Republic of Macedonia institutes measures for energy efficiency in the residential, commercial, and industrial sectors as well as transport, and develops projections concerning the future value of investments as well as their impact on society. The approach applied when provisioning measures in the industrial sector is primarily economic, both in development of standards and impact assessment. In example the impact of energy efficiency savings in the industrial sector are assessed in terms of competitiveness of industry, corporate social responsibility and new employment. This is in contrast to the other sectors: commercial, residential and transport impact assessments take a social approach and calculate the effect energy efficiency saving has on various aspects of the life of citizens (i.e. health, quality of life, poverty). However, a gender or social needs is not incorporated. To this end the Strategy is gender blind – it does not assess the gender implications of its actions, or take into account the specific perspectives of men and women in development of measures or impact assessment.

8.3 Disaster reduction policy

The policy mapping report prepared by UNWomen in 2009 defines the crisis management system in Macedonia as a complex structure that includes multiple stakeholders with various responsibilities for prevention and disaster relief. The President of the Republic, the Parliament and the Government are heads of the system, together with the armed forces. The system becomes operational when the Government declares a crisis situation that will be in place for a maximum of 30 days and activates use of all resources of the state. The main body that coordinates the crisis management system is the Management Committee. The composition of the committee and its responsibilities are determined in accordance with the Law on Crisis Management. At this time the Management Committee is headed by a woman, Minister of Interior Gordana Jankulovska (UN Women, 2009).

The current legal and institutional framework for crisis management does not clearly define entry points for gender mainstreaming, but the UNWomen report identifies the Management Committee as a suitable entry point for integrating gender objectives in the national policy and institutional framework. Another entry point is the Centre for Crisis Management, that was established as part of the Law on Crisis Management. The Centre is the central that provides expertise and support to the Management Committee. The Centre prepares assessments and early warning reports that integrate a gender perspective. Another possibility for gender mainstreaming of the sector is the data management system of the Centre, where gender indicators if implemented could provide a basis for gender analysis of crisis situations (UN Women, 2009).

8.4 Climate change policy

Climate change policy is developed by the Ministry of Environment and Physical Planning (MEPP). The Ministry's decision making structure was until recently headed by a female State Secretary, with two (out of four) female State Advisors⁶. Women dominate the Head of Sector positions as well, with 6 of 9 sectors led by a woman. This suggests that women participate significantly in the policy making process, but whether the Ministry has a gender responsive policy on environment has not been assessed.

The policy making structure for climate change is made of a National Climate Change Committee (NCCC) which is headed by a woman scientist from the Macedonian Academy of Science. The committee has 32 members, of which 16 are men and 16 are women. The MOEPP has appointed a civil servant at the rank of State Advisor as a responsible person for communication on the UN Framework Convention for Climate Change and the Kyoto Protocol. The unit managing monitoring and further development of climate change policy is not yet active.

The main policy document that regulates climate change policy is the Third National Communication on Climate Change. It prescribes measures for decreasing of greenhouse gas emissions and climate change adaptation, including projects for building capacities and buildings that are regulated with the Decree for determination of the projects and criteria based on which environment impact assessment needs are determined. The document assess the socio-economic situation in the country. This report is a supplement to the TNC, providing a gender analysis and recommendations for mainstreaming gender in the national climate change policy.

9. Summary

This report presents the first comprehensive analysis of gender trends relating to climate change adaptation and mitigation in the Republic of Macedonia. Overall, gender-based differences exist in the Republic of Macedonia in daily activities and household responsibilities, access to assets and credit, income, representation in decision making at

⁶ It is not yet known who will be appointed to replace her.

local and national levels, participation in decision making at the household level, and employment, among other areas. The gendered factors and trends identified here will affect the ability of women and girls to respond to the effects of climate change and will influence the success of adaptation and mitigation strategies.

- There is a substantial gender gap in earnings and productivity. This affects the ability of women to make choices, invest resources and influence decisions relating.
- Women make up 39.6% of the formal labour force which is very low compared to levels elsewhere in. At the same time they contribute a substantial amount of unpaid family labour. Their work on and off-farm tend to consist of manual labour-based activities, while male activities tend to be more supported by technologies and work in formal employment. However it should also be noted that men make up the majority of workers in the informal sector.
- Women and men in rural areas face challenges in accessing all levels of policy and decision-making processes. They are less represented as Mayors of municipalities, and at 30% or less in municipal administrations. (However they are close to equally represented in the civil service with the exception of two of the three highest non-ministerial positions.) Their decision making power within the household is very low, particularly in rural areas. As a result they are less able to influence policies, programmes and decisions that impact their lives.
- Socio-cultural norms and the gender division of labour – which restrict women to the household to care for children and manage domestic tasks – can limit women from acquiring information and interacting with institutions and services outside of the household.

Gender and Climate Change in the Republic of Macedonia

The European Institute for Gender Equality (EIGE) identified 6 dimensions where climate change causes gender-specific and differentiated effects:

- 1) Socio-psychological, relating to gender roles, behaviours, attitudes and perceptions of risk, among others. These can translate into different consumption patterns, different levels of energy use, and different values affecting behavior such as fairness and ethics vs. cost-performance ratio.
- 2) Socio-economic, relating to the gender division of labour both vertical and horizontal (i.e. relating to concentration in sectors or levels of employment), property ownership, access to resources, income, education and poverty. Differences in time use and patterns of domestic and productive responsibilities will affect energy use and requirements for low carbon development. Economic differences will affect capacity to cope with and mitigate climate change. For example, women (particularly single women, single parents and the elderly) will have more difficulty with expenses for adaptation than other groups.
- 3) Socio-cultural, relating to religion, cultural patterns and norms. These factors may affect the use of public services such as parks or transportation systems, and the geographical or physical areas where women and men live and work.
- 4) Legal, including land rights, inheritance, anti-discrimination, protection. Although legal rights in Macedonia are gender-neutral and an anti-discrimination law is in effect, there are still gender differences in ability to benefit from these, based also on, geographical location, ethnicity and economic status.
- 5) Political. Issues in this dimension include participation, governance, empowerment, and policy instruments. Social sectors which have the greatest influence in climate-change related decision making, mitigation and adaptation, tend to have low female representation, as do the highest levels of national and municipal level governments. This will mean that climate change strategies may fail to take into account gender differences in perceptions of and attitudes towards climate change issues and risks.
- 6) Physical and biological – these refer to physical differences between the sexes, such as reactions to pollution, temperature change, life expectancy, etc. which are not related to behavior. Health impacts of climate change can differ for biological reasons such as size, metabolism, pregnancy, non-communicable disease trends, as well as social reasons of care by partner, or exposure to chemicals / pollution in various venues (EIGE, 2012).

Based on the key areas identified in the Third National Communication on Climate Change (Ministry of Environment and Physical Planning, 2014), interviews with ministry personnel⁷ and the situational analysis of women and men in Macedonia in the previous section, critical impact points of climate change and leverage points for mitigation and adaptation in the country are identified in the following sectors:

- 1) Energy and Transportation
- 2) Agriculture
- 3) Water and irrigation
- 4) Disaster and risk reduction
- 5) Tourism

Important leverage points to ensure both women and men are reached by climate change-related information and participate in decision making include access to information and communication on climate change in all sectors, as well as participation in decision making bodies at local, national and regional levels.

In this section an overview is provided of the main gender trends in effects of climate change, contributions, risks and opportunities, as well as in adaptation and mitigation. The cross-cutting themes in this analysis relate to differences in social vulnerability, socio-economic level, access to and control over resources, and participation in consultation and decision making around climate change. The gender analysis of climate change will be followed by a review of different policy instruments and options to reach both women and men in their gender-differential division of labour, responsibilities, and resource access.

1. Gendered Effects of Climate Change

1.1 Energy and transportation

Gender differences in energy-related effects of climate change relate primarily to increasing costs or scarcity, health effects of different fuels, and power outages caused by environmental stresses.

In Macedonia and in most countries of the world, women tend to earn lower salaries than men, and greater numbers of women live below the poverty line, particularly among the elderly. As a result, single women and single-headed households will be less able to absorb increasing energy costs for heating, cooling and transportation. This is of course true for households in lower socio-economic levels in general. Particularly in Macedonia, a large proportion of women do not work outside of the home and will therefore depend on domestic heating – cost and type of fuel – to a greater extent.

People with low incomes are vulnerable to changes in energy prices in winter when energy is needed for heating and during heat waves for cooling. In Macedonia, cold temperatures are expected to be more of a problem than hot temperatures. Analysis of emergency calls in the country indicates that the elderly are more vulnerable to extreme temperatures, a demographic which is increasing (MEPP, 2014). Increasing energy prices place pressure on people with low incomes: not only do they spend a high proportion of their income on energy, and may live in poor housing (EIGE, 2012).

While sex-disaggregated data are not collected on energy poverty in Macedonia, the EU situation is that pensioners experience high levels of fuel poverty⁸, with women in the the majority. Overall in the EU- 27, more women than men report that they cannot afford to pay for adequate heating (Eurostat EU-SILC, 2009). According to one study, more than a fifth of female lone pensioners suffer from fuel poverty across Europe, slightly more than male lone pensioners (Healy, 2004). There is also considerable variation across countries relating to socio-economic status, ethnic group, and geographical location.

Higher temperatures and more frequent heatwaves affect women and men and different social groups in different ways. This was seen during the 2002–03 heat waves in Europe, where young children, the elderly, the sick and the poor were the most affected. Gendered effects relate to the predominance of women among the elderly and poor; they are also the ones to provide care for children, the sick and the elderly persons. Sex-disaggregated data on effects of heatwaves are not collected in Macedonia, but we can see potential trends from research in other European countries.

⁷ See Appendix 2 for a list of ministry personnel interviewed for this study.

⁸ Defined as the inability to afford sufficient heating fuel to maintain an adequate indoor temperature.

In Portugal, the estimated excess mortality rate for women resulting from the 2002–03 heatwaves was more than twice the rate estimated for men (Nogueira et al., 2005). During the same heatwave in France, there was a 70 % increase in excess fatalities for women (with elderly women aged 75 years and over being particularly affected) compared to a 40% increase for men (Pirard et al., 2005; EIGE, 2012).

As a result of transformation from a market economy and the need to update energy infrastructure, Macedonia experienced a major increase in energy prices, causing many households to switch to fuelwood. The use of fuelwood for heating and cooking purposes is usually fairly inefficient and not clean-burning, a result of the use of old stoves and scavenged wood materials (Stojilovska, 2013; IEA, 2008). As noted by the IEA, the use of inefficient wood stoves has a negative impact on the health of households using fuelwood. Women and children face the greatest disease burden from wood fuel use for these purposes because of the time spent in the household in general, and cooking duties in particular. Solid fuel use is most firmly associated with acute lower respiratory infections (including pneumonia) in young children, and chronic obstructive pulmonary disease and lung cancer in women (and to a lesser degree in men) (Desai et al, 2004).

1.2 Agriculture

As discussed in the Third National Communication, some of the main climate change induced concerns for the agricultural sector include increasing temperatures and drought, and increased natural disasters such as flooding and excessive rainfall, resulting in reduced crop yields. National data shows that the sector is the most important in the Macedonian economy, responsible for 16% of the country's GDP and employing 36% of the workforce. However, the report notes that the employment data underreports both the outputs and labour inputs of smallholder family farms (Ministry of Environment and Physical Planning, 2014). As seen above, women's unpaid and informal family farm activities make up a large proportion of national uncounted outputs and labour inputs.

Agriculture is an important, but not necessarily a paid activity of women across the country. Official statistics for Macedonia indicate that in 2012, women made up 40% of workers in agricultural enterprises. Data available for various agriculture sectors by education indicates they make up approximately 30% of agronomists, 10% of veterinarians, 50% of economists, and approximately 32% of "other" (SSO, 2014). The percentage of female households members who work at individual agricultural holdings and employees at business entities is 43% (SSO, 2007).

The degree and kind of participation by women in agriculture varies in different regions. In the Vardar and Pelagonia regions the majority, 66.7% and 60% of employed females respectively, work in agriculture and take surpluses to market surpluses, whereas in Polog (73.7%) and northeast region (66.7%) they engage in mostly agriculture subsistence. Overall, rural women make up to 38% of those economically active in agriculture, hunting and forestry (including seasonal workers), with an estimated 20% of economically inactive women actually working on family farms on an unpaid basis (CRPM, 2012).

Women engage in unpaid agricultural activity more than men, and their tasks tend to relate to planting, picking, processing, and packaging. Women tend to be responsible for the agricultural activities near the house, and for feeding and milking of livestock. Macedonian women work in the field with men, while Albanian women mainly work near the home while men work outside the house. Men undertake heavier tasks, such as digging, irrigation, and harvesting. They also operate the farm machinery and sell goods at market. As in most parts of the world (FAO, 2011), women's tasks in farming in the Republic of Macedonia tend to be manual-labour intensive and less supported by information and technology.

Women's participation in agriculture in the country is also characterized by lack of land ownership, little input into agricultural decision making, and lack of control over their time and labour. According to the FAO, approximately 16% of land in the country is owned by women (FAO, 2014). Very few women are formally registered as farmers, while on average, in less than 6% of households do women own farmland or a house (CRPM, 2012). Women in rural areas tend to have primary education only, while in the urban areas, they tend to complete secondary levels at least.

Risteska et al (2012) have noted that limited agricultural education, extension and training has limited opportunities for women to (1) gain new technological knowledge in their areas of production, (2) occupy positions as agricultural researchers and extensions, and (3) express their needs for research, training, and other kinds of support, including technology, policy, and financing. As in other countries, women lack the same access to inputs, services and technology in agriculture as men, limiting their production as well as their ability to respond to stresses and shocks caused by climate change. Prof. Chukaliev has noted from personal observation, that women do not attend information sessions

on new agricultural techniques and technologies, and that men make all agricultural decisions for the family farm, regardless of their level of expertise in particular tasks or areas of production (Ordan Chukaliev, 2014).

As a result of this situation, not only do women have little access to updated information and knowledge to improve their agricultural production, the knowledge they do have is lost or not taken into account. A series of interviews on the effects of variable climate on agriculture in Macedonia included an oft-repeated comment by the female farmers that new crops planted were less resilient in the face of drought and/or increased rain than the crops used previously (Garvanlieva, 2014). A lack of recognition of women's agricultural knowledge means that agricultural choices can be made without taking into account all available knowledge of seed hardiness, resilience and ability to withstand different conditions.

Rising energy and inputs costs make it difficult for both male and female farmers to make effective decisions on a long-term basis, and decreasing income from agricultural production forces men to find work off the farm. This sometimes requires migration to an urban centre or another region, causing hardship for the household as a whole.

1.3 Tourism

Tourism in Macedonia makes up a substantial part of national GDP, especially in generating new employment (3.2%). As a sector it is experiencing faster growth than the economy overall. The country's tourism industry has a rather narrow focus compared to other countries in the region: beach/lake, culture/heritage and mountains/rural tourism, with a limited presence in city breaks, conferences, spas and skiing/sports. Data in this sector comes primarily from hotels and restaurants, so that more data is needed from other sectors such as ski instructors, environment guides and touring companies, tourist agencies, etc. In Macedonia, available data indicates that 64% of employees in the accommodation and food service sector are male. This differs from the EU ratio of 55% female and 45% male workers in the sector (Mojsoska-Blazevski, 2012; Petrevska, 2011; Baum, 2013).

More than 80 per cent of employees in the hotels and restaurants sector have achieved secondary education, of whom 67.3 per cent have 4 years at the secondary level, and 14.3 per cent have 3 years. Data on school enrolments at secondary level show that, of the students who completed upper secondary education in travel, tourism hotel and catering services in 2011/2012, 29% were female and 71% male (State Statistical Office, 2013). The Global Report on Women in Tourism in 2010 has found among other trends that women make up a large proportion of the formal tourism workforce worldwide. They are well represented in service and clerical level jobs but poorly represented at professional levels, and are typically earning 10% to 15% less than their male counterparts. They also make up a much higher proportion of own-account workers in tourism than in other sectors, while they carry out a large proportion of unpaid work in the sector in family businesses (UNWTO and UN Women, 2011; OECD, 2008).

A very small share, 0.5 per cent, have less than primary education. About 7 per cent of workers have completed a bachelor degree, masters or PhD. Eight schools and 92 classes in the country provide travel, tourism, hotel and catering courses, with 2408 students across all years of study. This constitutes 2.6 per cent of the total number of secondary school students in country, with females representing 32 per cent.

According to ILO, skills development is important in this growing sector. There is a need to identify priority sectors for future economic development, and analyze their skills requirements. The National Strategy for Tourism Development 2009-2013 argues that the quality of studies and especially the learning of practical skills (for example, in catering) is low. It suggests that schools have insufficient resources in terms of space, laboratories and cabinets for practical learning. One potential to provide training in this area is through life-long learning which could consist of: specific courses, programs for language and computer skills and more general, soft skills programs. Currently there is only one tourism-related continuing education course in the country, offered by the Faculty of Tourism-Skopje - an IATA certified training course (Mojsoska-Blazevski, 2012).

Tourism is a sector that is particularly vulnerable to climate change, and effects will vary across regions and socio-economic group. Warmer winters and hotter summers will stress winter tourism which relies on snow-based activities, particularly skiing. Cultural tourism may also be at risk as physical and cultural heritage attractions may be affected by floods and severe weather (MEPP, 2014).

Based on experience in other countries as evidenced by the Global Report on Women in Tourism and other work, vertical and horizontal gender segregation in tourism employment in the country should exist. While males make up the majority of workers in the sector, certain jobs and levels of employment will be made up substantially or predominantly of female workers, particularly since they tend to have lower levels of education than men. As a result, certain occupations may see a concentration of male and/or female employees, such as ski instructors and outdoor instructors

or guides who will likely tend to be male, based on experience in other countries. Hotel employees below the position of manager may tend to be female, particularly in housekeeping, kitchen work and other low-paid activities. Senior and management positions tend to be occupied by males, these are the positions which also tend to provide the greatest levels of unemployment remuneration, as well as support for retraining and transfer. Data will need to be collected on which occupations tend to be the most negatively affected in the event of decreases in tourism, or changes in weather, and employees in different sectors targeted for retraining or placement in other jobs /regions.

1.4 Water and health

Climate change may influence increases in certain water and food-borne diseases, such as salmonella, although it is considered that interventions to prevent these will be able to manage any increases (MEPP, 2014). Extreme weather events often create conditions conducive to outbreaks of infectious diseases; heavy rains produce insect breeding grounds, and contaminate clean water sources while drought on the other hand can cause fungal spores and spark fires. Domestic work brings women and girls in close contact with water – given their responsibilities for cooking and cleaning as well as care of the sick and children, so that they are highly vulnerable to water-borne diseases and pollution of water sources which can result from flooding or other shocks. The need to ensure clean water for drinking and food preparation, either through boiling or other preparation, or accessing alternative water sources, will increase the work burden of women and children (UNDP, 2010).

1.5 Disaster and risk reduction

Vulnerability to disaster is related to age, ethnic group and socio-economic level. Women, girls, boys and men will therefore have distinct vulnerabilities based on these factors, which will shape their experience of disaster as well as their ability to recover. From data in 141 countries affected by disaster between 1981 and 2002, we know that disasters affect women's life expectancy more than men's, and that women, boys and girls are 14 times more likely than men to die during a disaster. Reasons for this include inability to swim and less physical strength and ability – such as running, climbing or jumping – which can help them to escape natural disasters or avoid physical injury. While no direct research has been done in this area in Macedonia, we know that these gender trends will have some relevance in the country. This is an area for further research and analysis.

Women and girls can be vulnerable to natural hazards in terms of vulnerability to gender-based violence – both inside and outside of the home. Many women avoid using shelters for that reason. Most disasters also increase the burden on women and girls who are responsible for providing care, water and food for households and caring for children. Studies have shown that women are often able to access fewer resources for recovery (Neumayer and Klumper, 2007).

Some other gender differences include trends toward reluctance on the part of men to request assistance after disasters. As well, there were more immediate deaths among men when hurricane Mitch struck Central America, not only because they were engaged in open-air activities, but because they took fewer precautions when facing risks (UNDP, 2010).

Two main areas of consequence result from failing to understand the gendered risks of disasters. If women and girls are left out of planning for disaster response or risk reduction measures, their skills, knowledge and contribution will not be available for recovery and the needs of the most vulnerable will be less addressed (UNDP, 2010). Considering that women in the country – particularly in rural areas – have lower incomes (and many have no personal incomes at all), low levels of education and limited access to information and communications technology, they are at greater risk during disasters, and will have less ability to prepare ahead of a disaster. This is of concern given their responsibilities for – and the need to take care of – children at the same time.

And finally, failing to understand that men and women will face different physical risks and different causes of physical risks will result in duplication of medical supplies and efforts. More accurate targeting of risks and populations at risk will increase efficiency and decrease resources required to help populations affected by disaster and shocks.

In one example of an approach to including gender in crises, UNDP has worked with the national Crisis Management Centre (CMC) in the Republic of Macedonia since 2008. A central part of the collaboration is the inclusion of gender concerns in all CMC activities. New software for a geographic information system was developed to allow researchers to collect sex-disaggregated data which is critical to learning more about the unique ways in which disasters affect women and men. Training on the protection of women is offered to the Macedonian Red Cross, which has uploaded a software application for e-learning. One of the results of the project has been the continued creation of plans, strategies and documents on gender and crisis management, such as The National Platform on Disaster Risk Reduction which has established working structures for gender issues in case of disasters and accidents. UNDP and CMC staff are working together to draft a gender-responsive national contingency plan (UNDP, 2010).

2. Gender Patterns in Contributions to Climate Change

Studies in Europe have found that women contribute differently to greenhouse gases emissions, in terms of types of consumption, amounts, and purposes/reasons for consumption. These relate to the gender roles, professional activities, and economic status. Key areas for assessing gender trends in contributions to climate change are consumption of goods and services, economic status and access to resources, energy use (including transportation), and food choices and nutrition.

2.1 Consumption patterns

In Europe, “gender has a huge influence on sustainable consumption (OECD, 2008)”. In some OECD countries, women make over 80% of consumption decisions even if men spend the money. Reasons for this are said to relate to closer connection to health issues in the family, as well as greater tendency on the part of women to act on internalized attitudes towards health and environment. Men tend to focus more on convenience and pay less attention to consumption and shopping. As a result, women tend to be a more effective target for consumerism based on ethical, social and environmental choices, and seem to be more willing to change their consumption behaviour. The Women’s Environmental Network found that 94% of women had recently started to change consumption patterns based on environmental issues (Women’s Environmental Network and the National Federation of Women’s Institutes, 2007). In Sweden, women are 20% more likely to feel guilty about their ecological footprint than men, and are therefore more willing to reduce their emissions and to buy products from companies and producers that support climate change initiatives or offer organic products. They also tend to be more willing to pay higher prices for these products. As a result, women are more responsive to organic or ecologically friendly labelling, or buying fair trade products (Schultz and Stiebs, 2009; EIGE 2012).

2.2 Economic status

Carbon footprints relate very closely to economic status and discretionary income. The higher the income, the higher the CO₂ emissions – in terms of car use, electrical energy consumed, size of house they live in, etc. Some people in developed countries produce fewer carbon emissions – if they do not own a car, do not own a home, do not eat a lot of meat – depending on the kind of lifestyle they can afford to lead (EIGE, 2012; House et al, 2007; Rätty, R. and Carlsson-Kanyama, 2010; Clancy and Roehr, 2003).

2.3 Energy use

On the other hand, a lower income may restrict the purchase of energy-efficient appliances, new energy-saving cars, better household insulation or more energy efficient heating and cooling systems. Women’s lower levels of income and discretionary spending means they will have a smaller carbon footprint than men in general, but conversely may be less able to afford emission reducing alternatives. As a result, actions to reduce personal carbon footprints may benefit from campaigns targeting men and male activities in certain sectors, while special subsidies may need to be implemented to allow women to make the climate change reduction decisions they tend to prefer.

While some distinctions can be made between women’s and men’s energy use, intrahousehold energy use patterns are more difficult. Energy use in the household relates to care work for other household members, commuting employment to support the family, informal work in the house to earn income for the family, non paid or volunteer work inside or outside of the house, transport of family members, and personal consumption, i.e. television or computer use (Alber; and Hemmati, 2011). However, some assumptions can be drawn from known gender patterns of labour within the household – e.g., women tend to cook and prepare meals, men tend to drive cars more than women, women run household cleaning appliances, while men and boys spend more time on computers and video games, etc.

Studies are emerging which indicate gender patterns in household energy use exist. An analysis of expenditures of single-person households in four countries (Germany, Greece, Norway and Sweden) found direct and indirect energy consumption and carbon emissions for different purposes (transport, energy consumption in the home, food and beverages, etc.). On average, single men consumed more energy than single women in all four countries, independent of income and age (Rätty and Carlsson-Kanyama, 2010). Other studies suggest that when women leave the house to enter the labour market, household consumption rises approximately 8–10%. This could mean that women’s labour is substituted by more energy-consuming practices, such as use of packaged ready-made meals instead of meals made at home, and increased aggregated consumption of food, energy, water and domestic goods related to cleaning and furnishing, childcare, transport and communications (House, et al, 2007; Clancy and Roehr, 2003; Machado, 2003).

Many household purchases have major implications for energy consumption or conservation, for items such as household appliances to house renovation or purchase. Men tend to be responsible for technical decisions and investments in insulation of homes, boilers, and hot water, and therefore make energy consumption decisions in the

form of choice of investments and purchases. Women tend to take responsibility for energy conservation by reducing their use of electrical appliances, such as washing machines and dishwashers, and encouraging the rest of the family to do likewise (Clancy and Roehr, 2003).

2.4 Transportation

Studies around the world indicate that women and men have different travel patterns in countries of all economic levels as a result of their daily tasks and responsibilities. Gender and transport issues include: (a) trends in transport use by gender; (b) women and men as marketers of products; and (c) gender trends of workers in the transport sector. With some exceptions, men tend to work outside the house at one task or job during the day. Women tend to take shorter and more frequent trips during the day in the course of tasks associated with their triple roles as income earners, home-makers, and community managers. While making these trips, women are often accompanied by children or elderly relatives (UNCTAD, 2011; IFRTD, 2009).

Studies in Europe show that women tend to use public transport more than cars. Studies across the region show that men tend to own and use cars more than women. A close geographical example, Romania, sees slightly less than 5 % of single female households own a car compared to 16.5% of single male households. Economic factors for these trends are very influential, as are gender roles and perceptions – i.e. male family members tend to drive. Other factors such as age, social class, ethnicity, position in the labour market, income and geographical settlement contribute to differences between women's and men's mobility and transport patterns. These patterns in addition are changing with broader societal structures in terms of increasing mobility, changing family makeup and gender roles (EIGE, 2012).

In Macedonia, in 2007 25% of driving licenses were issued to women, while nearly all men drive. In studies women have expressed fear of driving and operating heavy machinery such as tractors, while Albanian women are more disadvantaged in that it is considered inappropriate for them to travel on buses on their own (CRPM, 2012). Public transport is the most used form of transportation except for men in the lowlands of the country. Among those families that do own cars, men tend to drive. The CRPM survey of rural women found that rural women use public transport more than men, in connection with gender stereotypes related to driving. "Women drive cars less than men and operating heavy agricultural machinery is not [considered] a "womanly activity" (2012).

A focus on promoting bicycle use may also have unplanned gender dimensions. Research in Canada, the US, Australia and elsewhere indicates that women make up between 25-30% of bicycle commuters in these countries. Only in Denmark, Holland and Germany do they make up half or almost half of commuters on bicycles. The reasons are varied: women are much more apt to be concerned about traffic safety; they are subject to harassment; and they often need to combine childcare and domestic chores with their commuting patterns (Pucher and Buehler, 2008).

Air travel is also gendered in much of Europe. For example in Germany men use air travel three times as much as women. However, this data is not uniformly collected, and trends may change as women enter the labour force and enter more senior positions in the labour force.

In summary, research on gendered transport use in Europe concludes that overall women make shorter work trips, make greater use of public transport, make more trips for the purpose of serving others' needs and drive fewer miles per year than men. This would seem to be supported by existing data in Macedonia. While these mobility patterns of women lead to less intensive energy use, they can change as women enter the workforce in greater numbers and their salaries increase in relation to men's. Nevertheless, these differences in transportation-based energy consumption will need to be taken into account in developing and reaching energy reduction targets.

2.5 Food and nutrition.

Food production and transportation around the world contributes significantly to total greenhouse gas emissions. Nearly a third of all consumption-derived GHG emissions are food-related in the European Union (EIPRO– Environmental Impact of Products, 2006). Gender differences in attitudes and assumptions around food and nutrition involve body image, as well as social norms and assumptions about the roles of women and men. Studies in Europe found that men eat twice as much meat as women in Germany (103g per day vs 53 g per day), while in Denmark, they eat 60% more (EIGE, 2012). In the Republic of Macedonia, these trends are strongly influenced by ethnic grouping and socioeconomic level.

Applying a Gender Lens to Climate Change in Macedonia: Recommendations for Action at the National, Local and Project Level⁹

Women and men are differentially affected by climate change and its effects. Because of their differing gender roles, access to resources, knowledge, level of education and training, they will have different abilities to adapt to and mitigate the effects of climate change. Gender mainstreaming strategies in climate change activities will ensure that all members of society benefit.

1. Mainstreaming Gender in Climate Change

Gender mainstreaming is a process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's and men's concerns and experiences an integral aspect of policies and programmes.

The mainstreaming gender into climate change adaptation and mitigation will ensure that women and men benefit equally from actions taken and that inequalities are not perpetuated. In ensuring that all affected groups are taken into account, gender mainstreaming ensures a range of multiple benefits: increased efficiency and sustainability, higher rates of success of programmes, credibility and accountability, improved economic potential, and improvements in population health¹⁰.

Strategic entry points for gender and climate change action include:

- Ensure female representation in climate change related decision making;
- Work with governments, non-governmental organizations, communities and the private sector to integrate gender considerations and expand women's participation in the development and implementation adaptation and mitigation policy and programmes
- Mainstream gender in disaster and climate risk reduction policies and plans as well as budgetary frameworks of key sectors (water, agriculture, health and education).
- Analyze and disaggregated data and climate risk with a gender perspective.
- Engage women and men as key stakeholders in all phases of climate change strategies.

UNDP recommendations for incorporating gender equality into climate change adaptation and mitigation follow on this to suggest:

- Support partner efforts to increase women's access to, ownership and sustainable management of ecosystems goods and services, including through environmental and climate finance.
- Support national actors to analyze and use sex disaggregated data and analyze climate risk from a gender perspective.
- Conduct a gender analysis during programme design including analysis of stakeholders' roles, needs, priorities and opportunities as well as identification of the socio-economic and political context of both women and men affected and/or involved
- Identify gender issues in the planning process of climate change activities and carry it through implementation, monitoring and evaluation stages

⁹ This section builds on (GenderCC, 2010, UNDP, 2014, UNDP, 2011, Habtezion, 2012).

¹⁰ See Appendix Three for more information on participatory approaches and principles for gender mainstreaming of climate change.

- Involve women in training, awareness raising and capacity building activities
- Use gender-responsive M&E systems to identify the gendered dimensions of climate change strategies and include sex-disaggregated data as well as gender indicators
- Incorporate climate change into gender budgeting activities, and gender into all climate change financing and budgets
- Consult with gender experts in the development, implementation and monitoring of climate change activities (UNDP, 2014).

Actions for mainstreaming gender into climate change policy and response will need to be integrated into broader socio-economic assessments as well as poverty eradication, gender equality and women's empowerment. For example, social development projects and programmes should support capacity development in adaptation, mitigation or ability to address the effects of climate change, and have spill-over effects for gender equality and women's empowerment. These programs can be connected to employment generation, promoting gender equity in supply chains; improved household energy services and appliances; promoting the spread and diffusion of clean technologies; promoting use of clean energy; and ensuring that projects protect the land, water, human and labour rights of indigenous peoples and women.

Additionally, expanding gender sensitization efforts to the business and philanthropic communities, that traditionally work outside of gender and climate change, will reveal new and expand existing opportunities to support gender equality, women's empowerment and climate change efforts (UNDP, 2007; Otzelberger, 2011).

2. Applying a Gender Lens to Adaptation and Mitigation – Recommendations for Key Sectors

In Macedonia women's and men's access to resources such as technology, information, training and credit varies, which will affect their ability to adapt to and mitigate the effects of climate change in the sectors addressed in this report. Options, risks and benefits of adaptation and mitigation strategies for women and men are influenced by education, gender roles, division of labour, and income. These will need to be taken into account in developing strategies. Key channels will include communication and information, advice, financial resources and subsidies, and understanding gender roles in different ethnic and geographic communities. In this section we provide recommendations in the sectors of climate change in the country which have substantive gender dimensions.

2.1 Energy

Emission reduction recommendations outlined in the TNC include:

- making homes more energy efficient
- encouraging the use of more cleaner-burning wood fuel stoves
- expanding the electricity grid
- providing subsidies for fuel and clean energy sources (MEPP, 2014).

All of these actions will benefit women as well as men, in reducing energy costs for heating and cooling. They will also improve air quality in communities. Improving air pollution in general will benefit all members of society, but in particular those who make their living or spend much of the day outdoors in urban areas.

Providing subsidies for fuel will improve household finances; it may also involve men more than women if they are responsible for purchase of fuel for cars, tractors, and other vehicles. Subsidies and support for cleaner energy sources, such as solar, should target women specifically, at either the household, farm or enterprise level. They may not otherwise be aware, or may feel that they do not have the resources to take advantage of such programs.

In general, the impacts of policies in energy poverty, clean energy sources, energy efficiency and transport on women and men should be assessed for gender impacts.

2.2 Transportation

While women tend to use public transportation more than men, who tend to drive more, this distinction is less marked in Macedonia, where the number of cars overall is lower. Gender patterns of transportation use remain important for transport planning and climate change mitigation.

The introduction and promotion of trams, railway and bus use will benefit both men and women; however targeting women in use of public transport may have a bigger benefit since they are more receptive to using public transport. They may also have a greater need for public transport if they are unable to afford expenses associated with car ownership – particularly since women tend to have lower incomes than men and lower levels of personal income in general. Increased access to public transportation may also decrease car use by the family, allowing different members of the family to undertake their daily activities without reliance on cars.

Ensuring school transportation is free will accomplish the same results, easing family transportation burdens and car use, and increasing the likelihood that more students will finish secondary level education. Young women will benefit in particular if it increases the rate of their enrolments at that level.

According to research in Europe, men may be more receptive to arguments around cost efficiency and performance, so that taxes on use of cars as well as fuels would primarily affect male drivers – who presumably are more interested in costs/ convenience. Research also indicates that women may be more receptive to arguments of environmental benefit, physical fitness and health benefit from the use of clean fuels and/or public transportation. Awareness raising of drivers concerning efficiency and fuel consumption should target men as the decision makers around the family vehicle, while women may be more interested in energy-efficient household appliances.

2.3 Agriculture

Adaptation in agricultural production relates to responses to change in climate conditions and weather trends, insect vectors and changes in production. Agricultural extension and information systems need to be accessible to male and female farmers through ICTs, information sessions, demonstration fields and other innovation technology transfer activities. Strategies for agricultural outreach are needed to ensure that women are reached equally with men – although not necessarily using the same strategies or in the same venues – and are enabled to make decisions based on their experience and knowledge. This will include ensuring female farmers and farming household members are actively involved in information sessions, including voicing their concerns and needs and asking questions. Other strategies include the establishment of demonstration plots in community or public locations where females can observe and ask questions, either of extension agents or farmers managing the plots.

It will be important to ensure that women also receive equal access to inputs, information on techniques, improved seeds and crops to adjust to differing climate, soil and pest conditions for their agricultural activities.

Adaptation activities can include use and refinement of traditional and experiential knowledge of both women and men. Since men tend to be more involved in agricultural extension and information, the knowledge that women possess will need to be sought out and could make a substantial contribution in addressing and managing drought conditions, understanding seeds and crops which can handle more stressful conditions, as well as methods for protecting and preserving plants.

Considering their role on the family farm, it should be ensured that women farmers and members of farming households are trained in cultivation techniques of organic agriculture and soils with high humus content. Demonstration fields using these and other new and experimental innovations will allow women to view and discuss new techniques and inputs in a way that is not confrontational and will contribute to family and community interaction around these issues.

Energy use and emissions on the farm may be primarily the responsibility of as the main users of machinery and technologies, and they will need to be targeted for reduction of emissions, improvements in techniques and access to cleaner energy sources.

Making agricultural information more available via ICT – computer, TV, radio – in accessible formats and using language for those who are not experts or educated in the field could make a big contribution. They can allow female farmers to access this information at home on their own time, or with friends. Making them available via websites or through a local library will facilitate access (Huyer et al, 2005). The UNDP DVD “After the Rain: Climate Testimonials” is one good example of how this format could be used to raise issues of crop selection, dealing with drought and/or food, etc (Garvanlieva, 2014).

Subsidies and support for climate change-related adaptation and mitigation should be targeted to female land owners / female farm and rural business owners, while enhancing women's access to and decision making around land and farming will make better use of their knowledge and increase their participation in farm decision making.

More research is needed, including time analysis for women, men and children on how climate change-induced changes in agricultural production and return affect the work burden of various members of the family. What is the effect of migration to urban areas on male workers as well as the wife who remains at home? What are the effects on household workload and income of taking on additional income-generating employment, by either the male or female? What are effects on education and health of all family members?

2.4 Tourism

As seen above, certain occupations in different tourism sectors will see a concentration of male and/or female employees. With a predominance of men in the sector, most retraining, re-employment and other support schemes will be targeted at men. Sex-disaggregated data on participation at different levels and in different jobs within the tourism sector will help to assess which groups are the most affected; where women and men are located; and which will need support in re-training or placement elsewhere.

Women should be encouraged and targeted for participation in ecotourism positions equally with men, such as tour guides, ski instructors, bus drivers, etc. Female students should be targeted in tourism training, both at secondary level and in on-the-job and lifelong training programs.

Production of handicrafts and cultural goods is a way of supporting additional income for both women and men, in support of small-scale productive and market enterprises. Support will be needed in product design and market analysis to produce high-quality products that will be of interest to tourists.

Other actions include ensuring that women are represented on the Committee for Tourism and that it addresses climate change impacts on women and men's employment in the sector.

2.5 Disaster and risk reduction.

Information and warning systems for both prevention and response strategies need to be tailored so that they reach women in their differing locations. Training for disaster responses in situations such as flooding should target women and children in rural areas and women's access to government housing programmes and livelihoods opportunities should also be facilitated in post-disaster recovery efforts.

Involving local women in disaster planning and preparedness is important so that women leaders, networks and community-based organizations are encouraged to take leadership roles in disaster risk management (UNDP, 2010).

Other Issues to take into account include:

- Analyse climate change data (such as floods, drought, deforestation) in terms of gender, age, ethnicity and geographical location.
- Ensure that women's knowledge and perspectives and their voices are incorporated into the analysis and evaluation of the characteristics of key disaster risks equally with men.
- Ensure that women are visible agents of change at all levels of disaster preparedness, including early warning systems, education, communication, information and networking opportunities
- Build the capacity of national and local women's groups and provide them with a platform to be heard and to engage optimally
- Consider the level of a woman's access to technology and finances in times of disaster (Habtezion, 2012).
- Improving women's access to information, such as disaster warnings, longer-term changes in weather patterns, improved agricultural techniques and technologies, is important while taking into consideration the different media and information channels that will reach women and men.

2.6 Human health.

In the assessment of actions to take related to vulnerability and adaptation in the Third National Communication, the section for which gender risks and trends are most relevant is 4.3.5, Human health. The primary goal here is stated as the reduction of heat-related morbidity and deaths through heat-health warnings, raising awareness among the public and health workers, and coordinating and mobilizing relevant resources.

Training, warnings and information systems will need to take into account differential access – by age and ethnic group as well as gender – to information and communications channels such as computers, smartphones, and radio. Populations not in school or at a place of employment may be more difficult to reach on an individual basis, so that outreach strategies will need to be adapted to reach women and men in different geographical locations and daily life situations.

In addition, health and emergency workers should be trained in the differing needs and situations of some of the most vulnerable groups, including elderly women and men, as well as girls and women who are at risk of injury and sexual abuse. As discussed above, female headed single-parent and single person households will be less likely to have adequate financial or other resources to adjust to heat waves and other natural stresses and shocks. Their specific situations and risks will need to be taken into account in health and emergency response.

2.7 . Human resources capacity.

While not directly related to climate change mitigation and adaptation, women's representation in sectors of the economy and professions related to climate change is important to ensure that women's perspectives and experience are utilized in developing solutions to climate change. It is also important to support women to engage in climate change discussions and make contributions in activities at all level of the country. As discussed above, women are adequately represented in environmental sciences, including biodiversity and environmental management, but they are poorly represented in the energy, water, telecommunication and transport sectors.¹¹

Gender-sensitive capacity building programmes at the community, farm and household level should draw on the priorities and abilities of all members.

3 Policy Tools

A range of tools exist to address the gender dimensions of climate change in national and local level policy. Some are focused on gender equality and women's empowerment, and others, if used in tandem with gendered assessments, planning and monitoring, will achieve results which benefit women and men.

Policy tools and approaches which can be improved if implemented through a gender lens, are:

- Participation of women in climate change decision making at all levels, from project level to municipal all the way to international. As discussed above, this has been implemented at the national level.
- Communications strategies which take into account and target different sectors of the population, according to sex, age, ethnicity, economic status, and geographic location. This has been introduced to a certain extent in the country.
- Climate financing instruments which incorporate both gender mainstreaming into existing mechanisms and also target women and women's sectors. These have not yet been introduced.

Gender tools include:

- Technology transfer: approaches to assess the needs and uses of women and men relating to technology often differs, with preferences, priorities and access closely related to their different roles. This is an area that has not yet been addressed in the country.
- Gender-sensitive criteria and indicators: for assessment, participation, progress monitoring and evaluation of results will need to be developed, and can build on existing work in agriculture and food security, environmental management, transport, energy and technology transfer. While sex-disaggregated data is

¹¹ This is in line with global trends – see Huyer and Hafkin, 2012.

collected in some sectors, it is not complete and needs to be more clearly connected to climate change impacts and adaptation and mitigation strategies.

Internal government actions:

- Gender budgeting: gender analysis of applicable budget lines and financial instruments to determine the differentiated impact on women and men of the budget with subsequent reallocation of resources, if relevant. This process has been initiated as a pilot in selected national ministries, The next step would be to expand it throughout the federal level of government and into municipal levels.
- Gender focal points in Ministries should receive training on climate change while focal points on climate change should receive training in gender mainstreaming and gender issues relating to climate change adaptation and mitigation. This can be done in the form of an online training course, in-person capacity building workshops, and intra-departmental networks of focal points for climate change and gender.

3.1 Decision making and consultation around climate change issues and responses.

The World Bank notes the importance of social inclusion in green growth policies as well as implementing participatory processes to increase knowledge about climate change and build societal resilience and flexibility (World Bank, 2014). According to the Bank, social inclusion in green policy design and implementation will support “equitable outcomes, improved governance, better decision making and efficient institutional development (World Bank, 2014)”. This involves considering characteristics and perceptions of different social groups in the country which vary according to employment and income, knowledge and skills, age and gender, urban-rural locations and other characteristics. Some of the activities and trends identified by the Bank for promoting green growth in the country include: vocational training in new technologies; education and training for farmers; awareness raising campaigns on climate change, green growth and the environment;

Women’s participation in climate change decision-making is an important factor for more gender-responsive and efficient climate change policies. As noted by the UNFCCC, all UNFCCC bodies as well as national delegations should incorporate the participation of women. The European Institute for Gender Equality (2012) also notes the importance of gender equality in planning and decision making around climate change. If climate change policies are not targeted to all relevant beneficiaries and consumers, they are less likely to address the different needs of society, will not lead to efficient outcomes and will not bring benefits to men and women in different socio-economic groups on an equal basis.

The EIGE also notes that women’s enrolment in science and technology-related educational fields leading to careers in the climate-change related sectors is one of the prerequisites for gaining access to institutions and power structures that are involved in climate change policy making.

While women’s representation in the National Parliament and Government and in municipal governments ranges from 30-35%, at the very highest levels (Ministers, Mayors, etc.) female representation drops sharply. The National Climate Change Committee has equal representation of women at approximately 50%. However, the representation of civil society in general is low in comparison with other organizations represented. Importantly, women’s organizations should be directly represented on the committee, and not only in traditional areas such as health.

Further, women are not represented in all climate change sectors, in particular their participation in the transport and communications, energy and water sectors is very low. More information is required on women’s access to decision making at the community level. CPRM found that in the household and community level, there are major imbalances in participation in decision making around infrastructure between men and women. The study found differences in:

- needs relating to type and location of physical infrastructure;
- priorities for infrastructure services;
- opportunities to participate in decision making on the choice of infrastructure services, both within the households and within the communities,
- participation in the implementation of infrastructure programs and the delivery of services.

The study also found significant disparities in access to infrastructure services. Female participation in the decision making processes in the local community, which includes infrastructure investments, was almost nonexistent because while women traditionally don’t take part in decision making process within the community and second, it is assumed that male and female needs are the same and that males can speak for the entire family/household (CPRM, 2012).

An area of exploration for further activity may be supporting and enhancing the calibre of leadership at all levels, but particularly at the local municipal levels. This will not only improve decision-making bodies' overall functioning and its climate change resilience—but will also serve to help embed such skills and proficiencies within communities.

3.2 Communications strategies

The Climate Change Communications Strategy and Action Plan outlined in the Third National Communication on Climate Change targets three levels of engagement – municipal, workplace and household - as entry points for climate change communications. Decision makers in these groups are targeted as those who can influence resource consumption. The action plan is designed to increase:

- 1) Knowledge and awareness of the impacts of and vulnerability to climate change impacts of cities, workplaces and households
- 2) Capacity to develop and implement strategies to reduce climate change vulnerability and impacts in cities, workplaces and households
- 3) Proactive attitudes for mainstreaming climate change considerations into city, workplace and household routines and processes.

The Action Plan is guided by a number of principles that are deemed integral to sound communication, including cost-effectiveness, demonstrating an understanding of the target audiences, clearly defined outcomes, “sticky” messages, the right mix of communications tools, and simple and systematic monitoring (Ministry of Environment and Physical Planning, 2014).

To integrate gender trends in climate change impacts, adaptation and mitigation communications strategies in addition will need to understand gender trends in:

- access to information and communications
- consumption and consumption decisions
- types of messages to encourage change in behavior
- developing communications content.

Differences in gender roles in society and the household, attitudes towards behavior of women and men, access to and use of energy and transportation, employment and income situation will mean that communications strategies will need to take into account the needs, perspectives and interests of women and men. Communications campaigns should not present women as the sole responsible person for household activities, for example, and should present men's participation in these activities are expected and even “cool”.

Men may be more persuaded by arguments of cost efficiency and improvements in techniques and times, while women may be more receptive to arguments of environmental and social responsibility, health, and benefits to the family. Women make up 30% of information and communications employees; it would be important to know the level of representation of females in marketing, advertising, and consumer support agencies. It will be constructive to encourage more women into these fields, so that they can craft messages and approaches that will be appealing to the female demographic. Google, for example recently stated its desire to increase the proportion of women and ethnic minorities in its workforce in order to, among other things, sell more products (Google, 2014).

While televisions are ubiquitous, the use of computers is not as widespread, particularly in rural areas. Although a slight gender gap exists among computer users in the country, it is probably true that geographic location (urban/rural) is more of a determining factor, as is education and age. The use of smartphones should be assessed for any gaps as well. As a result, communications strategies and media will need to take into account varying levels of technical literacy, as well as access to information and communications media. Radio and television may be more universal methods of communicating information, while Internet and computers may provide access to targeted audiences.

3.3 Climate Finance

As UNDP notes, while the importance of ensuring that women have access to and opportunity to benefit from climate finance schemes is recognized by entities such as the UNFCCC, current frameworks and mechanisms do not systematically take gender issues into account. A process of Gender-sensitizing procedures and mechanisms is needed to ensure that climate change finance mechanisms, procedures and outcomes impact women and men more equitably. There are a number of reasons to ensure this result:

1. Mainstreaming gender will increase the effectiveness and efficiency of climate change responses and protect women's roles and activities in the face of climate change impacts and activities;
2. Empowering women will ensure that climate change finance policy choices reflect both women's and men's interests and enable women to fully participate in all aspects of decision making; and
3. Addressing market and non-market mechanisms will facilitate women's economic and social empowerment by promoting a deeper understanding of the gender differentiated impacts of private- and public-sector climate change finance mechanisms and their impacts on gender equality.

Areas of work in this area included the need to understand and map the evolving relations among the growing networks of private and public sector climate change financing. Suggested actions of action include:

- Use of a mixed system of market- and non-market mechanisms: Adaptation and mitigation measures that take advantage of both market and non-market mechanisms will yield a range of high-impact gender equality benefits. Investments and financial support should increase women's access to resources, enable both women and men to scale up their entrepreneurial activities and promote local and household infrastructure.
- Integrate gender-based priorities into private-sector regulations and policy frameworks: Mechanisms and processes need to be developed to ensure that gender-specific priorities and concerns are integrated into policies, programmes and incentive mechanisms that influence private-sector finance activities.
- Ensure that information and analysis for decision makers account for gender differences: Financing should be based on differentiated estimates (that incorporate the values, contributions and time spent by women and groups whose productive and reproductive activities are not reflected in traditional markets indicators), so that the livelihood costs and consequences are understood through a gender, age and ethnic lens (UNDP, 2011).
- Develop gender audits of financing projects, gender impact assessments, and progress towards the development of gender-sensitive climate change financing indicators.

Gender sensitive procedures and mechanisms for climate change finance

Ensuring that climate change finance impacts women and men more equitably entails targeted attention within each step of the financing process. Several suggested actions are highlighted below.

- Incorporate gender analytical tools into all phases of programme design, implementation, monitoring and evaluation: Utilizing gender analytical tools (e.g. gender analysis, gender indicators, sex-differentiated data-sets, gender monitoring and gender auditing) will help ensure that both women's and men's needs, concerns and perspectives are incorporated into programme frameworks, will facilitate equity in the delivery of programme benefits, and will help avoid unintended negative consequences.
- Undertake gender assessments to determine how climate policy and economic mechanisms incentivize individuals, households and businesses: Gender assessments, including the collection of sex-disaggregated data, should inform decision-makers with a view towards maximizing the impact of their decisions and avoiding suboptimal outcomes that perpetuate existing inequalities.
- Establish gender-based criteria in fund allocation, project selection, and other aspects of decision-making: Enhancing gender-based selection criteria and fund allocation throughout every stage of financing activities will help ensure that project proponents and advocates consider gender-differentiated impacts from the earliest stages of project design.
- Advocate for strong property rights: As previously undervalued assets (e.g. forests) gain value in response to adaptation and mitigation efforts, and as informal property uses calcify into formal property rights, it will be necessary to support women's and continued access to and use of these assets (particularly in NAMAs and related mechanisms).
- Use regulatory, budgetary, and tax policies to provide resources: Subsidizing adaptation and mitigation efforts that are unlikely to be financed through private sector sources—yet have high development and gender equality benefits—will promote the general welfare of communities and nations and will enhance overall climate resilience. Governments can also include gender-based and other development criteria as required components of project approval processes and can direct resources from new market-based income streams toward development activities.
- Streamline application processes and support women and small-scale initiatives' participation in adaptation and mitigation activities: Reducing the time and cost of accessing resources entails streamlining processes such as application, registration, approval, implementation, evaluation and monitoring of funds. Targeted interventions should address the high transaction costs that women and community groups face within existing financing mechanisms and eliminate the pervasive gender bias and segmentation inherent to these mechanisms.

Source: UNDP, 2011

3.4 Gender budgeting

Gender Responsive Budgeting (GRB) is a tool for incorporation of the gender perspective in government policy. GRB enables the creation and implementation of policies to take into account the different status of women and men and the various obstacles they face, while providing conditions for creating more effective programs and spending public funds in a more targeted manner.

The Republic of Macedonia began to promote the concept of gender responsive budgeting in 2008. In accordance with Article 11 of the Law on Equal Opportunities for Women and Men: "The state administration bodies are obliged to incorporate the principle of equal opportunities for women and men within their strategic plans and budgets; to monitor the effect and impact of their programs on women and men and to report within their annual reports".

In its 2010 gender budget analysis the Ministry of Labour and Social Protection notes that overall policy planning and implementation processes, strategies and analyses, as well as instruments for monitoring and evaluation, must not be gender neutral. It should include a gender breakdown of statistical data and data cross-referenced to various parameters, including gender analytical information that clarify statistical differences. In this approach, statistical data should become a routine part of each governmental initiative.

GRB in the country is currently in a pilot phase. Based on the lessons learned in this phase, the initiative will be expanded to other central level institutions. Currently UNWomen is implementing a project on introducing GRB in local

level government, in 10 case study municipalities¹².

On the model of the Ministry of Labour and Social Policy¹³, Ministries in the Republic of Macedonia are encouraged to develop methodologies to benefit objectives and relevant target groups, and introduce mechanisms to access to these measures. Target groups should be encouraged to participate, in particular women. In the course of the development, implementation and monitoring of policies and programmes, ministries are encouraged to recognize the double discrimination and difficulties that women from rural areas and particular ethnic groups.

A gender budgeting process has been initiated in all Ministries of the Republic of Macedonia. Those ministries, committees and agencies involved in climate change planning should use gender budgeting analysis in all programmes for adaptation, mitigation and addressing impact. This includes the Ministries of: Environment and Physical Planning, Agriculture, Forestry and Water Economy, Economics, Finance, Transport and Communications, and Health, using the guidelines for assessing impact and developing gender-equal strategies for adaptation and mitigation outlined in this paper.

In 2012 the Government of Republic of Macedonia adopted a Strategy of Gender Responsible Budgeting for 2012-2017 which included the state in global gender budgeting initiatives. This obligates the government to mainstream a gender perspective through creating and implementing policies and budgets which will take into consideration the different position of women and men and different obstacles they face. On the basis of the activities and measures included in the Strategy, the Ministry of Finance made some changes in a Budgetary Circular and obligated the Ministry of Labour and Social Policy, Employment Service Agency, Ministry of Agriculture and Water Management and Ministry of Health to develop gender indicators to measure results. Budget analyses and statements for incorporation of gender in budgetary programmes are also prepared.

3.5 Technology assessment

Needs and uses of women and men relating to technology often differs, with preferences, priorities and access closely related to their different roles. As we have seen, women in the Republic of Macedonia tend to have lower levels of access to technologies as well as to information and training about appropriate technologies and their use. Their views on technology use and needs are not always heard.

Women have a broad body of knowledge, capacities and experiences in the use of technologies which are appropriate for their particular situation – i.e. agriculture, water use, etc., but this knowledge is often neither recognized or called upon, and often women are absent from technology transfer and information discussions. Facilitating women's access to information and knowledge, is a high priority, through education in the natural sciences and technology, as well as through innovative methods to reach women farmers at the community and household level.

Gender impact analysis should be introduced for new technologies and technology transfer methods in the agriculture, energy, and transport sectors in particular. At the very least it should be ensured that no harm is caused to either environment or humans where new technology is introduced or existing technologies improved. Human rights, gender equity and environmental conservation should be part of the minimum standards applied to all technology transfer.

Because small scale requirements are not normally integrated into technology transfer, gender assessments will be needed in terms of household productivity, access and use by women and men, alleviation of labour, improvements in access to knowledge and training, and increases in income or resources. Gender assessments of technology transfer and development are being developed by GenderInSITE – Gender in Science, innovation, technology and engineering – an international coalition addressing these issues in the context of climate change and sustainable development¹⁴.

¹² The local component of the project “Promoting Gender Responsive Policies in South East Europe and the Republic of Moldova” (2013-2016) supported by the Austrian Development Agency and the Swiss Agency for Development and Cooperation, aims to replicate the central level interventions for gender mainstreaming policies and gender responsive budgeting with local governments. Ten pilot municipalities, will become case study municipalities for gender assessment of decentralization and budgeting processes at the local level, in order to identify entry points for gender mainstreaming within the decentralization, policy planning and budgeting processes.

¹³Jovanovikj et al, 2010.

¹⁴ See www.genderinsite.org.

Indicators to Measure Gender Trends and Effects in Climate Change

This section makes recommendations on indicators to assess gender trends in climate change in Macedonia, as well as monitoring its effects in society. Proposals are made both for sex disaggregation of indicators in the TNC, as well as additional indicators which, if collected, would shed light on the national situation.

1. Social Vulnerability Index. The Social Vulnerability Index (SoVI) used in the Third National Communication is a set of selected indicators for social vulnerability. Each of these indicators should be disaggregated by sex to determine differences between women and men in vulnerability in different sectors. This kind of knowledge will allow programme planners and implementers to tailor their prevention and response strategies most effectively according to the socio-economic, physiological and resource characteristics of the vulnerable group.

Concept or Characteristic	Proxy Variable	Sex-disaggregation	Responsible institution	Rationale for disaggregation by sex
Socioeconomic status	Per capita income - 3,615 in 2012 Average wage – 21175 MKD (345 EUR) in April 2014 (monthly)	Is sex-disaggregated in data on employment by net wages and gender, SSO 2013	Data from SSO Ministry of Finance, Ministry of Economy, Ministry of Social Protection and Labor	Access to varying levels of resources and income by women and men will determine their ability to respond, adapt to and mitigate the effects of climate change.
Gender	% female headed household	This data may not be available, data on the % of [female] single parent families is a potential proxy	Data from SSO Ministry of Social Protection and Labor Centers for Social Work	Understanding the % of households which are headed by females will help to identify households which may be at risk due to lower levels of income and resources. The State Statistical Office currently collects data only on single parent households, these should be disaggregated by sex.
Ethnicity	% Roma – 2.7% of total	This data should be available, is not in Women and Men in Macedonia 2013	Data from SSO Ministry of Social Protection and Labor Centers for Social Work	Females in the Roma population will be an especially vulnerable population and may require special targeting.
Age	% elderly - 15% of total population % under 18 – 29% ¹⁵ % under 6 – 6% ¹⁶	% female elderly: 55.6% % females : 49.3 % females : 48.4	Data from SSO Ministry of Social Protection and Labor	The female elderly have a greater risk of poverty. Each age group has its own particular vulnerabilities, which will be further affected by physical vulnerabilities, access to education and income/poverty levels.

¹⁵ The state statistical office provides data until 19 years of age and division of the population total to 18 years of age is not possible without separate request for data analysis to be made to SSO.

¹⁶ The State statistical office provides data until 5 years of age. Total to 6 years of age cannot be presented without separate request for data analysis to be made to SSO.

Housing tenure (ownership)	% renters % homeowners	Data not available	Data from SSO Ministry of Social Protection and Labor Ministry of Transport and Communication	This would be a useful indicator for targeting household efficiency and emission campaigns, by targeting them according to gender trends in preferences and behavior.
Employment	% unemployed – 30.3% (2013)	Women make up 39% of the unemployed population, but 70% of the inactive population	Data from SSO Ministry of Social Protection and Labor Agency for Employment	Relates to vulnerability and access to resources.
Occupation	% agricultural workers – 17% of total employed (2012)% construction workers – 6% of total employed (2012)% low skilled service jobs	38% of agricultural, 20% of uncouncted agricultural	Data from SSO Ministry of Social Protection and Labor Agency for Employment	Understanding the share of men and women in vulnerable occupations will allow more focused targeting of workers in support programs
Family Structure	% female single parent family – 7% of total		Data from SSO Ministry of Social Protection and Labor Centers for Social Work	Understanding the of female-headed single parent families will provide data on resource access
Education	% Less than high school - 53% of total at age 15		Data from SSO Ministry of Education and Science	Populations with less education will be less able to retrain in employment, take on new technologies and leadership in climate change response
Population growth	Rapid growth- stagnating		Data from SSO Ministry of Social Protection and Labor	No direct gender component relevant to climate change. However, the effects of climate change on food security, clean water, on the status of the general population could be relevant.
Access to medical services	Higher density of medical establishments and services -0.84% (primary health practitioners per 1000 residents in 2013)		Data from SSO Ministry of Health Health insurance fund	No gender component in relation to climate change.
Special needs populations	% population with disabilities % population with disabilities residing in institutions		Data from SSO Ministry of Social Protection and Labor Centers for Social Work	No gender component in relation to climate change.
Populations that needs special treatment in case	Tourists – 399.680 in 2013		Data from SSO Ministry of Social	Imbalance in favour of one gender would affect emergency and treatment

of disaster			Protection and Labor Center for Crisis Management	response strategies.
Social dependence	% social security recipients - 133 539 recipients in 2012		Data from SSO Ministry of Social Protection and Labor Centers for Social Work	Sex-disaggregation will provide information on whether certain households need particular targeting in understanding social vulnerability. Should be complemented by information on rural/urban situation.

2 Proposed Additional Indicators, by sector and climate change-related activity

2.1 National Level Data, State Statistical Office (already collected)

2. 1.2 Participation of Women and Men in climate-change related sectors of employment

Employed persons by sectors of activity and gender,

- Agriculture, hunting and forestry
- Electricity, gas, steam and air conditioning supply
- Water supply; sewerage, waste management and remediation activities
- Transportation and storage
- Accommodation and food service activities
- Information and communication
- Financial and insurance activities
- Professional scientific and technical activities

Suggested: Data disaggregated by level of employment

2.1.3.Students who completed regular upper secondary education

- Gymnasium of natural sciences and mathematics
- Agriculture
- Forestry and wood processing
- Engineering
- Transport
- Travel, tourism, hotel and catering services
- Students, who have graduated from undergraduate studies
- Persons, citizens of the Republic of Macedonia, who have enrolled in postgraduate studies in:
 - Masters of science
 - Specialists
 - Doctors of science:
 - Natural sciences and mathematics
 - Technical and technological sciences
 - Biotechnical sciences

2.1.4. Participation of women and men in agriculture

- Household members who work at individual agricultural holdings, by age and gender
- Household members who work at individual agricultural holdings by main activity, SUGGESTED: by age and gender

- Household members who work at individual agricultural holdings, by working hours, SUGGESTED: by age and gender
- Land ownership by gender
- Paid and unpaid agricultural employment, by gender
- Agricultural scientists and extension agents/trainers, by gender

2.1.5. Energy

- Users /recipients of energy subsidies
- Female-headed enterprises taking advantage of energy programmes and subsidies

2.1.6. Transport

- Users of public transportation, by age and gender
- Access to public transportation by geographic location
- Car owners / drivers by gender

2.1.7. Proportion of women in climate change decision-making bodies at the national level

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. The following positions should be covered:

- Political level – i.e. ministries
- Managerial or administrative decision-making;
- Heads of sectorial departments or divisions.
- National delegation to UNFCCC
- National Climate Change Committee

2.2. Other suggested indicators, by sector:

2.2.1. Representation in climate change decision making, consultation and information

- Representation in climate change decision making, consultative and implementation activities / bodies, by sex.
- Representation of women's organizations and committees in climate change decision making, consultative and implementation activities / bodies.
- Reach to women farmers and women's support organizations in agricultural information systems.

2.2.2 Population and Population Health

- Health status of the population by age and sex and population growth rates
- Migration rates, especially to urban parts of the country, but also abroad, by sex and age
- Disease rates, resulting from infections communicated through food, water, impacts of heat waves,, vectors and other communicable diseases, as well as natural disasters, by sex and age
- Change in supply/demand of labor, in terms of education and qualifications; (un)employment rate, revenues, standard of living, etc. by sex and geographical location
- Trends of decline in diseases by sex and age
- Life expectancy changes (extension or reduction) by sex
- Number of calls to emergency services, by sex and geographical location
- Health status of the population compared to statistics before the phase of activities implementation by sex and age

2.2.3. Climate Change (general)

- Trend of climate change specific mortality and morbidity by sex and age
- Transportation and mobility patterns in urban and rural areas (by sex).
- Trend in the use of public transport services by sex
- Trends in use of bicycles by sex and age

- Number of studies/reports on effects on women and men of climate change, adaptation and mitigation
- Number of studies/reports on climate change, by sex of researcher/author
- Populations affected by disasters and crises (by sex, age and ethnicity).

2.2.4. Communications and training

- Number of public campaigns targetted at men or women to increase the awareness of end consumers
- Number of conducted trainings, seminars and campaigns for men or women on climate change adaptation and mitigation topics and participation by sex
- Climate change communications focal points at municipal level, by sex
- Climate change community champions, by sex
- Participation of females in activities targetted at households

2.2.5 Agriculture and water

- Participation in water use and management associations by sex

2.2.6. Tourism

- Types, sectors and levels of employment in the tourism industry (by sex).
- Tourism occupations affected by climate change caused changes (by sex and geographical location).

See Appendix 4 for suggested indicators at national and program levels on Gender and Climate Change and gender and climate change indicators in relevant sectors.

Conclusions

Climate change will bring wide-ranging effects and threats to global social, economic and environmental systems. Impacts will continue to be differently distributed among different regions, generations, age, classes, income groups, occupations and genders. Different priorities, socio-cultural situations, levels of access to decision making, resources, education and finances between men and women will affect how they contribute to climate change, how they are affected, and their ability to respond to climate change-induced events.

A national strategy to address climate change will need to take these gender differences into account. Gender-disaggregated data, gendered impact assessments, gender equality audits, gender assessments of access to resources to address and respond to climate change and gender indicators are all important tools towards this end. In general, research on climate policy will need to address the social and gender dimensions of adaptation and mitigation. Research needs to be done to close data gaps and improve knowledge about issues such as the gendered effects of various policy instruments, interventions to address poverty and affluence, and decision-making at the household level.

Climate change policies, programmes and communications campaigns will need to understand and act on gender differences in climate change contributions, adaptation and mitigation. This will ensure that the capabilities, knowledge and experience of all members of society will be mobilized towards addressing climate change challenges.

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Appendix One
UN Gender Definitions

(From UNDP 2013).

Understanding gender: Gender determines what is expected, allowed and valued in a woman or a man in a given context. It determines opportunities, responsibilities and resources, as well as powers associated with being male and female. Gender also defines the relationships between women and men and girls and boys, as well as the relationships between women and those between men. These attributes, opportunities and relationships are socially constructed and are learned through socialization processes. They are context- and time-specific, and changeable. **Gender does not mean “women.”** However, given that women are often in a disadvantaged position in many developing, as well as developed countries, the promotion of gender equality implies an explicit attention to women's empowerment.

Gender: Refers to the social attributes and opportunities associated with being male and female and the relationships between women and men and girls and boys, as well as the relations between women and those between men. These attributes, opportunities and relationships are socially constructed and are learned through socialization processes. They are context/ time -specific and changeable.

Gender equality: Refers to the equal rights, responsibilities and opportunities of women and men and girls and boys. Equality does not mean that women and men will become the same but that women's and men's rights, responsibilities and opportunities will not depend on whether they are born male or female. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration—recognizing the diversity of different groups of women and men. Gender equality is not a 'women's issue' but should concern and fully engage men as well as women. Equality between women and men is seen both as a human rights issue and as a precondition for, and indicator of, sustainable, people-centred development.

Gender mainstreaming: Mainstreaming gender is the process of assessing the implication for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality.

Women's empowerment: The concept of empowerment is related to gender equality but distinct from it. The core of empowerment lies in the ability of a woman to control her own destiny. This implies that to be empowered, women must not only have equal capabilities (such as education and health) and equal access to resources and opportunities (such as land and employment), but they must also have the agency to use those rights, capabilities, resources and opportunities to make strategic choices and decisions (such as are provided through leadership opportunities and participation in political institutions). To exercise agency, women must live without the fear of coercion and violence.

Gender division of labour: the result of how each society divides work among men and among women according to what is considered suitable or appropriate to each gender (UNESCO, 2013).

Appendix Two
List of Interviews

May 14, 2014

Teodora Obradovic Grncharovska, UN Focal Point for Climate Change, Ministry of Environment and Physical Planning

Elena Grozdanova, State Advisor for Equal Opportunities and Non-Discrimination, Ministry of Labor and Social Policy

Ordan Chukaliev, Faculty of Agriculture

Neda Maleska, Consultant, USAID Project on Climate Change

Dominika Stojanoska, Head of Office, UNWomen

May 15, 2014

Tanja Kirovska Filic, Gender Focal Point, Ministry of Environment and Physical Planning

Vasilka Tamburkovska and Lidija Miteva, Gender Focal Points, Ministry of Agriculture and Forestry

Violeta Krsteva and Daniela Avramoska, Gender Focal Points, State Statistical Office

May 16, 2014

Slobodanka Markovska, Department of Gender Studies, Faculty of Philosophy

Marija Mitevaska, Gender Focal Point and Verica Stoilova, Deputy Gender Focal Point, Ministry of Finance

Liljana Popovska, Member of Parliament, Green Party, and Macedonian Women's Lobby

Appendix Three Mainstreaming Gender into Climate Change Adaptation and Mitigation Strategies

Gender-blind policies or programmes are potentially harmful to human development as they tend to exacerbate existing inequality or exclusion. Gender mainstreaming assesses the different implications of any planned action for men and women, pertaining to legislation, policy or programmes in any area and at all levels. It is a strategy to make the concerns and experiences of men and women an integral dimension of the design, implementation, monitoring and evaluation of policies, initiatives and programmes. When realized, it ensures that women and men benefit equally, thereby resulting in effective and sustainable policies and programmes.

Rather than adding women's participation to existing strategies and programmes, gender mainstreaming aims to ensure that social and institutional structures are cognizant of and respond to different experiences and capabilities of men and women. This means that at times special attention may be required to compensate for existing gaps and inequalities that women and men currently face.

Adaptation strategies for climate change will be more effective if developed through a participatory decision-making process. To facilitate this, decision makers will need to take the following into account:

- Trends in control and distribution of benefits
- Viability and accessibility of communal and natural resources
- Levels of vulnerability, resilience and autonomy of men and women when confronted with different threats
- Relevance and existence of local knowledge for social and economic development
- Gender implications of current social protection systems and climate change adaptation strategies
- Disaster risk reduction management to take action on causes and lessen impacts

While there has been somewhat more exploration of the links between gender and climate change adaptation, the gender aspects of mitigation are still preliminary. Actions associated with mitigation are grouped into two areas: 1) the reduction of GHG emissions and 2) the capture, fixing and sequestration of carbon.

Promoting gender mainstreaming in mitigation and adaptation provides an opportunity to establish conditions for men and women to work in conditions of equality when developing innovative activities. Methods for accomplishing this include:

- Carrying out national and global studies on sex-differentiated impacts, with emphasis on capacities to assimilate urgently needed adaptation and mitigation measures.
- Identifying gender aspects of the technology and financing of climate change projects.
- Developing and applying gender-sensitive criteria and indicators in all UNFCCC and Kyoto Protocol instruments and mechanisms.
- Incorporating gender equality in the Clean Development Mechanism (CDM) of the UNFCCC. To date, women and men with few financial resources have not been able to participate.
- Understanding and working with different patterns of using natural resources, and the gender-differentiated impacts and effects of climate change.
- Promoting women's equal access to land ownership and other resources needed for effective socio-economic participation, such as capital, technical assistance, technology, tools, equipment, markets and time.
- Recognizing the importance of domestic work and the knowledge it brings to matters concerning climate change, and to promote men's participation in this sphere.
- Training both women and men in methods for increasing their agricultural productivity with new technologies that may allow for greater productivity in a changing climate. These include, for example, techniques for nurseries, site selection, species selection, land preparation, sowing, weeding, and maintenance.

Steps for gender mainstreaming in climate change also include ensuring the active participation of women at all levels of policy, planning, implementation, and monitoring:

- Analyse the effects of climate change from both men and women's perspective as well as their vulnerability.
- Incorporate the inputs, perspectives and situations of women when designing and implementing projects
- Build on the abilities and contributions of both women and men
- Set targets for female and male participation in activities
- Ensure that women are adequately represented in all decision-making processes, at all levels
- Make women's equal access to information, economic resources and education a priority (UNDP, 2009; Otzelberger, 2011)..

Gender essentials

- Effective participation: Active expression of concerns, rather than simply to numerical participation (percentages-

quantity).

- Development of skills to gain access to and control over resources and their benefits. Women tend to experience less access and control over resources and opportunities
 - Access is defined as being able to participate, use and benefit.
 - Control refers to authority, property and the power to make decisions. In some circumstances, women may have access to (the possibility of using) a resource – land, for example – but have limited control over it (as they do not own it, they cannot decide about whether to sell or to rent).
 - Resources (understood as goods and means): different types of resources include economic or productive (e.g., land, equipment, tools, work, credit); political (e.g., leadership, information and capacity to organize); and time (one of women's scarcest resources). The benefits of using resources are economic, social, political and psychological rewards, including the satisfaction of having met basic and strategic needs, such as food, housing, education, training, political power, and status.
- Joint responsibility and equitable redistribution of work.
 - Productive work: Includes producing goods and providing services for consumption or sale. This type of work usually refers to activities that bring an income and is counted in national censuses and statistics.
 - Reproductive work: Includes the care and maintenance of the domestic unit and its members, as well as management and care of children, food preparation, collecting water, buying provisions, doing domestic chores and caring for the family's health. This type of work is not considered as work in society and no monetary value is placed on it.
 - Community work: Includes collective organization of social and service events. This type of work is not considered in economic analyses.

Source: (UN Development Programme, 2009)

Principles and recommendations for integrating gender into climate change responses

Any development policy or programme addressing climate change should be premised on the following principles

- gender equality and human rights, particularly women's rights and climate justice;
- effective poverty reduction; and
- effective climate change adaptation and low-carbon development efforts.

How do gender roles, norms and relations affect the problems we are addressing, and how will the policy or programme address them?

What risks and opportunities does the policy or programme entail for men, women, boys and girls?

What strategies will it use to close gender gaps, avoid negative impacts and enhance gender opportunities?

How to ensure that adequate resources are available to implement these strategies?

How to ensure that men's and women's needs and preferences are reflected both in the policy or programme design and its implementation?

Who and what will define the policy or programme's success, and how will it be measured?

Who will be held accountable for the policy or programme's gender impacts and how?

Governments can integrate gender into climate change planning by:

- ensuring that NAPAs, NAMAs and other forms of national adaptation and low-carbon development planning are aligned with national development and poverty reduction strategies as well as gender commitments such as CEDAW and the Beijing Platform for Action;
- including gender-responsive social protection mechanisms in adaptation planning to protect the most vulnerable men, women and children from climate change impacts;
- ensuring that gender equality is one of the criteria for activity selection and that both women and men participated in the consultations;
- collaborating with GGCA organisations such as UNDP, UNIFEM or IUCN to build national and regional capacity on gender and climate change;
- institutionalising and providing technical assistance for gender budgeting and gender audits of climate change and related strategies such as energy and transport – for example, by collaborating with UNIFEM, UNDP or ENERGIA;
- learning lessons from and expanding or replicating approaches from initiatives such as the UNDP/JICA Africa Adaptation Programme, which appoints regional gender and climate change advisers to provide governments with technical support;

- supporting the development of a working relationship between different ministries, including the social sector (e.g. education, health), for adaptation and low-carbon development planning in coherence with other policies; and
- promoting an understanding of multi-stakeholder processes as horizontally and vertically inclusive of various different sectors, levels and social groups. Promote equal access to new opportunities created by responses to climate change by:
- promoting the reduction of legal and other barriers to women's equal access to property, information and credit, so both men and women can benefit from markets, technologies and asset inputs for climate change mitigation and adaptation;
- promoting the reduction of economic, infrastructural and safety barriers to women's equal access to transport;
- working with private-sector stakeholders who emerge as key actors in the low-carbon economy to develop their vision and priorities for social development and gender;
- supporting vocational training programmes for women and girls and ensuring demand for their labour in energy- and transport-related services and institutions, at all levels;
- supporting transparent, accessible and responsive climate funding procedures and proposal-writing workshops for community-level organisations and particularly those representing women; and
- catering for women's and men's technology choices when designing and scaling up low- carbon development initiatives, considering both socio-economic factors (gender, education, income) and product specific factors (e.g. price, usage cost, safety). Protect and invest in women's rights and girls' education to increase resilience to climate change by:
- shielding developing countries' health and education budgets from pressures due to climate and budget allocations to low-carbon development, to prevent negative impacts on, for example, maternal and reproductive health;
- improving women's legal status as a key prerequisite for reducing gender gaps in disaster mortality;
- investing in women's and girls' access to transport, which in turn improves their access to markets, education and health services.

Source: (Otzelberger, 2011)

Appendix Four
Gender and Climate Change Indicators

Sources: (Sida, 2011) (Asian Development Bank and Australian Aid, 2013)

1. Climate Change – Sectors and Activities (Adaptation and mitigation)

Country and Sector Level Indicators

Gender Equality Dimension	Gender Equality Indicators (see below for more detail)
Human capital	<ul style="list-style-type: none"> • Number of community-based adaptation activities that strengthen women's access to resources for sustainable food production, renewable energy, and clean water sources • Number and percentage of women and men with increased resilience to deal with climate changes (e.g., use of climate-resilient crops and farming techniques, improved land management, clean technologies, increased knowledge and strengthened networks on climate change issues) • Number of MSc/PhD students/graduates in environment or climate change related fields, by sex • Number of environmental/climate change policy briefs written/communicated by researchers, by sex
Health	<ul style="list-style-type: none"> • Proportion of population using an improved water source (urban/rural; women/men) • Disability-adjusted life years (DALYs) due to lack of water, sanitation and hygiene, indoor air pollution or outdoor air pollution (women/men) • Contingency plan for distribution of medicine in case of natural disasters (yes/no) • Number and percentage of those affected by climate and environmental impacts, including heat waves, droughts and natural disasters, by sex and age. •
Economic empowerment	<ul style="list-style-type: none"> • Number and percentage of women and men who access employment or increase their incomes due to climate change adaptation or mitigation activities • Number and percentage of women and men who experience unemployment or decreased incomes due to climate change effects • Number and percentage of women and men employed in climate change sectors and engaged in entrepreneurship in climate change related enterprises
Participation in decisionmaking	<ul style="list-style-type: none"> • Evidence that climate change policies, strategies, and plans require the participation and involvement of women and men in developing and managing local adaptation and mitigation plans • Number and percentage of women and men on national climate change decision making bodies
Gender capacity building	<ul style="list-style-type: none"> • Evidence that policies, strategies, and plans are based on gender analysis of the different impacts of climate change on women and men, and include gender equality objectives for each sector of climate change adaptation and mitigation

Project and Programme Level

1. Human Capital	
Gender Equality Result	Indicator
Increased capacity of women and men to adapt	<ul style="list-style-type: none"> • Changes in women's workload compared with men's due to environmental changes and adaptation activities

and respond to environmental changes	<ul style="list-style-type: none"> • Percentage of women and men involved in environmental protection or adaptation activities • Women's and men's views on the impact of project activities on their fuel, water, and food security and the viability of communal and other natural resources
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2. Economic Empowerment	
Gender Equality Result	Indicator
Equal employment for women and men in land use, water and agricultural management projects	<ul style="list-style-type: none"> • Number and percentage of jobs (person-days) generated for women and men in the community • Proportion of women employed in unskilled, technical, management, and supervisory roles, by sector
Women's employment in climate change agencies and projects	<ul style="list-style-type: none"> • Number and percentage of women and men employed in climate change agencies and as project and field staff • Incentives designed to recruit women, increase their capacity, and provide career development
Equal access by women and men to small grants for climate change projects	<ul style="list-style-type: none"> • Number of awareness activities providing targeted information to women and men on climate change small grant opportunities • Number and percentage of women and men who receive finance for climate change small projects • Climate finance facilities include special windows for funding activities with women's groups and gender-sensitive guidelines for all funded activities, and employ women and men in fund management

3. Participation in Decision making	
Gender Equality Result	Indicator
Women and men participate equitably in the development of local climate change adaptation and mitigation plans	<ul style="list-style-type: none"> • Number of community-based agreements and adaptation plans that have input from both women and men • Number and percentage of women and men who attend community-based meetings on natural resource management (e.g., land, forests, biodiversity, water supply) • Changes in adaptation or mitigation plans and initiatives due to consultation with women
The rights of women and men displaced by climate change problems are protected	<ul style="list-style-type: none"> • Number and type of activities specifically targeted at women and men who have migrated due to degradation of natural resources caused by climate change • Percentage and number of women and men who are affected by disasters
Strengthened capacity of women's organizations to analyze climate change policy, regulatory frameworks, and programs (including their impact on women's and men's time burdens and access to natural resources)	<ul style="list-style-type: none"> • Number of research activities that involve women in documenting women's and men's local knowledge of resource management and changes in resource availability and use • Number of women and/or women's organizations involved in the assessment and management of environmental hazards • Number and percentage of women and men in civil society organizations trained in gender analysis of environmental impacts and climate change adaptation and mitigation programs • Women's voices and women's groups engaging in national debate and analysis of environmental impacts, and climate change policy, regulatory frameworks, and programs

4. Capacity Development	
Gender Equality Result	Indicator
Strengthened capacity of	<ul style="list-style-type: none"> • Sex-disaggregated information on women's and men's access to and use of

<p>environmental agencies and other stakeholders to ensure that women and men benefit equitably from climate change adaptation and mitigation investments</p> <ul style="list-style-type: none"> • Increased capacity to consult with women and men on climate change impacts, and respond to women's needs and priorities • Increased understanding of the different impacts of climate change and adaptation and mitigation strategies on women and men 	<p>natural resources and their links to environmental challenges is documented and applied to program planning and implementation</p> <ul style="list-style-type: none"> • Amount of research funding dedicated to natural resource management and adaptation focused on activities undertaken by women, including crops farmed by women and water use • Number of training sessions held with environmental agencies and other stakeholders on participatory techniques to involve women and men; and number and percentage of women and men attending • Contracts with implementing agencies (e.g., nongovernment organizations) require consultation with women, employment of female staff and community facilitators, and implementation of gender strategies based on gender analysis • Number of executing and implementing agencies that employ staff with specialist expertise on gender and climate change • Number of training and awareness sessions with environmental agencies and other stakeholders on gender issues in environmentally sustainable development and climate change; and number and percentage of women and men attending
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2. Energy (Mitigation)

Country and Sector Level Indicators

Gender Equality Dimension	Gender Equality Indicators
Human capital	<ul style="list-style-type: none"> • Percentage change in expenditure on purchasing fuel for household energy needs • Percentage of population using solid fuel for cooking and/or heating • Number of households with an electricity connection • Share of households without access to electricity, by geographical location and ethnicity • Number of cases of respiratory disease, carbon monoxide poisoning, and fire accidents, by sex (adults and children) •
Economic empowerment	<ul style="list-style-type: none"> • Number and percentage of women and men with increased incomes due to improved energy facilities and services • Number and percentage of female-headed enterprises taking advantage of energy programmes and subsidies <p>Number and percentage of women and men employed in the sector and engaged in entrepreneurship in energy-related enterprises</p>
Participation in decision making	<ul style="list-style-type: none"> • Evidence that energy sector policies, strategies, and plans require participatory approaches and the targeting of both women and men to manage renewable and nonpolluting technologies • Users /recipients of energy subsidies, by sex • Number an percentage of women an men on national energy decision making bodies
Gender capacity building	<ul style="list-style-type: none"> • Energy policy, strategies, and reforms include gender equality objectives based on gender analysis of need, demand, and supply

Project and Programme Level

1. Human Capital

Gender Equality Result	Indicator
<p>Improved access to affordable electricity</p> <ul style="list-style-type: none"> • Targets met for electrification of all households 	<ul style="list-style-type: none"> • Number and percentage of households with free or subsidized electricity connections, flexible payment arrangements, or receiving credit for household connections (including for renewable and nonpolluting energy technologies) • Number of households adopting workload-saving and efficient energy technologies (labor-saving technologies)
<p>Increased access by women to time-saving, affordable, renewable, and nonpolluting energy technologies</p> <p>Increased energy efficiency at the household level</p>	<ul style="list-style-type: none"> • Number of training and awareness activities targeted at women and men on energy efficiency, safety, and conservation; and number and percentage of women and men participants • Women's and men's satisfaction with electricity services or renewable energy technologies (reliability, affordability, convenience, efficiency, reasons for not taking up new services or technologies)
<p>Reduced incidence of respiratory disease due to clean energy solutions</p> <ul style="list-style-type: none"> • Clean and energy-efficient electricity generation in urban and rural areas • Increased understanding of the causes of respiratory disease 	<ul style="list-style-type: none"> • Number and percentage of households using clean energy cooking facilities • Number of reported cases of respiratory infections by sex and age • Number of schools and health and other community facilities using clean energy sources for heating and other uses • Number of people participating in community awareness activities on the health impacts of polluting energy sources, by sex and age (adults and children)
<p>Women and men benefit equitably from program- and project-related training</p>	<ul style="list-style-type: none"> • Number and percentage of women and men who receive training provided by the program or project, by type of training • Number of training sessions targeted at women and men, by area of content

^aThese indicators should be disaggregated by socioeconomic group (e.g., lowest wealth quintiles) and vulnerable and marginalized groups (e.g., households that include people living with disabilities or type of household head, where relevant).

2. Economic Empowerment	
Gender Equality Result	Indicator
<p>Increased employment and enterprise opportunities for women and men in renewable energy</p> <ul style="list-style-type: none"> • Employment during construction, operation, and maintenance and in energy agencies 	<ul style="list-style-type: none"> • Number and percentage of jobs (person-days) generated for women and men • Number and percentage of women and men employed, by type of job and pay rates; and proportion of women employed in unskilled, technical, management, and supervisory roles (e.g., meter-readers, technicians, bill collectors, customer service staff) • Evidence of the type of incentives designed to recruit women, increase their capacity, and provide career development in energy sector agencies and service providers
<p>Employment as renewable energy service providers and technicians</p>	<ul style="list-style-type: none"> • Number and percentage of women and men who receive technical training to assemble, operate, maintain, or manage small and medium-sized energy enterprises • Number and percentage of women and men earning income as renewable energy service providers and technicians, by type of energy technology (e.g., solar, biogas) • Evidence of the type of incentives used to encourage women's entry into the renewable energy market (e.g., finance packages, tax benefits and rebates, pilot schemes, partnerships with financial institutions, the private sector or women's associations)

More women engaged in other micro, small, and medium-sized enterprises due to more efficient, nonpolluting, and labor-saving energy technologies	<ul style="list-style-type: none"> • Number and percentage of enterprises established or expanded using new energy sources by women and men, by type of enterprise • Number and percentage of women and men trained in the use of efficient energy technologies, or other aspects of enterprise development and management, by type of training • Evidence of specific activities designed to support women's and men's enterprise development, including partnerships with nongovernment organizations, women's associations, or financial institutions
Access to credit for renewable energy sector enterprises and technologies	<ul style="list-style-type: none"> • Number and percentage of women and men receiving credit for enterprises, by type of enterprise • Number and percentage of women and men purchasing more energy-efficient, labor-saving technologies (e.g., grinding mills, water pumps, etc.) • The proportion of credit provided to men and women, and to women from poorer socioeconomic groups

3. Participation in decision making

Gender Equality Result	Indicator
<p>Women and men participate equitably in decision making in the energy sector</p> <ul style="list-style-type: none"> • Policy making • Utilities and energy boards • User groups and committees • Public consultations on energy infrastructure, efficiency, and technologies 	<ul style="list-style-type: none"> • Number and percentage of women and men who attend participatory planning and consultation meetings • Number and percentage of women and men in energy user groups, cooperatives, committees, utilities, or energy boards; and in decision-making positions in these entities • Number and percentage of women involved in decision making on tariff arrangements (including identification of poor and vulnerable households for free or subsidized access) • Number and percentage of male and female facilitators and field staff working with community groups on planning, consultation, or implementation • Changes to design, implementation, cost recovery, or maintenance practices due to consultation with women • Number and type of awareness activities on entitlements and standards of energy service specifically targeted at women and men

3. Capacity Development

Gender Equality Result	Indicator
Strengthened capacity of service providers to ensure women and men benefit equitably from energy investments	<ul style="list-style-type: none"> • Equal employment opportunity policy and practices are implemented for staff and contractors (core labor standards, equal pay for work of equal value, occupational health and safety, and separate sanitation facilities) • Sex-disaggregated data routinely collected and applied to policy, planning, implementation, monitoring, and evaluation
Increased capacity of service providers to consult with women and men, and respond to women's needs and priorities	<ul style="list-style-type: none"> • Procedures for responding to complaints are publicly available and accessible to women; standards for responding to complaints are implemented and monitored • Number of training sessions with energy agencies and service providers on participatory techniques to involve women and men; and the number and percentage of women and men attending
Increased understanding by service providers of gender issues in the energy sector	<ul style="list-style-type: none"> • Number of training and awareness sessions held with energy boards, agencies, and service providers on gender issues in the energy sector • Number and percentage of women and men attending gender training (by agency and type of employee)

3. Transport (Mitigation)

Country and Sector Level Indicators

Gender Equality Dimension	Gender Equality Indicators (see detail below)
Human capital	<ul style="list-style-type: none"> • Average travel time to schools and health services by women, men, girls, and boys, by mode of transport • Percentage of women and men using modes of transport, including passengers cars, buses, trains and public transport services
Economic empowerment	<ul style="list-style-type: none"> • Average travel time to markets, financial services, and places of employment by women and men • Number and percentage of women and men who access employment or better income opportunities due to improved transport infrastructure and services • Number of women and men with increased incomes due to improved transport facilities and services • Employed persons in transportation and storage, by sex and level of employment
Participation in decision making	<ul style="list-style-type: none"> • Transport sector policy and plans require participatory approaches to planning and implementation, including the participation of women • Number and participation of women and men in transport decision making bodies
Gender capacity building	<ul style="list-style-type: none"> • Policy and strategies include gender equality objectives based on gender analysis of women's and men's different transport needs and modes of transport utilized

Project and Programme Level

1. Human Capital	
Gender Equality Result	Indicator
Increased use of affordable transport services by women and girls	<ul style="list-style-type: none"> • Number of trips made, by sex, age, and mode of transport • Average cost of trips made, by sex, age, and mode of transport • Change in the proportion of income spent on public transport by women and men • Sale and use of flexible and multiple-trip tickets by males and females, including subsidized tickets for low-income groups
<p>Increased convenience and reduced security and safety risks for women and girls due to gender-responsive design features such as</p> <ul style="list-style-type: none"> • Wider and sealed road shoulders, speed humps, footpaths, footbridges, bicycle lanes, access and feeder roads, trails, road signage, ramps, rails • Separate toilets and rest areas (bus and railway stations, wharves, trains, and vessels) 	<ul style="list-style-type: none"> • Number and type of completed gender-responsive design features that facilitate access for female transport users, people with disability, and the elderly, including features that provide for intermediate and nonmotorized modes of transport and pedestrian access • Number and type of completed gender-responsive design features that address security risks for women and girls • Perceptions of safety when using modes of public transport, by sex and age • Number of injuries and deaths due to road accidents, by sex and age • Number of physical and sexual assaults on public transport reported by women and girls (including by female staff) • Number and percentage of female and male security staff on public transport • Number and percentage of transport staff (e.g., station attendants, ticket sellers and collectors, drivers, bus and rail inspectors) trained in

<ul style="list-style-type: none"> • Separate public transport vehicles, carriages, and queues; panic buttons; security cameras; improved lighting • Routes and timetables to meet women's and children's needs, storage space, priority seating, child-friendly access 	<ul style="list-style-type: none"> • preventing sexual harassment and appropriate responses • Number and percentage of women and men who are satisfied with new transport infrastructure and services and their reasons, by socioeconomic group
<p>Women and men benefit equitably from transport-related training</p>	<ul style="list-style-type: none"> • Number and percentage of women and men trained, by type (construction, operation, or maintenance of transport facilities; driving or operating heavy machinery; enterprise development; leadership; other training) • Number of training sessions specifically targeted at women and men, by area of content • Employed persons in transportation and storage, by sex and level of employment

2. Economic Empowerment	
Gender Equality Result	Indicator
<p>Increased employment and income generation for women and men</p> <ul style="list-style-type: none"> • Targets met for women's employment during construction, operations, and maintenance (e.g., as roadside maintenance workers, station attendants, ticket collectors, drivers, bus or rail inspectors) • Targets met for women's employment within the Ministry of Transport 	<ul style="list-style-type: none"> • Contracts and tender documents for subcontractors require the recruitment of women as unskilled labor • Number and percentage of women and men employed on construction, operation, and maintenance, by type of job and pay rates • Number of rural women's road maintenance groups established • Proportion of women employed in unskilled, technical, management, and supervisory roles • Number and percentage of women contractors who are awarded labor-based contracts • Number of hours (or days) of paid work by women and men during construction, operation, and maintenance • Percentage change in women's employment in professional, technical, supervisory, and management positions • Incentives designed to recruit women, increase their capacity, and provide career development
<p>Increased employment for women in transport-related and other commercial enterprises</p>	<ul style="list-style-type: none"> • Number and percentage of women and men who receive credit for transport-related or other commercial enterprises; and the proportion of credit provided to men and women • Percentage of women and men who own motorized, intermediate, nonmotorized, and public transport • Number of market spaces constructed or reserved for women (e.g., along highways, at bus or rail stations) • Women's and men's views of the benefits and negative impacts of new transport infrastructure, including views on how any additional income earned was spent

3. Participation in Decision Making	
Gender Equality Result	Indicator
<p>Women and men participate equitably in decision making about the location and type of transport infrastructure</p>	<ul style="list-style-type: none"> • Number and percentage of women and men who attend planning and consultation meetings • Number and percentage of women and men in stakeholder and

	<p>transport user committees and groups</p> <ul style="list-style-type: none"> • Number and percentage of women in leadership positions in community-based user committees or organizations • Number and percentage of male and female facilitators tasked to work with communities and transport • Participation of women and men in user groups on transport design, planning, and consultation processes
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4. Gender Capacity Building	
Gender Equality Result	Indicator
<p>Strengthened capacity of executing and implementing agencies to ensure women and men benefit equitably from transport investments</p> <ul style="list-style-type: none"> • Increased capacity to consult with women and men • Increased capacity of stakeholders (e.g., female and male elected officials, government staff, community leaders) to address negative social and gender impacts of transport projects 	<ul style="list-style-type: none"> • Equal employment opportunity policy and practices are implemented for staff and contractors (core labor standards, equal pay for work of equal value, occupational health and safety, and separate sanitation facilities) • Sex-disaggregated data routinely collected, analyzed, and applied to the planning, implementation, monitoring, and evaluation of transport initiatives • Number of women and women's organizations involved in policy dialogue and monitoring and evaluation of transport plans, projects, and services • Level of satisfaction by women and men with the performance of transport agencies in providing appropriate, safe, and affordable services • Number of training sessions held with executing and implementing agencies, contractors, and other stakeholders on the social and gender impacts of transport, and on gender-responsive transport design

4. Agriculture (Adaptation)

Country and Sector Level Indicators

Gender Equality Dimension	Gender Equality Indicators (see detail below)
Human capital	<ul style="list-style-type: none"> • Number and percentage of people (adults and children) who benefit from improved social protection systems, by sex and age • Share of issued land titles held by women (%) • Proportion of households with access to secure tenure (female-headed/male-headed) • Employed persons by sector of activity and gender in agriculture • Number of MSc/PhD students/graduates in agricultural science
Economic empowerment	<ul style="list-style-type: none"> • Number and percentage of women and men with increased income • Changes in income disparities between women and men
Participation in decisionmaking	<ul style="list-style-type: none"> • Women are consulted and involved in the development of policies, strategies, and plans • Social protection, land tenure, and financial services laws and regulations are nondiscriminatory and compliant with the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)
Gender capacity building	<ul style="list-style-type: none"> • Policies, strategies, and legal reforms are designed to support both women and men producers and entrepreneurs

Project and Programme Level

1. Human Capital	
Gender Equality Result	Indicator
Women and men benefit equitably from project training and technology transfer	<ul style="list-style-type: none"> • Number and percentage of women and men trained in sustainable production technologies, soil and water conservation, pest and disease management, animal diseases, and basic veterinary services • Number and percentage of women and men provided with information on marketing, pricing, and value adding
Social protection measures supported that help women, including those with disabilities, graduate from poverty to sustainable livelihoods	<ul style="list-style-type: none"> • Number and percentage of additional women and men accessing social transfers • Evidence of awareness and training activities on social protection targeted at women and men, including those in the informal sector and other vulnerable occupations
Increased benefits for women from social insurance schemes	<ul style="list-style-type: none"> • Number of micro or community-based social insurance schemes established or supported, and the number and percentage of female and male members • Evidence of the type of measures taken to ensure poor women benefit equitably from social insurance and welfare programs

2. Economic Empowerment	
Gender Equality Result	Indicator
<p>Increased productivity by women in agriculture, horticulture, postharvest processing, and marketing</p> <ul style="list-style-type: none"> • Increased access by women to agricultural and other services, inputs, and markets • Increased ownership of productive resources and assets by women • Increased security of land tenure and usage rights for women 	<ul style="list-style-type: none"> • Changes in productivity by women and men • Percentage of women's and men's incomes spent on food • Number and percentage of women and men who adopt new production and postharvest technologies • Number and percentage of women and men receiving extension services • Description of the number and type of extension activities targeted at increasing the productivity of women and men • Number and percentage of women and men with increased access to markets as buyers and sellers • Number and percentage of women and men with increased ownership of productive assets (e.g., livestock, equipment for production, storage, processing, and marketing) • Number of women with secure tenure or usage rights to land (e.g., where sole or joint ownership or usage right is recorded on land title documents) • Number and percentage of women and men trained in energy-saving and sustainable agricultural technologies (e.g., adaptations to land management practices in marginal and fragile lands, adaptations related to changed rainfall patterns) • Number of households with improved access to water for agricultural and household uses
<p>Increased employment and enterprise development for poor women and men</p> <ul style="list-style-type: none"> • Targets met for women's access to financial services and credit for agricultural productivity or enterprise development 	<ul style="list-style-type: none"> • Number of jobs created for women and men • Number and percentage of women and men trained in enterprise development, business, or financial management • Number and percentage of micro, small, or medium-sized enterprises established or expanded by women and men • Percentage increase in the number of women engaged in viable and profitable micro and small enterprises, including evidence of increased incomes from these enterprises • Number and percentage of women and men who receive credit, by type of enterprise (and profitability) • Proportion of credit provided to men and women • Number and percentage of women and men with increased access to financial services • Description of specific measures taken to increase women's access to

	financial services and products
Increased employment of women in rural development agencies, including as extension agents	<ul style="list-style-type: none"> • Number and percentage of women and men employed in rural development agencies and as project staff, including the percentage employed as extension agents and community facilitators (e.g., in agriculture, horticulture, fisheries, forestry, livestock, agro-processing, marketing, enterprise development, and management) • The number and percentage of women and men trained annually as extension agents, by sector • Incentives designed to recruit women, increase their capacity, and provide career development

3. Participation in decision making	
Gender Equality Result	Indicator
Increased membership of women in community associations and rural producer and business organizations	<ul style="list-style-type: none"> • Number and percentage of female and male members of community associations and organizations (e.g., irrigation, farmers, credit groups), and the percentage of women in decision-making positions • Number and percentage increase in women's rural producer and business organizations
Strengthened rural women's organizations and networks	<ul style="list-style-type: none"> • Number of rural women's organizations that advocate with government agencies and elected representatives on women's needs, interests, and priorities (e.g., as producers or consumers) • Number of rural women's organizations contracted to deliver program or project activities and services • Number of women's networks or cooperatives formed
Women empowered to play an increased decision-making role in their households	<ul style="list-style-type: none"> • Changes in women's decision making in family and livelihood matters • Changes in women's control over income (their own earnings and other family income)

4. Gender capacity development	
Gender Equality Result	Indicator
<p>Strengthened capacity of rural development agencies to ensure women and men benefit equitably</p> <ul style="list-style-type: none"> • More research undertaken that focuses on increasing women's productivity 	<ul style="list-style-type: none"> • Number of research projects (and the proportion of research funding) targeted at increasing women's productivity in agriculture, horticulture, fisheries, forestry, livestock, and postharvest processing and marketing • Constraints to women's access to productive resources and assets are documented and analyzed; and that strategies are developed and monitored to address constraints

5. Disaster Preparedness and Response (Adaptation)

Country and Sector Level Indicators

Gender Equality Dimension	Gender Equality Indicators (see detail below)
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Human capital	<ul style="list-style-type: none"> • Number and percentage of vulnerable women, girls, men, and boys provided with life-saving assistance in humanitarian and disaster situations (including conflict and crisis) • Total number of victims (killed or affected) of natural disasters, by sex and age • Number or density of refugees/DPs by age and sex
Economic empowerment	<ul style="list-style-type: none"> • Number and percentage of women and men whose livelihood is destroyed and / or restored following a disaster
Participation in decisionmaking	<ul style="list-style-type: none"> • Evidence that policy and regulatory frameworks require the equal participation of women and girls in disaster preparedness and response
Gender capacity building	<ul style="list-style-type: none"> • Evidence that disaster risk management and response strategies include gender equality objectives and are based on gender analysis of women's and men's different risks, resilience, and capacity to respond

Project and Programme Level

1. Human Capital	
Gender Equality Result	Indicator
<p>Equitable and safe access to disaster resources and services according to the needs of affected women, men, girls, and boys</p> <ul style="list-style-type: none"> • Relief items (e.g., food, clothing, utensils, fuel) 	<ul style="list-style-type: none"> • Relief items are delivered directly to women or women's groups (food, clothing, fuel, utensils, hygiene packs, cash, and other social transfers) • Food distribution is organized to reduce waiting and travel time and safety risks for women and children • Women have safe and easy access to fuel for cooking and heating • Number and type of outreach activities to ensure that the needs of the most vulnerable are assessed and met (e.g., male and female adolescents; unaccompanied children; single, widowed, and elderly women; and women, men, boys, and girls living with a disability)
Health and hygiene	<ul style="list-style-type: none"> • Number of pregnancy and hygiene packs delivered to women and girls (compared with the proportion of affected females) • Percentage receiving health outreach services, by sex and age • Percentage of women and girls with access to contraceptive services
Water, sanitation, temporary shelter, and other infrastructure	<ul style="list-style-type: none"> • Water and sanitation sites are directly accessible to women, girls, and boys, in safe locations, culturally appropriate, private, and well-lit • Percentage of women and men trained in the use and maintenance of water facilities • Percentage of women and men with control over resources for collecting and storing water • Temporary shelter is appropriate, safe, private, and well-lit for women, unaccompanied and adolescent boys and girls, and other vulnerable groups including those living with a disability
Permanent shelter	<ul style="list-style-type: none"> • Number of households repaired or built, by type of household head and socioeconomic group • Number of grants and loans provided for building and/or repairing houses, by type of household head and socioeconomic group • Number and percentage of land and house titles or leases provided

	in the names of women, men, joint (both spouses), or male or female children
Schooling	<ul style="list-style-type: none"> Number and percentage of boys and girls attending schools and day care centers set up in camps
Identity documentation	<ul style="list-style-type: none"> Number and percentage assisted to replace identity documents, by sex and age

2. Economic Empowerment	
Gender Equality Result	Indicator
<p>Women and men benefit equitably from employment and livelihood opportunities during recovery and reconstruction</p> <ul style="list-style-type: none"> Women have access to employment, finance, and training 	<ul style="list-style-type: none"> Number and percentage of women and men employed in reconstruction and rehabilitation work; and proportion from households headed by females Number of days of paid work by women and men during relief, recovery, and reconstruction phases Number and percentage of women and men who receive credit or cash grants to re-establish their livelihoods (or establish new livelihoods), by type of household head The proportion of credit or cash grants provided to women and men, by type of household head (including the proportion of nonsecured loans to women and men) Number of women accessing free or affordable child care to enable them to participate in training and livelihood programs Livelihood programs are tailored to the needs of different groups (e.g., female heads of households; adolescent girls and boys; older, displaced men and women, and those with disability) Vocational training and livelihood support programs target the specific needs of women and men and provide practical skills, including in nontraditional areas Women, men, and adolescent females and males receive equal pay for equal work

3. Participation in decision making	
Gender Equality Result	Indicator
<p>Increased capacity of women and men to prepare for humanitarian emergencies and recover from them</p>	<ul style="list-style-type: none"> Number and percentage of women and men in local disaster preparedness and management committees, and risk assessment and planning teams Percentage of women in office-bearing and decision-making positions in committees, compared with the percentage undertaking voluntary disaster preparedness work Number and percentage receiving training or assistance for disaster risk reduction, preparedness, and response, by sex and age (including women from households headed by women) Number and percentage of women and men involved in maintaining early-warning systems (including indigenous, local, and contemporary warning systems) Number of local women's organizations and networks supported to undertake disaster risk assessment, preparedness, planning, training, and mitigation activities Number of local women's organizations and community-based organizations engaged in raising women's awareness of their human and legal rights (pre-disaster)
<p>Women participate as decision makers in all aspects of the disaster</p>	<ul style="list-style-type: none"> Number and percentage of people consulted on their relief and rehabilitation needs, safety, and security, by sex and age

<p>response</p>	<ul style="list-style-type: none"> • Number and percentage of women and men who are consulted on the design of water and sanitation facilities, camp layout, and temporary shelters • Number of local women's organizations and networks supported to deliver relief, rehabilitation, reconstruction, and resettlement services and programs • Changes to the distribution or type of relief items due to consultation with women (e.g., type or quality of food items or utensils; design of water, sanitation, or shelter facilities) • Percentage of women and men in decision-making positions (e.g., camp management, distribution of food and other relief items, planning and implementing reconstruction) • Regular dialogue is occurring with affected women and men, with separate forums for consultation with women • Child and family care provisions are in place to enable women and girls to participate in decision making
<p>The rights, safety, and security of women, men, girls, and boys are protected during relief, recovery, and reconstruction</p> <ul style="list-style-type: none"> • Registration procedures • Gender-based violence • Psychosocial support 	<ul style="list-style-type: none"> • Percentage of affected population interviewed and registered individually, by sex, including unaccompanied children and other vulnerable groups; and percentage provided with registration documents, by sex • Monitoring procedures are in place to prevent exploitation and abuse during registration processes • Number of reported cases of gender-based violence, by type and age, and the percentage where the survivor chooses to pursue legal action • Number of survivors who receive counseling and other support (e.g., legal, medical, safe refuge) for physical and sexual gender-based violence, by sex and age • Reports on gender-based violence are compiled monthly, analyzed, and taken into account when implementing security and safety measures (including domestic violence and violence perpetrated by state and non-state actors) • Number who receive trauma counseling and support, by sex and age • Information, education, and communication materials are available on sexual and physical violence
<p>Increased capacity of women to protect themselves from rights violations and advocate for and monitor service delivery during relief, recovery, and reconstruction</p>	<ul style="list-style-type: none"> • Number and percentage of women and men who receive training or awareness-raising on their rights and entitlements • Number of local women's organizations and networks supported to monitor service delivery and protection issues • Evidence of protection issues and rights violations that arise, and the action taken by women's organizations, nongovernment organizations, and individual women and men to address them

4. Gender Capacity Building	
Gender Equality Result	Indicator
<p>Strengthened capacity and effectiveness of humanitarian agencies to protect women, girls, men, and boys, and to provide services according to their different</p> <ul style="list-style-type: none"> • Targets met for deployment of female staff, gender specialist expertise, and gender training of field staff 	<ul style="list-style-type: none"> • Sex-disaggregated data is routinely collected, disaggregated by other key variables, and analyzed • Adequate gender expertise is deployed during all phases • Number of field staff receiving gender training, including the risks and impacts of gender-based violence • Percentage of male and female local and international field staff (including the percentage on needs assessment teams) • A gender network is established and functioning with representation across all sectors • A gender strategy is implemented and monitored for each sector or area of relief and reconstruction
<p>Regular reviews are undertaken of women's and children's protection</p>	<ul style="list-style-type: none"> • Number of gender-responsive assessments of protection needs (including consultation with women and girls, gender analysis, and

<p>needs during the humanitarian response</p> <p>Protocols, procedures, and standby agreements are in place that explicitly refer to women's and men's different protection issues and needs</p> <p>Gender-responsive complaints procedures are in place and implemented</p>	<p>gender-based violence)</p> <ul style="list-style-type: none"> • Number of protocols and agreements that refer to the different needs and security concerns of women, men, boys, and girls, including directions on how these should be addressed through each phase of emergency response and reconstruction • Number of partner agencies that issue codes of conduct to field staff, and percentage of male and female field staff who have signed codes of conduct • Number of relief agencies that share codes of conduct with affected communities • Number and percentage of male and female field staff trained in gender-responsive protection protocols and procedures • Protocols are implemented for addressing complaints of sexual harassment and gender-based violence by field staff • A complaints procedure is in place and monitored for rights violations, and that this is equally accessible for women, girls, men, and boys • Number of complaints by women, men, girls, and boys regarding actions by field staff • Description of the type of actions taken to respond to complaints, and the level of satisfaction of women and men with these actions
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6. Tourism (Adaptation)

Country and Sector Level Indicators

Gender Equality Dimension	Gender Equality Indicators (see detail below)
Human capital	<ul style="list-style-type: none"> • Number of new entrants into the “emerging opportunity” positions in the sector, disaggregated by sex. • Number and percentage of entrants into new “un-gendered” jobs, disaggregated by sex. • Number of women and men trained to become recruiters and trainers. • Number of applicants for tourism jobs, disaggregated by sex (after more women staff are in place as recruiters). • Number and percentage of female and male employed in the Accommodation and Food Services sector, by level and occupation. • Number and percentage of graduates of programmes in Travel, tourism, hotel and catering services, by sex • Number and percentage of women and men in retraining programs
Economic empowerment	<ul style="list-style-type: none"> • Annual sales of handicrafts before and after tourism plan, disaggregated by sex of producer. • Number of tourism enterprises, disaggregated by sex of owner and senior management • Targetted programmes, credit and training for women entrepreneurs • Employed persons in tourism, by sex and level of employment
Participation in decisionmaking	<ul style="list-style-type: none"> • Percentage of women and men on Committee on Tourism • Integration of gender effects of climate change into national Tourism policy
Gender capacity building	<ul style="list-style-type: none"> • Policy and strategies include gender equality objectives based on gender analysis of differential employment, income and training needs of women and men and opportunities for new employment and enterprises.

Project and Programme Level

1. Human Capital	
Gender Equality Result	Indicator
Increased use of affordable transport services by women and girls	<ul style="list-style-type: none"> • Number of trips made, by sex, age, and mode of transport • Average cost of trips made, by sex, age, and mode of transport • Change in the proportion of income spent on public transport by women and men • Sale and use of flexible and multiple-trip tickets by males and females, including subsidized tickets for low-income groups
Women and men benefit equitably from tourism-related training	<ul style="list-style-type: none"> • Number and percentage of women and men trained, by type • Number of training sessions specifically targeted at women and men, by area of content
Increased employment for women in tourism-related enterprises	<ul style="list-style-type: none"> • Number and percentage of women and men who receive credit for tourism-related enterprises; and the proportion of credit provided to men and women • Women's and men's views of the benefits and negative impacts of new tourism opportunities

2. Economic Empowerment	
Gender Equality Result	Indicator
Increased employment and income generation for women and men <ul style="list-style-type: none"> • Targets met for women's employment in new sectors • Targets met for women's employment within the Ministry of Tourism 	<ul style="list-style-type: none"> • Contracts and tender documents for subcontractors require the recruitment of women • Number and percentage of women and men employed by type of job and pay rates • Proportion of women and men employed in unskilled, technical, management, and supervisory roles • Percentage change in women's employment in professional, supervisory, and management positions • Incentives designed to recruit women, increase their capacity, and provide career development
Increased employment for women in tourism-related enterprises	<ul style="list-style-type: none"> • Number and percentage of women and men who receive credit for tourism-related enterprises; and the proportion of credit provided to men and women •
Increased participation of women in employment retraining and new opportunities	<ul style="list-style-type: none"> • Number and percentage of women and men who participate in employment retraining courses • Number and percentage of women and men employed in new tourism sectors and initiatives, by level and type of activity

3. Participation in Decision Making	
Gender Equality Result	Indicator
Women and men participate equitably in decision making about tourism initiatives	<ul style="list-style-type: none"> • Number and percentage of women and men who attend planning and consultation meetings • Number and percentage of women in leadership positions in community-based user committees or organizations • Participation of women and men in user groups on tourism design, planning, and consultation processes

4. Gender Capacity Building	
Gender Equality Result	Indicator
<p>Strengthened capacity of executing and implementing agencies to ensure women and men benefit equitably from tourism investments</p> <ul style="list-style-type: none"> • Increased capacity to consult with women and men • Increased capacity of stakeholders (e.g., female and male elected officials, government staff, community leaders) to address social and gender implications of tourism projects 	<ul style="list-style-type: none"> • Equal employment opportunity policy and practices are implemented for women and men in the workforce • Sex-disaggregated data routinely collected, analyzed, and applied to the planning, implementation, monitoring, and evaluation of tourism initiatives • Number of women and women's organizations involved in policy dialogue and monitoring and evaluation of tourism plans, projects, and services •

Appendix Four

Proposed Action Plan on Gender and Climate Change Adaptation and Mitigation

Action	Type	Stakeholders [Coordinated by Climate Change Committee]	Timeframe for Commencement	Constraints	Water	Agriculture	Health	DR	Energy & Trans	Tourism	Decision making
Climate Change (general):											
Effects of climate change, adaptation and mitigation are analysed from women's and men's perspectives and situation	Capacity building	Women's organizations; Min of Env't training for other departments; university researchers; Institute of Gender Studies; government M&E; think tanks;	Short-term	Low awareness; limited capacity; financing	X	X	X	X	X	X	
Data in assessments and stocktaking is disaggregated by sex	Capacity building	All Government departments (part of national gender policy); collected and published by Office of Statistics	Short-term	Methodological and capacity constraints; database software needs to be developed	X	X	X	X	X	X	X
Gender sensitive criteria and indicators are developed for assessment, participation, monitoring and evaluation of climate change activities	Capacity building; policy	Gender focal points; university researchers; gender experts; NGOs M&E	Short-term	Low awareness; limited capacity; insufficient data and research; political interest	X	X	X	X	X	X	X
Targets set for participation of women and men in all activities	Policy	Gender focal points; Department for Equal Opportunities	Short-term	Guideline of EU targets adjusted to Macedonian circumstances							
Gender expertise is involved and consulted in climate change project implementation and monitoring	Policy; capacity building	Gender experts; NGOs; university researchers;	Short-term	Identification / availability of gender and climate change expertise; revise process to allow their inclusion		X		X	X	X	
Technology assessments take into account gender	Policy ; capacity building	Gender experts; NGOs; university researchers;	Medium-term	Low awareness and capacity development; need to identify expertise to advise							
Business and philanthropic communities should be sensitized re gender in climate change efforts		Private sector; part of Communications Strategy; Governmental liaison for civil society and foundations		Few business-government connections, especially with small businesses; no concrete philanthropic community; little tradition of business working with government							

Action	Type	Stakeholders [Coordinated by Climate Change Committee]	Timeframe for Commencement	Constraints [low awareness]	Water	Agriculture	Health	DR	Energy & Trans	Tourism	Decision making
Awareness raising of consumers	Capacity building	Consumers; Ministry of Energy (outreach); communications experts; women's organizations; consumer organizations	Short-term/ongoing	Low awareness; limited options for consumers					X		
Reduction of energy consumption	Investment	Consumers; private sector; transportation sector; Finance; consumer organizations	Medium-term	Low awareness; limited economic resources for investments in energy use reduction					X		
Reduction of solid fuel use for heating in households	Investment	Consumers; Ministry of Energy (outreach)	Long-term	Low awareness; limited economic resources for investments in energy use reduction					X		
Subsidies for cleaner energy are accessed by women farmers, heads of households, and business owners	Policy	Women business owners/farmers; Ministry of Energy	Long-term	Low awareness; limited economic resources for investments in energy use reduction; isolation of female farmers and business owners					X		
Public transportation is accessible in both urban and rural locations	Policy	Population; transportation sector	Medium-term	Cost and distance of transport in rural areas					X		
Tax incentives for public transportation use are in place	Policy / legislation	Tax department		Government capacity; internal approval processes					X		
Campaigns promoting the use of public transit and energy-efficient transport	Policy; capacity building	Ministry of Energy/Transport; communications experts/agency	Medium-term						X		
Primary Sector: Agriculture (MR)											
Extension and information systems reach women farmers and female members of farming households	Capacity-building	Women farmers; female members of farming households; members of agricultural associations; women's NGOs; gender focal points on local level; Ministry of agriculture, MOEPP	Short-term	The information approaches are not adapted to the mentality of rural women residents; participation in policy making and farmer's associations is low		X					
Women and female farmers have equal access to agricultural inputs	Capacity-building; investment	Women farmers; female members of farming households; members of agricultural associations; women's NGOs; gender focal points on local level; Ministry of agriculture, IPARD PA, MOEPP	Medium-term	Mentality, patriarchal families, stereotypes, gender neutral policies		X					
Women's experience and knowledge is included in	Capacity-building	Women's associations, women farmers; farmers' association;	Short-term	Research on women's experiences and knowledge is limited;		X					

Primary Sector: Disaster and Risk Reduction (SH)											
Information and warning systems reach women and men equally in different locations	Capacity building	Population in rural areas; women's organizations; Ministry of Health; Ministry of Telecomm	Medium-term	Lower levels of access /control of ICT by females; few warning systems in place				X			
Women and women's groups are involved equally with men in disaster planning and preparedness	Capacity building	Women's organizations; Ministry of Health; emergency responders	Medium-term	Low awareness of gender component				X			X
Climate change data on droughts, floods, emergencies is analysed in terms of gender, age, ethnicity and geographic location	Capacity building	Ministry of Environment and Physical Planning; university researchers; gender experts	Short-term	Difficulty in gathering data in remote areas; low awareness				X			
Access of women and men to technology and finances for disaster preparation and recovery is analysed	Capacity building	Ministry of Finance; university researchers; gender experts	Short-term	Low awareness; making women and men aware of options is difficult in rural areas				X			

Primary Sector: Health (MR)											
Training, warning and information systems take into account situations of groups in society, by sex and age	Capacity building	Experts, academia, think-tanks, research institutes, MOEPP, Ministry of Health, Public health institute,	Medium-term	Low awareness (research) on the situations of different groups in society, no commitment for gathering age relevant data				X			
Health and emergency workers are trained in differing needs and situations of vulnerable groups	Capacity building	Faculty of medicine, local governments, MOEPP, Crisis management centre, experts	Medium-term	Disconnection between education system and research on social determinants of climate change				X			

Sector: Participation in decision making											
Women are adequately represented in the workforce and decision making in energy, agriculture, water, telecommunication and transport sectors	Capacity building; private sector	Equal opportunities department MLSP, line-ministries, gender focal points	Medium-term	Patriarchal traditions, low awareness among politicians, low participation of women in political parties		X	X		X		X
Targets set for women's participation in climate change decisionmaking at all levels	Policy	Climate change committee, line-ministries, gender focal points	Short-term	Participation does not guarantee that the women's voice will be heard if women policy makers do not know the situation of women as vulnerable groups in climate change							X
Gender budgeting process includes climate change components		MLSP, MoF, line ministries, gender focal points, NGOs (M&E)		Low interest for GRB; limited capacity for GRB							X
National and municipal level	Capacity	Gender focal points, equal	Short-term	Low awareness and interest in							X

Appendix Six
Gender and Climate Change Resources

Global Gender and Climate Alliance (GGCA) - <http://www.gender-climate.org>

Eldis, Institute of Development Studies, Gender and Climate Change <http://eldis.org/go/topics/resource-guides/climate-change/key-issues/gender-and-climate-change#.U-u3x1aZ625>

BRIDGE – Development and Gender, Gender and Climate Change, <http://www.bridge.ids.ac.uk/go/bridge-processes-and-publications/cutting-edge-programme-processes/gender-and-climate-change/strategic-planning>

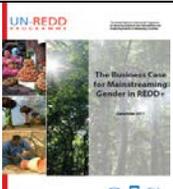
World Bank, Gender and Climate Change, <http://go.worldbank.org/TNOKYRX8Q0>

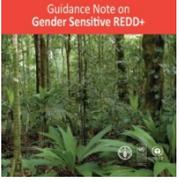
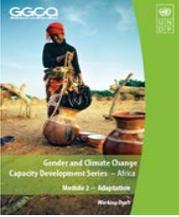
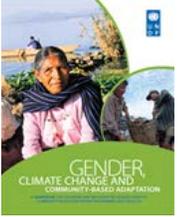
UNFCCC page on Gender and Climate Change, http://unfccc.int/gender_and_climate_change/items/7516.php

Women’s Environment and Development Organization (WEDO), page on Climate Change, <http://www.wedo.org/climatechange>

IUCN Global Gender Office, <http://www.iucn.org/about/work/programmes/gender/>

UNDP resources and training materials on gender and climate change:

	Title & Description	URL
	<p>“Ensuring Gender Equity in Climate Change Financing” - This publication was launched at COP-17 in Durban. It examines the links between gender equality, climate change and achievement of the Millennium Development Goals, as well as suggests how climate financing can be structured to promote gender equality and women’s empowerment. Available in English, French, Spanish and Arabic</p>	<p>http://www.undp.org/content/undp/en/home/librarypage/womens-empowerment/gender_and_environmentenergy/ensuring_gender_equity_inclimatechange financing.html</p>
	<p>“The Business Case for Mainstreaming Gender in REDD+” - This publication was developed in collaboration with the UN-REDD Programme and was launched at COP-17 in Durban. It illustrates how integrating gender equality principles into REDD+ can result in more effective and sustainable climate and development policies and programmes. Available in English, French and Spanish</p>	<p>http://www.undp.org/content/dam/undp/library/gender/Gender%20and%20Environment/Low_Res_Bus_Case_Mainstreaming%20Gender_REDD+.pdf</p>
	<p>“Women’s Green Business Initiative” is a global programme that is turning climate change challenges into economic opportunities for women, by promoting women’s employment and entrepreneurship opportunities in the green economy and in emerging climate change adaptation and mitigation industries. Available in English</p>	<p>http://www.undp.org/content/undp/en/home/librarypage/environment-energy/climate_change/gender/womens-green-business-initiative/</p>

 <p>UN-REDD PROGRAMME Guidance Note on Gender Sensitive REDD+</p>	<p>The “Guidance Note on Gender Sensitive REDD+” promotes gender sensitive REDD+ processes as well as countries and stakeholders in the preparation, development and implementation of gender sensitive national REDD+ strategies. Through five components, it provides the rationale for investing the time and resources, offers concrete examples of good practices and guidance, and proposes specific actions that can be taken in order to ensure that gender sensitive REDD+ outcomes are realized. Available now in English, and soon in French and Spanish</p>	<p>http://www.unredd.net/index.php?option=com_docman&task=cat_view&gid=1044&Itemid=53</p>
 <p>GGCA Gender and Climate Change Capacity Development Series – Africa Module 2 – Adaptation</p>	<p>“Regional Thematic Policy Briefs and Training Modules on Gender and Climate Change in Africa” - These resources are centered around various climate change themes of relevance to Africa and include discussions on general overview issues, adaptation, agriculture and food security, equitable energy access and climate finance. The knowledge products are designed to facilitate the work of regional and national cadres of experts, practitioners, policy makers and other partners in mainstreaming gender into climate change policy and programing. Available in English</p>	<p>http://www.undp.org/content/undp/en/home/librarypage/womens-empowerment/gender_and_environmentenergy/gender_and_climatechange-africa.html</p>
 <p>UN-REDD Orientation of linkages between gender and climate change</p>	<p>“Regional Thematic Policy Briefs and Training Modules on Gender and Climate Change in the Asia-Pacific Region” - These resources were developed for gender and climate change for practitioners and policy makers in the Asia-Pacific region. The themes are of specific relevance to the region, and include a general overview of climate change issues, adaptation, disaster risk reduction, equitable energy access, and climate finance. Available in English</p>	<p>http://www.undp.org/content/undp/en/home/librarypage/womens-empowerment/gender_and_environmentenergy/gender-and-climate-change-asia-pacific/</p>
 <p>Making Progress toward a Gender-Sensitive Approach in the Green Climate Fund Recommendations for the Paris Climate Fund</p>	<p>“Making Progress toward a Gender-Sensitive Approach in the Green Climate Fund” - In collaboration with the Global Gender and Climate Alliance Climate Finance Working Group, this Advocacy Brief was prepared in advance of the 5th Green Climate Fund (GCF) Board meeting in October 2013. It presents concrete recommendations of how to achieve a gender-sensitive approach within the Business Model Framework of the GCF. Available in English</p>	<p>http://gender-climate.org/Content/Docs/HBF-GGCA Gender-SensitiveApproach_GCF_Paris_Board Meeting.pdf</p>
 <p>GGCA The Least Developed Countries Fund and Special Climate Change Fund Gender and Climate Funds</p>	<p>“The Least Developed Countries Fund and Special Climate Change Fund, Gender and Climate Funds” – This brief aims to detail the recent progress of the Global Environment Facility to mainstream gender in LDCF and SCCF programming and implementation. It also identifies next steps towards ensuring gender equality and women’s empowerment principles are further incorporated into the design and implementation of LDCF and SCCF projects. Available in English</p>	<p>http://www.undp.org/content/dam/undp/library/gender/Gender%20and%20Environment/LDCF-SCCF.pdf</p>
 <p>GGCA GENDER, CLIMATE CHANGE AND COMMUNITY-BASED ADAPTATION</p>	<p>“Gender, Climate Change and Community Based Adaptation Guidebook” – This publication presents a wealth of experiences and examples taken from the UNDP-GEF Community-Based Adaptation Programme which are being piloted throughout the world. The Guidebook will be useful for any community-based practitioners who wish to review successful cases of gender mainstreaming in community-based adaptation</p>	<p>http://www.undp.org/content/undp/en/home/librarypage/environment-energy/climate_change/gender/gender-climate-change-and-community-based-adaptation-guidebook-.html</p>

	projects. Available in English	
	<p><u>“Leading Resilient Development: Grassroots Women's Priorities, Practices and Innovations”</u> – This publication was developed in collaboration with GOOTS International and Northumbria University and highlights grassroots women's innovations that build community resilience to disasters. Available in English</p>	<p>http://www.undp.org/content/dam/aplaws/publication/en/publications/womens-empowerment/leading-resilient-development---grassroots-women-priorities-practices-and-innovations/f2_GROOTS_Web.pdf</p>