Macedonian GENDER and CLIMATE CHANGE INDICATORS

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Foreword

UNDP under the projects "Macedonia's Fourth National Communication and Third Biennial Update Report on Climate Change under the UNFCCC", and "Strengthening institutional and technical Macedonian capacities to enhance transparency in the framework of the Paris Agreement" (CBIT project) has introduced a methodology of integrating the UNFCCC gender references (Paris Agreement and Gender Action Plan of the UNFCCC) into the Macedonian methodology of reporting to the UNFCCC.

The study "Gender and Climate Change in Macedonia Applying a Gender Lens to the Third National Communication on Climate Change" (Huyer, Sophia) provides guidance', methods, indicators and recommendations on including gender perspective into the Third National Communication of the Republic of North Macedonia.

Afterwards, in the period from June 2019 - February 2020, within the project "Macedonia's Fourth National Communication and Third Biennial Update Report on Climate Change under the UNFCCC" , for the first time in the country a systematic approach was undertaken to introduce measures and models for strengthening the implementation of the Draft Action Plan for integrating gender aspects responsiveness (hereinafter "the Plan").

Namely, as part of climate change projects implemented by the Ministry of Environment and Physical Planning with the support of the United Nations Development Programme (UNDP), a Draft Action Plan for Gender Mainstreaming in Climate Change has been prepared. It foresees concrete steps by which, through increasing the knowledge and awareness of all relevant gender and climate change stakeholders, will build institutional capacity for specific actions in this area, both at policy and implementation level. The Ministry of Labor and Social Policy actively participates in and supports all these activities.

The process of strengthening the implementation of the Plan encompassed several phases, starting with Analysis of the current situation on the introduction of the gender perspective into the climate change in the country, it encompassed all the relevant stakeholders at central level through consultative processes, provided a Training manual - Gender and Climate Change of the public administration, put the issue on the highest decision-making level, provided a model for efficient implementation of the Plan. A set of Recommendations for strengthening the implementation of the Action Plan on Gender and Climate Change was developed and introduced to the key stakeholders and members of Parliament.

Introduction

This document is developed with a purpose of continuing the above established basis of introducing gender perspective in the National Communications with a special focus on developing and proposing a set of indicators in the following requested areas of the Biennial Update Reports (under 4th National Communications to the UNFCCC): A greenhouse gas (GHG) inventory, Actions to mitigate GHG emissions and Monitoring, Reporting, and Verification (MRV).

Until recently, Macedonian reports to the UNFCCC have been gender blind, except for the 2nd and 3rd BURs that incorporated project specific Gender Action Plans. On the other hand, the UNFCCC is requesting gender responsive BURs.

Gender perspective is highlighted in the Preamble of the Paris Agreement (2016) by "Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity". Two Gender Action Plans were developed under UNFCCC. In 2017, at COP23 the first GAP was developed and CP 25, 2019 by adopting the Enhanced Lima Work Programme on Gender (LWPG) and Gender Action Plan (GAP) parties acknowledged that a further elaboration of the gender perspective throughout the Convention will lead towards increased transparency and effectiveness, and sustainability of climate policy and action.

GENDER RESPONSIVE NATIONAL COMMUNICATIONS (NCs)TOOLKIT

THE UNFCCC SPECIFIES THAT NATIONAL COMMUNICATIONS (NCs) ARE INTENDED TO FUNCTION AS BOTH REPORTING AND PLANNING DOCUMENTS.

NC FINDINGS AND RECOMMENDATIONS CAN GUIDE PLANNING FOR ADAPTATION MEASURES AND THE REDUCTION OF GREENHOUSE GAS EMISSION THROUGH MITIGATION EFFORTS.

AS PLANNING TOOLS, GENDER-RESPONSIVE NCs CAN PROVIDE COMPREHENSIVE BACKGROUND AND BASELINE INFORMATION ON POPULATION GROUPS ACROSS SECTORS.

In that direction for the purposes of the project, the following workplan was developed:

GENDER INDICATORS IN NATIONAL COMMUNICATIONS	
WORKPLAN	
Section	Activities
Responsible	National consultant on gender and CC/juniors on gender and CC
Main Collaborators	MLSP, MoEPP, Academy os Science and Arts of the Republic of North Macedonia
Section 1: Mitigation Assessment and respectively NDC	
Develop country specific gender and climate change sensitive criteria and indicators that will enable monitoring of gender issues in priority mitigation areas	
	1. Review of the social data of Mitigation assessment: identification of data that need to be sex- disaggregated
	2. Review of national literature/policies on gender indicators in Mitigation assessment
	3. Review of foreign literature on gender indicators in Mitigation assessment (UNDP/UNFCCC)
	4. Consultations with relevant stakeholders/actors in developing gender indicators (MLSP/MoEPP/ parties included in development of GHG inventory) - to define the possibilities in developing and gathering gender disaggregated data
	5. Identification of gaps in gathering sex-disaggregated data
	6. Design of a set of gender indicators for the Mitigation assessment
	7. Consultative meetings with actors working on development of Mitigation assessment to define the possible gender indicators
	8. Working meetings with MLSP representatives for purpose of synchronizing the suggested indicators into the new Strategy on equal opportunities on women and men, Priority area: Gender and Climate Change
Section 2: Vulnerability and Adaptation Assessment	
Ensure collection sex-disaggregated data and include analysis of male/female (M/F) differences in all reports and assessments to clarify differences between M/F vulnerability	1. Review of the Vulnerability and Adaptation Assessment: identification of data that need to be sex-disaggregated
	2. Review of national literature/policies on gender indicators in Vulnerability and Adaptation Assessment
	3. Review of foreign literature on gender indicators in Vulnerability and Adaptation Assessment (UNDP/UNFCCC)
	4. Consultative meetings with actors working on development of Vulnerability and Adaptation Assessment to define the possible gender indicators

	5. Working meetings with MLSP representatives for purpose of synchronizing the suggested indicators into the new Strategy on equal opportunities on women and men, Priority area: Gender and Climate Change
Section 3: GENDER INDICATORS IN LEGAL AND STRATEGIC FRAMEWORK INTERSECTING GENDER AND CLIMATE CHANGE	
Identification of the specific measures in the legal and policy framework	Review of the MRV report: identification of data that need to be sex- disaggregated and legal and strategic provisions to be gender mainstreamed and climate change responsive
Section 4: NDC	
	Review of the Mitigation measures defined within the Third BUR on Climate Change of the Republic of North Macedonia and defining and proposing the gender indicators (where applicable)
Section 1: GHG Inventory	
Where GHG inventories connect to social data, ensure collection of sex-disaggregated data, identify gaps in data and include consideration of gender issues in strategies to overcome data constraints	1. Review of the social data of GHG inventory: identification of data that need to be sex-disaggregated
	2. Review of national literature/policies on gender indicators in GHG inventory
	3. Review of foreign literature indicators in GHG inventory (UNDP/UNFCCC)
	4. Consultations with relevant stakeholders/actors in developing gender indicators (MLSP/MoEPP/ parties included in development of GHG inventory) - to define the possibilities in developing and gathering gender disaggregated data
	5. Identification of gaps in gathering sex-disaggregated data
	6. Design of a set of gender indicators for GHG inventory
	7. Consultative meetings with actors working on development of GHG to define the possible gender indicators
	8. Working meetings with MLSP representatives for purpose of synchronizing the suggested indicators into the new Strategy on equal opportunities on women and men, Priority area: Gender and Climate Change

I. Sex-disaggregated data and gender indicators in National Mitigation Assessment and respectively NDC report

Developing country specific gender and climate change sensitive criteria and indicators that will enable monitoring of gender issues in priority mitigation areas is the main purpose of this section.

Namely, at the very beginning it is very important to highlight that the conventional approach to mitigation and the development and transfer of technologies is primarily aimed at "Climate-first" which means that mitigation, development and technology transfer policies are seen only through their actual contribution to greenhouse gas reduction in the two energy associated sectors (energy and industry) which are mainly dominated by men. This represents a very limited approach to the true purpose of the mitigation process, due to the fact that it neglects various social and economic impacts and benefits for women and men, and also fails to take into account women's knowledge and contribution to household and community mitigation efforts. In developing countries, women play a leading role in relation to energy use in households, forest resources, and agricultural products.

The third Biennial Update Report on Climate Change of the Republic of North Macedonia-Climate Change Mitigation Report is the first national Mitigation report that includes a separate Chapter (5.3) on social aspects-gender with concrete measures to make the Climate Change Mitigation Process more Gender Responsive. This report highlights two concrete measures: Ensure work plan highlights categories where gendered divisions of labor indicate scope for in-depth gender analysis and Establish criteria for all terms of reference to include a collection of sex-disaggregated data, establishment of a small set of gender-specific indicators, and employment of gender specialist to conduct gender analysis of mitigation findings.

In that direction, following the UNDP Gender Responsive National Communications Toolkit, "Gender and Climate Change in Macedonia Applying a Gender Lens to the Third National Communication on Climate Change" (Huyer, Sophia) and Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development a set of gender indicators designed (Table 1: GENDER INDICATORS IN NATIONAL MITIGATION ASSESMENT and NDC). The level of importance of the sex-disaggregated data and design of gender indicators is divided in 2 categories: Existing and Proposed to be included, where the "Existing" indicators can be used in the development of the National Mitigation Assessment and NDC, while "Indicators proposed to be included" are referring to those indicators that can provide more detailed gender aspect of the National Mitigation Assessment and NDC, and are divided in "yes" and "recommended" column.

Table 1: GENDER INDICATORS IN NATIONAL MITIGATION ASSESMENT and NDC								
SECTOR	SEX-DISAGGREGATED DATA	INSTITUTION RESPONSIBLE FOR DATA GATHERING	AVAILABLE DATA			INDICATORS PROPOSED TO BE INCLUDED		
SOCIO-ECONOMIC STATUS	% of female`s share in the poverty and labor force rate	State Statistical Office (SSO)	Total poverty rate: 21.9% men:21.8% women 22%;(SSO 2019)			% of female`s share in the poverty and labor force rate	yes	
			Activity rate	67.8 %men	46,6 %women		yes	
			Employment rate	56.6% men,	38.1% women			
			unemployment rate	men: 16.5%	women: 18.4%			
			Inactive population	38.2% men	61.8 %women		yes	
	Proportion of men, women of all ages living in poverty in all its dimensions according to national definitions (SDG)	SSO	total	men: 21.8%	women 22%		yes	
			0-17	men: 28.7%	women: 29.8%;	% of male and female` share in the poverty rates by age groups	recommended	
			18-64	men:21%	women:21.5%;		recommended	
			65 and over	men 15%	women: 14.3%		recommended	
DECISION MAKING IN GHG SECTORS	SEX-DISAGGREGATED DATA	INSTITUTION RESPONSIBLE FOR DATA GATHERING	AVAILABLE SEX-DISAGGREGATED DATA			INDICATORS PROPOSED TO BE INCLUDED		
Female`s share in the decision making (institutional level)	Gender breakdown of high managerial positions in ministries/private sector in charge of climate change reporting, tourism, agriculture, energy, transport, construction, etc., as well as in the major public companies in charge of waste management, main manufacturing industries (GHG emitters), electricity and heat, etc	State Statistical Office (SSO), SEO	**Gender breakdown Minister and Deputy Minister: 14% female representation** Ministry of Agriculture, Forestry and Water Economy: men Ministry of Transport and Communications: Men Ministry of Environment and Physical Planning: Male Minister and female Deputy Minister Ministry of Labor and social policy: Female Minister and male Deputy Minister Ministry of Finance: Men Ministry of Health: Men Ministry of Economy: Men **State Secretaries: 14% female participation** Ministry of Labor and social policy: not appointed			% of female`s share in the decision-making positions in each of the Ministries related to GHG sectors	yes	

			Ministry of Environment and Physical Planning: Women Ministry of Health: Men Ministry of Transport and Communications: Men Ministry of Agriculture, Forestry and Water Economy: men Ministry of Economy: Men			
Female`s share in the decision making (corporate level)		Central Registry, SEO, Ministry of Economy	ELEM			% of female`s share in the decision-making positions in energy companies	yes
			Management board	67% Men,	33% Women		
			Supervisory board	86% Men	14% Women		
			EVN Macedonia				
			Management board	100% Men			
			Supervisory board	89% Men	11% Women		
Industrial Processes and Product Use (IPPU)		SSO, SEO, MLSP and each Ministry on the relevant sector	No data available			% of female`s share in the decision-making positions in each of the sectors (public and private entities)	yes
Agriculture, Forestry and Other Land Use (AFOLU)		SSO, SEO, MLSP and each Ministry on the relevant sector	No data available			% of female`s share in the decision-making positions in each of the sectors (public and private entities)	yes
Waste		SSO, Ministry of Environment and Physical Planning	No data available			% of female`s share in the decision-making positions in each of the sectors (production)	yes
LABOR FORCE IN RELATED SECTORS	**SEX-DISAGGREGATED DATA**	**INSTITUTION RESPONSIBLE FOR DATA GATHERING**	**AVAILABLE SEX-DISAGGREGATED DATA**			**INDICATORS PROPOSED TO BE INCLUDED**	
Energy	% of female share in the labor forcel level) in each sector: Energy Industries, Manufacturing Industries and Construction, Transport, Other Sectors (Commercial/Institutional, Residential and Agriculture/Forestry/Fishing),	State Statistical Office (SSO)	Manufacturing:	men:54.6% women: 45.4%		% of male and female share in the labor force in each sector: Energy Industries, Manufacturing Industries and Construction, Transport, Other Sectors (Commercial/Institutional, Residential and Agriculture/Forestry/Fishing),	recommended
			Construction:	men: 93.4% women: 6.6%			recommended
			Transportation and storage:	men: 87.2% women: 12.8%			recommended
			Agriculture, forestry and fishing:	men: 61.7% women: 38.3%			recommended
			Electricity, gas, steam and air conditioning supply:	men: 85.5% women:14.5%			recommended

			Water supply, sewerage, waste management and remediation activities:	men: 88.9% women: 11.1%			recommended
	Gender breakdown of the labor force in the Energy producers (companies)	SSO, SEO, MLSP and each Ministry on the relevant sector	Not available			% of male and female share in the labor force in private companies	recommended
Industrial Processes and Product Use (IPPU)	Gender breakdown of the labor force in the IPPU sector	SSO, SEO, MLSP and each Ministry on the relevant sector	Not available			% of male and female share in the labor force in the IPPU sector	recommended
Agriculture, Forestry and Other Land Use (AFOLU)	Gender breakdown of the labor force in the AFOLU sector	State Statistical Office (SSO)	Agriculture, forestry and fishing:	men: 61.7%	women: 38.3%	% of male and female share in the labor force in the AFOLU sector	recommended
Waste	Gender breakdown of the labor force in the Waste sector	State Statistical Office (SSO	Water supply, sewerage, waste management and remediation activities:	men: 88.9%	women: 11.1%	% of male and female share in the labor force in the Waste sector	recommended

GENDER RESPONSIVE MITIGATION MEASURES	GENDER MAINSTREAMING IN THE MITIGATION ASSESSMENT REPORT DEVELOPMENT	INSTITUTION RESPONSIBLE FOR DATA GATHERING	AVAILABLE GENDER POLICY/MEASURES	INDICATORS PROPOSED TO BE INCLUDED	
	Gender responsive mitigation measures in the national climate change and gender equality legislation	SEO, MLSP/all actors included in the process	Law and Strategy on Equal Opportunities on women and men- under construction	Policies and measures targeting women and vulnerable groups	yes yes
			Climate Action Law and Strategy under construction	Gender targets; Policies and measures targeting women and vulnerable groups	yes
			Energy Strategy	Gender targets Policies and measures targeting women and vulnerable groups	yes
	Participation of Institutional machinery on gender equality, “female” NGOs (representatives) in the policy and measures development			Institutional machinery on gender equality, “female” NGOs (representatives) included in the policy and measures development	yes

MITIGATION MEASURES	SEX-DISAGGREGATED DATA	INSTITUTION RESPONSIBLE FOR DATA GATHERING	AVAILABLE DATA		INDICATORS PROPOSED TO BE INCLUDED	
SECTOR 1: ENERGY	Number and percentage of female-headed enterprises taking advantage of governmental energy programmes and subsidies	SSO, Ministry of Economy	FITD supported projects 2015-2020: 30% female headed MSMEs have used the FITD funds (not mainly related to energy issues) No other data available		% of male and female-headed enterprises taking advantage of governmental energy programmes and subsidies	yes
	Number and percentage of women and men taking advantage of governmental energy programmes and subsidies	SSO, Ministry of Economy	Sex-disaggregated distribution of recipients of subsidies for PVC in 2018 and 2019	Men: 73% Women: 27%	% of women and men taking advantage of governmental energy programmes and subsidies	yes
			Sex - disaggregated distribution of Recipients of Subsidies for Solar panels for 2018 and 2019	Men 78% Women 22%		
			Subsidies for purchasing pellet stoves 2018-2020	Men 74% Women 26%		
	Number and percentage of women and men employed in the sector and engaged in entrepreneurship in energy-related enterprises	SSO, Central register	No data available		% of male and female share in the labor force in entrepreneurship in energy-related enterprises	recommended
	% of women participating in capacity building and awareness raising activities	all actors included in the measure's implementation	No data available		% of female and male`s share in the mitigation measures on capacity building	yes
	Number and percentage of male and female headed households with free or subsidized electricity connections, flexible payment arrangements, or receiving credit for household connections (including for renewable and nonpolluting energy technologies)	SSO, MoEPP, Ministry of economy	No data available		% of females and male share in the mitigation measures (households with free or subsidized electricity connections, flexible payment arrangements, or receiving credit for household connections (including for renewable and nonpolluting energy technologies)	yes
	Single mothers living in houses with children under the age of 18, using firewood	SSO, MoEPP	15% in the Skopje Region. Data available at www.skopjesezagreva.mk		% of single mothers (female headed households using firewood)	yes

	Single fathers living in houses with children under the age of 18, using firewood	SSO, MoEPP	17% in the Skopje Region. Data available at www.skopjesezagreva.mk	% of single fathers (female headed households using firewood)	yes
	Women 65+ age, with monthly income beyond 12.000 MKD single, divorced or widower and live alone	SSO, MoEPP	62,22% in the Skopje Region. Data available at www.skopjesezagreva.mk	% of women aged 65+ with monthly income beyond 12.000 MKD single, divorced or widower and live alone	yes
	Men 65+ age, with monthly income beyond 12.000 MKD, single, divorced or widower and live alone	SSO, MoEPP	75.00% in the Skopje Region. Data available at www.skopjesezagreva.mk	% of men aged 65+ with monthly income beyond 12.000 MKD single, divorced or widower and live alone	yes
	% of female VS male headed households using electrical power for heating	State Statistical Office (SSO)	Not available	% of female and male headed households using electrical power for heating	yes
	% of female share in Guaranteed monthly income (MLSP) receiving subsidies in money (1000 mkd) for heating during the heating season	MLSP		% of female and male share in Guaranteed monthly income (MLSP) receiving subsidies in money (1000 mkd) for heating during the heating season yes	yes
SECTOR 2: TRANSPORT	SEX-DISAGGREGATED DATA	INSTITUTION RESPONSIBLE FOR DATA GATHERING	AVAILABLE DATA	INDICATORS PROPOSED TO BE INCLUDED	
	Users of public transportation, by age and gender and place of living	SSO/Ministry of interior	Not available	% of female and male participation in the public transportation	yes
	Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities (SDG)	SSO/Ministry of interior/Ministry of Transport	Not available	% of female and male participation in the public transportation with disabilities and by age	recommended
	% of men VS % ow women owners of registered vehicles	SSO/Ministry of interior	men: 71.07%	women:12.76%	% of men VS % ow women owners of registered vehicles	yes
	% of men vs % of women owners of vehicles on eletrical power	SSO/Ministry of interior	men: 40.71%	women: 1.77%	% of men vs % of women owners of vehicles on electrical power	yes
	% of men VS % of women that bought old vehicles (which EUROSTANDARD is dominated)	SSO/Ministry of interior	No data available	% of men VS % of women that bought old vehicles (which EUROSTANDARD is dominated)	recommended

	% of men VS % of women owners of vehicles with EURO 5 and more standard	SSO/Ministry of interior	No data available			% of men VS % of women owners of vehicles with EURO 5 and more standard	recommended
SECTOR 3: AGRICULTURE, FORESTRY AND OTHER LAND USE (AFOLU)	SEX-DISAGGREGATED DATA	INSTITUTION RESPONSIBLE FOR DATA GATHERING	AVAILABLE DATA			INDICATORS PROPOSED TO BE INCLUDED	
	agricultural workers by gender	SSO, Ministry of Agriculture	Employed agricultural and fishery workers	men: 73.82%,	women: 26.18%	% of female workers (skilled agricultural workers)	yes
	Holders of individual agricultural holdings Managers of business entities - men:80% women:20%	SSO, Ministry of Agriculture	Holders of individual agricultural holdings	men:90%	women: 10%	% of female headed agricultural holdings and managers of business entities	yes
			Managers of business entities	men: 80%	women:20%		
	Land ownership by gender	SSO, Ministry of Agriculture	men:88%;	women:12%,		Female`s share in the land ownership	yes
	Unpaid family workers	SSO, Ministry of Agriculture	men:32.4%	women: 67.6%		% of women as unpaid family workers	yes
	Role in decision making on activities related to the land	Source: MEASURING WOMEN'S EMPOWERMENT IN AGRICULTURE WITH SURVEY-BASED AND EXPERIMENTAL ECONOMICS METHOD	9.65% of women have a leading role in decision making on activities related to the land	50% of women landowners are not active in the decision-making process on activities related to the land		% of women deciding on the usage of mitigation and adaptation activities in agriculture	yes
	Membership in groups or associations	Source: MEASURING WOMEN'S EMPOWERMENT IN AGRICULTURE WITH SURVEY-BASED AND EXPERIMENTAL ECONOMICS METHOD	5% of women are active members in groups or associations			% of men and women who have access to information systems	yes
	Household members who work at individual agricultural holdings, by age and gender	SSO, Ministry of Agriculture	up to 25 years:	men: 59.57% women: 40.43%		% of male and female household members who work at individual agricultural holdings, by age and gender	yes
			25 – 34 years:	men 58.32% women: 41.67%			
			35-44 years:	men: 54.89% women: 45.11%			

			45-54 years:	men:55.74% women: 44.26%		
			55 – 64 years	men: 55.72% women: 44.28%		
			65 years and more:	men: 59.77% women: 40.23%		
	Household members who work at individual agricultural holdings by main activity by gender	SSO, Ministry of Agriculture	Growing of crops: 55.36% women		% of male female`s share (household members) in the work at individual agricultural holdings by main activity	yes
			Farming of animals: 3.72% women			
			Growing of crops combined with farming of animals: 38.18% women			
			Agricultural service activities: 2.31% women			
			Hunting and game propagation: 0.07% women			
			Forestry and logging: 0.31% women			
			Fishing and fish farming: 0.06%; women			
	Household members who work at individual agricultural holdings, by working hours by age and gender	SSO, Ministry of Agriculture	up to 50 hours: men: 46.55% women: 53.45%;		Male and Female`s share in work at individual agricultural holdings, by working hours	recommended
			51 - 349: men: 52.42% women: 47.58%;			
			350 - 449 men: 53.34% women: 46.66%;			
			450 - 899: men: 54.61% women: 45.39%;			
			900 - 1349: men: 58.93% women: 41.07%;			
			1350 - 1800: men: 61.5% women: 38.5%;			
			1800 hours and more: men: 66.46% women: 33.54%;			
	SEX-DISAGGREGATED DATA	INSTITUTION RESPONSIBLE FOR DATA GATHERING	AVAILABLE DATA		INDICATORS PROPOSED TO BE INCLUDED	

EDUCATION	Number of MSc/PhD students/graduates in environment and climate change mitigation sectors related fields, by sex	SSO, Ministry of Education	Phd: 2016 Natural Sciences: 46% Men, 54% Women; Technical sciences: 81% Men, 19% Women; Biotechnical sciences: 37% Men, 63% Women, 2017 Natural Sciences 54% Men, 46% Women; Technical sciences 57% men, 43% women; Biotechnical sciences 75% men, 25% women; 2018 Natural sciences: 29% Men, 71% Women; Technical sciences: 65% Men, 35% Women; Biotechnical sciences: 33% Men, 67% Women	% of men and women in secondary and tertiary education in sectors related to Climate Change sectors (Natural Sciences; Technical sciences: Biotechnical sciences)	recommended
			Masters: 2016 Natural Sciences: 51% Men, 49% Women; Technical sciences: 52% Men, 48% Women; Biotechnical sciences: 41% Men, 59% Women; 2017 Natural Sciences 38% Men, 62% Women; Technical sciences 51% men, 49% women; Biotechnical sciences 54% men, 46% women; 2018 Natural sciences: 30% Men, 70% Women; Technical sciences: 44% Men, 56% Women; Biotechnical sciences: 41% Men, 59% Women		

The Republic of North Macedonia, non-Annex I country of the UN Framework Convention on Climate Change (UNFCCC), and is fully committed to the negotiating process aimed at reaching a global agreement applicable to all Parties at the Paris Conference in December 2015. According to this Agreement, all Parties should be able to give their contribution on a fair and equitable basis and in line with their national circumstances, towards achieving the global objective of stabilizing greenhouse gas (GHG) concentrations in the atmosphere at a level which would prevent an increase in the global temperature of more than 2°C. Still, the Nationally Determined Contributions, so far, were not considering the gender aspect.
In that regard, the following table provides a list of general lists proposed indicators based on the existing Mitigation measures of the Third BUR on Climate Change of the Republic of North Macedonia.

Table 2: GENDER MAINSTREAMING IN THE Mitigation Report and NDC gives a short overview of the gender mainstreaming process, providing tools for developing gender-responsive NDC, Institutions that should be responsible for data gathering, and Table 3: NDC GENDER INDICATORS provides a list of mitigation measures from the Third BUR on Climate Change of the Republic of North Macedonia as well as proposed Gender Indicators to be included in NDC measuring the gender mainstreaming process.

Table 2: GENDER MAINSTREAMING IN THE Mitigation Report and NDC				
	TOOLS	INSTITUTION RESPONSIBLE FOR DATA GATHERING	INDICATORS PROPOSED TO BE INCLUDED	
Inclusion of National Gender Machinery in the Process of development of the National Mitigation Assessment and NDC	Representative(s) from the (Sector on equal opportunities, Ministry of Labour and Social Policy) is included in the national coordinating body for National Mitigation Assessment and NDC as well as into the Technical Working Group (with clear responsibilities and terms of reference)	SEO, MLSP/all actors included in the process	List of nominated persons/affiliations included in the process	yes
	Included statement in project plan to explain gender as a relevant issue and identify that outcomes data and analysis of gender issues will be included in the National Mitigation Assessment and NDC	SEO, MLSP/all actors included in the process	Statement included in the project plan	yes
	Developed plan to gender mainstream National Mitigation Assessment and NDC and developing gender responsive measures	SEO, MLSP/all actors included in the process	Plan developed and data collected	yes

Table 3: NDC GENDER INDICATORS		
SECTOR	PROPOSED INDICATORS	INSTITUTION RESPONSIBLE FOR DATA GATHERING
SECTOR 1: ENERGY		
Table 9. Mitigation action: Solar rooftop power plants:	% of male and female users of the subsidies	► Government of the Republic of North Macedonia ► Energy Regulatory Commission ► Ministry of Economy, Energy Agency ► Elektrodistribucija Skopje ► Suppliers of electricity ► End-users of electricity
TABLE 16. Mitigation action: Public awareness campaigns and network of energy efficiency (EE) info centers	% of male and female consumers reached with the campaign activities; Content targeted to female consumers	► Ministry of Economy, Energy Agency ► Energy suppliers ► End-users

TABLE 17. RETROFITTING OF EXISTING RESIDENTIAL BUILDINGS:	% of men and women who received reimbursement of 50% of the costs for windows replacement and installation of PVC and aluminum windows, but not more than 500 €, provided by the Ministry of Economy	► Ministry of Economy, Energy Agency ► Donors and financial institutions ► Households
TABLE 24. IMPROVEMENT OF THE STREET LIGHTING IN THE MUNICIPALITIES	Gender responsive budgeting included	Government of the Republic of North Macedonia ► Energy Regulatory Commission ► Ministry of Environment and Physical Planning ► Ministry of Economy, Energy Agency ► Local self-government
SECTOR 2: Transport	INDICATOR	
TABLE 30. INCREASED USE OF THE RAILWAY, Campaigns for cheaper/free driving of certain categories of passengers (young people, pensioners, etc.) carried out	% of male and female participation of the targeted population	► Government of the Republic of North Macedonia ► Ministry of Transport and Communications ► Ministry of Economy, Energy Agency ► JSC Macedonian Railway Transport ► End-users ► Private companies
TABLE 33. ADVANCED MOBILITY, Subsidies and campaigns for buying new bicycles/electric scooters implemented	% of male and female participation in the subsidies	► Ministry of Economy, Energy Agency ► Local self-government ► End-users
TABLE 35. ELECTRIFICATION OF THE TRANSPORT, Money from the budget should be allocated for the realization of the Program for subsidizing new vehicles	% of male and female participation of the targeted population	► Government of the Republic of North Macedonia ► Ministry of Transport and Communications ► Ministry of economy
SECTOR 3: Agriculture, Forestry and Other Land Use (AFOLU)	INDICATOR	
TABLE 36. REDUCTION OF CH4 EMISSIONS FROM ENTERIC FERMENTATION IN DAIRY COWS, Incentives for dissemination of the advisory package to target farmers	% of male and female farmers in the disseminated advisory package	► Ministry of Agriculture Forestry and Water Economy
TABLE 39. REDUCTION OF N2O EMISSIONS FROM MANURE MANAGEMENT IN DAIRY COWS BY 20% FOR FARMS BELOW 50 LIVESTOCK UNITS, Train farmers for BAT in manure management	% of male and female farmers trained	► Ministry of Agriculture Forestry and Water Economy
TABLE 40. CONVERSION OF LAND USE OF FIELD CROPS ABOVE 15% INCLINATION, Institutional support to primary producers with subsiding the process of conversion of crop fields into grassland	% of male and female participation in the institutional support	► Ministry of Agriculture Forestry and Water Economy

TABLE 41. CONTOUR CULTIVATION OF CROPLAND ON INCLINED TERRAINS (5-15%), Institutional support to primary producers with subsiding the process of adoption of the system of contour cultivation	% of male and female participation in the subsidies	► Ministry of Agriculture Forestry and Water Economy
TABLE 42. PERENNIAL GRASS IN ORCHARD AND VINEYARDS ON INCLINED TERRAINS (5-15%), Institutional support to primary producers with subsiding the process of implementing the measure	% of male and female participation in the subsidies	► Ministry of Agriculture Forestry and Water Economy
TABLE 43. USE OF BIOCHAR FOR CARBON SINK ON AGRICULTURAL LAND, Institutional support to primary producers with subsiding the process of implementing the measure	% of male and female participation in the subsidies	► Ministry of Agriculture Forestry and Water Economy

Gender gaps in NDC sectors should be firmly addressed as following:

a) Policy alignment: national climate change policy and sectoral policies, national gender policies and national strategies on gender equality and the guidance on concrete actions to promote synergies between various policies to ensure gender equality issues are integrated are given in the already developed Training manual - Gender and Climate Change of the public administration, and the Recommendations for strengthening the implementation of the Action Plan on Gender and Climate Change.

Namely, the analysis shows that the existing central and local strategic documents, actions and operational plans for gender equality on t one hand and climate change on the other have to be revised and upgraded. Namely, this should be done using the Open Method of Coordination or the Multi-Stakeholders Method, which means that multi-level inter-sectoral, inter-institutional, inter-sectoral and inter-institutional cooperation must be established at both administrative and decision-making levels.
The institutional machinery must consult the civil sector, the business sector and the academic community in order to provide comprehensive information on the basics, barriers, needs and opportunities for introducing gender intersection and climate change.
The revision and upgrading of existing gender equality strategic documents can be done through the establishment of working groups or other formal inter-institutional bodies (committees, working bodies) composed of representatives from all relevant institutions, CSOs, academia and the business sector working in the field. On the other hand, the existing strategic documents related to the environment and climate change should be revised to include gender mainstreaming.
It must be emphasized that measures in gender equality plans and measures in climate change plans need to be synchronized in order to intersect gender and climate change.

To this end, the process of Gender mainstreaming (Gender mainstreaming) should be applied, which is a process consisting of incorporating a range of methods at all stages of the project or strategic program / policy, in the planning, development, implementation and monitoring / evaluation phases).
Gender mainstreaming is the (re)organization, improvement, development and evaluation of policy processes, so that a gender equality perspective is incorporated in all policies at all levels and all stages, by the actors normally involved in policy-making (EIGE)[1].

a) Institutional coordination (HORIZONTAL AND VERTICAL GOVERNANCE)

There is no continuous cooperation between gender mechanisms and different sectors related to climate change (environment, spatial planning, etc.) in the field of climate change policy making.
The only cooperation noted is the one during the implementation of climate change projects which are implemented in cooperation with UNDP, in particular in the preparation of the Action Plan on Gender and Climate Change as well as within the project Strengthening Institutional and Technical Capacities to Improve Climate Transparency changes under the Paris Agreement (CBIT project) .
No climate change and gender training for public and state administration of institutions working on climate change has been registered on the one hand, and no climate change training on gender machinery on the other. In 2017, the Macedonian government introduced an e-learning system, which set up two gender equality trainings, one basic and one advanced. Civil servants are obliged to undergo these trainings. These trainings are focused on gender equality issues and do not have a specific section on climate change or the environment and gender. Coordinators for Equal Opportunities on Women and Men in Public Administration Bodies are not familiar, nor informed with the text of the Action plan on Gender and Climate Change, nor are familiar with the dependence on the gender based vulnerability to the climate change negative impacts (how and does gender relates to the mitigation and adaptation capacities), although some have participated in workshops on climate change policy-making.
They have no information on whether men and women have equal access to mitigation and adaptation resources / services and whether climate change is increasing existing gender disparities and vulnerability. Also, the coordinators have no knowledge of the reasons for the different positions of women and men in mitigating and adapting to climate change.
At the time of this analysis, no inter-institutional or intra-institutional collaboration on the link between climate change and gender perspective was observed, ie for the latter Equal Opportunities Coordinators were most often not involved in activities (workshops, consultations, working groups) and are not consulted on a gender perspective when creating climate change policies within their institution.
There is no data on the involvement of the Inter-Departmental Group on Equal Opportunities in the processes of climate change policy-making, while the National Committee on Climate Change in the field of gender mainstreaming as an example exemplifies the Action Plan on Gender and Climate Change.
On the other hand, NCCC members consider that this committee is not operational and that its work should be strengthened above all, after which steps should be taken to actively address gender and climate change issues into it`s work[2].

b) Institutional capacities.

In order to ensure the intersection of the gender and climate change at both administration and decision-making level, it is firstly necessary to strengthen the institutional capacities on gender perspective of the climate change.

[1] Recommendations for strengthening the implementation of the Action Plan on Gender and Climate Change
[2] Recommendations for strengthening the implementation of the Action Plan on Gender and Climate Change

Namely there is strengthening capacities on climate change of the gender institutional machinery at central and local level, to introduce the knowledge on the intersection of gender and climate changes, more precisely assessing and measuring the impacts of climate change impacts, policies and measures and their gender. On the other hand, gender sensitization of the institutions and institutional representatives dealing with climate change is needed, ie strengthening the capacities of relevant stakeholders at both the administrative and decision-making levels to introduce a gender perspective into climate change policies.

The introduction of gender and climate change training should be made at the level of strategic plans and their relevant action / operational plans with financial support, in order to raise awareness of the different needs and roles of women and men in mitigation/adaptation. Strengthening the capacities at the administrative and decision-making level of both climate change and gender equality stakeholder groups for the existence of gender intersection with climate change is a prerequisite for effective implementation of the NDC[3].

d) Gender analysis through sex-disaggregated data.

An analysis of the gender segregation of activities, needs and barriers to cope with the negative impacts of climate change is needed in order to design gender responsive policies.

There is no official insight/analysis/assessment of the different needs and roles of women and men in mitigation and adaptation measures, which results with absence of gender responsive measures in environmental or climate change plans. There is need of assessing the gender based differences negative climate chance impacts, or how their daily behavior and functioning impacts climate change, depending on social context, culture, socio-economic factors, place of residence, etc.

[3] Ibid.

II. Sex-disaggregated data and gender indicators in Vulnerability and Adaptation assessment

The Paris Agreement in the Article 7 paragraph 5, states that: " Parties acknowledge that adaptation action should follow a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science and, as appropriate, traditional knowledge, knowledge of indigenous peoples and local knowledge systems, with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate".

The entire population is vulnerable to the negative impacts of the Climate Change (long-term) and the disasters and catastrophes caused by the climate change.
Still, different groups of people based on social, economic, educational, health (physical and mental), age, ethnicity, gender, place of living (geographical), environmental factors, as well as accessibility to the institutional mechanisms and sources for adaptation and mitigation are more vulnerable to the long-term effects of the climate change and the disasters and catastrophes caused by them.
Considering vulnerability of different groups in the context of climate change must encompass all the above listed factors while developing policies and projects on CCs.
UN/ISDR (2004) defines vulnerability as "conditions determined by physical, social, economic and environmental factors or processes that increase susceptibility to community of the impact of hazards".
"Vulnerability is the presence of special characteristics and circumstances that the individual, the community, the system or objects make them susceptible to adverse effects from hazards and disasters. "(Decree 2011 - Rulebook on the methodology for making assessment, Official Gazette, No. 03/11).
On the other hand, the term of 'vulnerability' of population represents a wide-open concept that cannot be precisely defined because it encompasses a lot of elements such as physical, social, economic, ecological and institutional vulnerability (Birkmann, 2006).
Women are considered to be victims of double and multiple discrimination (sex in correlation to age, place of living, education, ethnicity, religious belief, etc.) and therefore an accent should be given in identification of elements and needs of defining Climate Change adaptive measures that should be gender responsive.

In that regard, based on the set of indicators developed based on the indicators defined in the "Gender and Climate Change in Macedonia Applying a Gender Lens to the Third National Communication on Climate Change" (Huyer, Sophia) and Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development . This section and the table bellow identifies a set of indicators that should be considered while developing the Vulnerability and Adaptation assessments:

Table 4: GENDER INDICATORS IN Vulnerability and Adaptation Assessment		
Ensure collection sex-disaggregated data and include analysis of male/female (M/F) differences in all reports and assessments to clarify differences between M/F vulnerability		
SECTOR	INDICATOR	INSTITUTION responsible for data gathering
Decision making level		
	Number and percentage of women and men on national climate change decision making bodies	Sector on Equall Opportunities
	Number and percentage of women and men in national vulnerability and adaptation assesment working groups	Project managerial body
	Participation of Institutional machinery on gender equality, "female" NGOs (representatives) in the vulnerability and adaptation policy and measures development	SEO, MLSP/all actors included in the process
Labour market and economic empowernment	INDICATOR	INSTITUTION responsible for data gathering
	Number and percentage of women and men who access employment or increase their incomes due to climate change adaptation or mitigation activities	SSO, MoEPP, Ministry of Agriculture
	Number and percentage of women and men who experience unemployment or decreased incomes due to climate change effects	SSO, MoEPP, Ministry of Agriculture
	Number and percentage of women and men employed in climate change (vulnerability and adaptation) sectors and engaged in entrepreneurship in climate change related enterprises	SSO, MoEPP, Ministry of Agriculture
Adaptation measures and their effect	INDICATOR	INSTITUTION responsible for data gathering
	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.	SSO, MoEPP, Ministry of Agriculture

	Number of community-based adaptation activities that strengthen women's access to resources for sustainable food production, renewable energy, and clean water sources	SSO, MoEPP, Ministry of Agriculture
	Percentage of women and men involved in environmental protection or adaptation activities	SSO, MoEPP, Ministry of Agriculture
	Number of community-based adaptation activities that strengthen women's access to resources for sustainable food production, renewable energy, and clean water sources	SSO, MoEPP, Ministry of Agriculture
	Number of community-based adaptation activities that strengthen women's access to resources for sustainable food production, renewable energy, and clean water sources	SSO, MoEPP, Ministry of Agriculture
Education	INDICATOR	INSTITUTION responsible for data gathering
	Number of MSc/PhD students/graduates in environment and climate change vulnerability and adaptation sectors related fields, by sexFemale % in tertiary education: – Agriculture – Forestry and wood processing – Engineering – Transport – Travel, tourism, hotel and catering services	SSO, Ministry of Education
Agriculture	INDICATOR	INSTITUTION responsible for data gathering
	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	Ministry of Agriculture, SSO
	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)	Ministry of Agriculture, SSO
	Participation in water use and management associations by sex	
Tourism	INDICATOR	INSTITUTION responsible for data gathering
	Types, sectors and levels of employment in the tourism industry (by sex).	SSO
	Tourism occupations affected by climate change caused changes (by sex and geographical location).	SSO
Vulnerability		
General	INDICATOR	INSTITUTION responsible for data gathering

	Socioeconomic status: sex-disaggregated in data on employment by net wages and gender,	SSO
	% female headed household (single mothers), age 65+	SSO
	Occupation: % of female share in the labor market in each sector 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	SSO
	Social dependence: % female social security recipients	MSLP
	Number and percentage of people (adults and children) who benefit from improved social protection systems, by sex and age	MLSP
SDG	1.1.1 Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural)	SSO
SDG	1.2.2 Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	SSO
SDG	1.3.1 Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable	SSO, MLSP
SDG	1.4.1 Proportion of population living in households with access to basic services	SSO, MLSP
SDG	1.4.2 Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure	MLSP
SDG	1.5.2 Direct economic loss attributed to disasters in relation to global gross domestic product (GDP)	
SDG	1.5.4 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	
	Mortality rate attributed to household and ambient air pollution	Ministry of Health, SSO
Agriculture	**INDICATOR**	**INSTITUTION responsible for data gathering**
	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	SSO, Ministry of Agriculture
	Agricultural employees (% of total population) Rural population (% of total) Agricultural employees (% of male population) Agricultural employees (% of female population)	SSO, Ministry of Agriculture

	Proportion of population living below the national poverty line, by sex and age	SSO, Ministry of Agriculture
SDG	2.3.2Average income of small-scale food producers, by sex	SSO, Ministry of Agriculture
SDG	2.4.1 Proportion of agricultural area under productive and sustainable agriculture	SSO, Ministry of Agriculture
SDG	5.a.1 (a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure	SSO, Ministry of Agriculture
Water, sanitation	**INDICATOR**	**INSTITUTION responsible for data gathering**
SDG	3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)	SSO, Ministry of Health
Education	**INDICATOR**	**INSTITUTION responsible for data gathering**
	Female % in tertiary education: – Agriculture – Forestry and wood processing – Engineering – Transport – Travel, tourism, hotel and catering services	SSO, Ministry of Education

III. Gender responsive measures in legal and strategic framework intersecting gender and climate change

This section provides the main articles from the Law on equal opportunities on women and men which represents a legal basis for collecting and providing sex-disaggregated data by each public and private legal entity in the country. This Law also regulates the incorporation of the gender perspective into the ministerial policies and budgets, which can be identified as two key access points to gender mainstreaming into the MRV reports.
MRV presents an opportunity to have a clearer picture of what is the role of climate actions and identify who is receiving the benefits of these actions and also know who is not (Huyer, 2016), and therefore the percentage and level of implementation of Articles 11 and 18 of the Law on equal opportunities on women and men can provide asset into the gender perspective of the MRV.
On the other hand, a few proposals for including the gender concept into the Law on climate change are given in purpose of harmonizing both sets of legal provisions from the targeted areas: gender and climate change.

GENDER INDICATORS IN LEGAL AND STRATEGIC FRAMEWORK INTERSECTING GENDER AND CLIMATE CHANGE			
Policy/Law	Article	Status/ Amendment proposed	INDICATOR
Law on equal opportunities on women and men	Article 18: Display statistics: all private and state legal entities that by law they are obliged to collect, record and process statistical data, they are obliged to display these data by gender and submit them to the State statistical office.	Existing	Type of gathered gender data where applicable, i.e. where data are related to social dimension and data on human capital
	Article 11: (3) The state administration bodies are obliged within their strategic plans and budgets to incorporate the principle of equal opportunities for women and men; to monitor the effects and the impact of their programs on women and men and to report within their own annual reports	Existing	Number and type of provided gender responsive measures where applicable, i.e. where measures are related to social dimension and data on human capital
	Subject to the law Article 1(2)	To include the environment and climate change in the areas of application of the Law.	
Law on climate action (under development)	Article 7 Principles to govern climate action	"Principle of equality and non-discrimination, which means that when taking actions to address climate change, parties should respect, promote and consider human rights, rights of vulnerable groups, communities, environmental and social safeguards as well as equal opportunities on women	Number and type of provided gender responsive measures where applicable i.e. where measures are related to social dimension and human rights respect

		and men." (In compliance to the Law on Equal Opportunities, Law on non-discrimination of the Republic of North Macedonia, and Paris Agreement (paragraph 7 of the preamble to the Paris Agreement) and UNFCCC Gender Action Plan adopted in Dec 2019)	
	Article 8 National Climate Change Council	The Council should respect gender balanced composition of members, as well as to include representative from the Ministry of Labour and Social Policy, the UNFCCC Gender and Climate Change Focal Point. *(In compliance to the UNFCCC Gender Action Plan)*	% of female representation in the Council
	Article 9 Functions of the Council	To consider relevance of gender in the context of their work in a consistent and systematic manner" *(In compliance to the UNFCCC Gender Action Plan)*	Number and type of gender responsive measures
	Article 12 Strategy on climate action	respecting the principle of equal opportunities on women and men; (In compliance with the Law on Equal Opportunities, Art.11 par.3)	Number and type of gender responsive measures in the Strategy

IV. Visual presentation of the main sex-disaggregated data

This section provides visual presentation of some of the sex-disaggregated data to be considered as gender responsive indicators in the development of the National Mitigation Assessment and NDC.

The purpose of the sex-disaggregated data shown in this document is to identify the gender gaps to be considered while development of policy measures, sectoral actions and initiatives in the field of climate change.

According to the National GHG Inventory report (December 2019) "the greatest share of emissions is from the Energy sector, accounting for 73.7% in 2016, followed by the Agriculture (excluding FOLU) with 11.8% and IPPU sector with 8.5% and Waste sector with 6% share. The dominant share of emissions for the Energy sector is evident throughout the whole time series (1990-2016)". According to the same report "most of the GHG emissions in 2016 occur in the category Energy Industries (51.0%), followed by Transport (28.1%) and Manufacturing Industries and Construction (13.9%). The other two categories together account for 5% of the total emissions in 2016 and the remaining around 2% are Fugitive emissions".
There are no official sex-disaggregated statistics on the GHG emissions` producers, but still, the available sex-disaggregated data are showing differences in certain aspects of the GHG emissions, such as the following socio-economic drivers of emissions

- Which groups produce more/less emissions?
- Who controls industries?
- Who uses/who benefits/ who pays?
- Wealth concentration/poverty connections?[4]

Namely, the available sex-disaggregated data are indicating the following:
The identified vulnerable groups which are facing energy poverty, and therefore are using wood as household heating are as following: Single mothers living in houses with children under the age of 18, using firewood, Single fathers living in houses with children under the age of 18, using firewood, Women 65+ age, with monthly income beyond 12.000 MKD single, divorced or widower and live alone, Men 65+ age, with monthly income beyond 12.000 MKD, single, divorced or widower and live alone (Data are taken from the Socio-economic analysis of the household heating patterns – also presented in the Table: GENDER INDICATORS IN NATIONAL MITIGATION ASSESMENT above).
On the other hand, female`s share of the unemployment and poverty rate is higher than male (Chart 1), which as it is argued above, correlates to the (financial) abilities to practice, buy, purchase climate friendly practices, services, devices, patterns, behaviors etc.
According to gender and climate change studies, women are showing bigger concern on the climate change issue and are more willing to accept new behavioral practices that are contributing to the decrease of the GHG emissions, but, they are less engaged into the decision-making positions, less likely to manage and control family budgets due to the cultural patterns, as well as due to their dependence on the male family income.

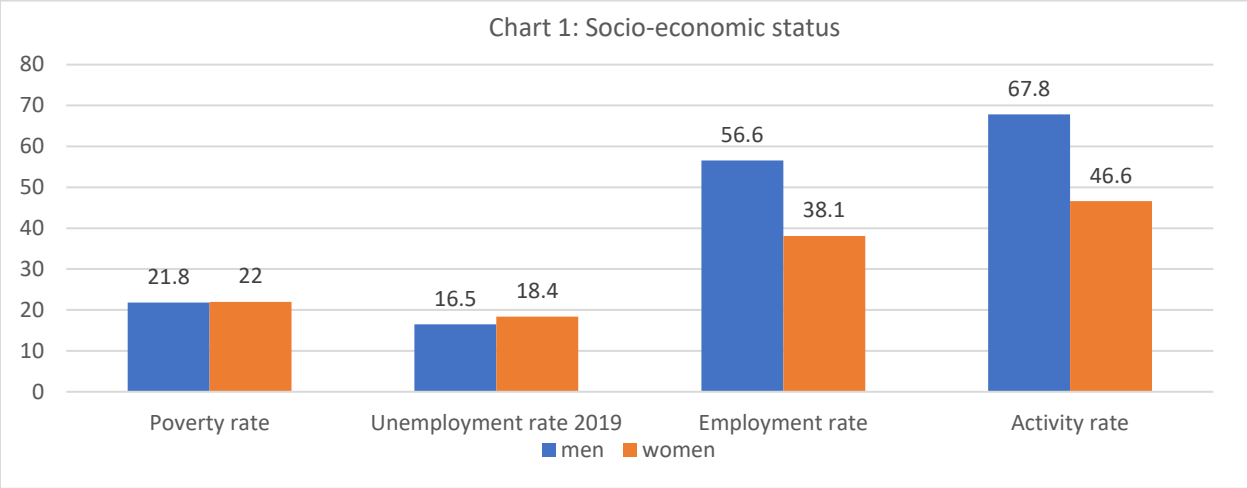
Second issue on the control of the industries as well as national institutions related to energy, and other GHG related sectors, are showing male dominance (Indicator 2). Men are still leading the main decision-making positions and consequently processes leading towards increase or decrease of the GHG emissions, and at the production level, are dominating the labor force in the GHG related sectors (Indicator 3).

[4] Gender Responsive National Communications Toolkit

Third issue on Who uses/who benefits/ who pays? Can be elaborated clearly through the AFOLU sector, mainly through the female share in the agricultural holdings, as an indicator showing the female`s share in the unpaid family workers in the agricultural holdings and therefore their approach to the financial instruments in terms of developing "climate resilient" practices are lower (Indicators 4 and 5). The production of GHG emissions here is once again male dominated, due to the lower activity rate of women in the labour related to AFOLU sector, as well as due to the fact that their main activities in agricultural holdings is mostly related to the home and near-home activities.
Once again, this indicates that we can not see women as "agents of change" here, or more precisely, women are disabled of being "agents of change"
The transport numbers (Indicator 6), is clearly confirming the fact that men are more frequently using cars as emission producers.

INDICATOR 1: SOCIO-ECONOMIC STATUS

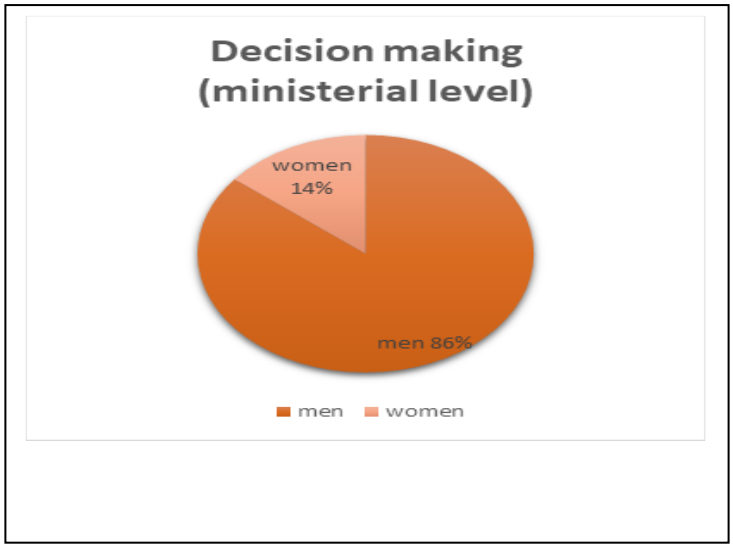
Climate change may be different depending on the nature, variability, the speed of change, sensitivity of the area, the location etc. Still, even the differences within the climate change, have one common constant, which is the fact that poor, marginalized and vulnerable people are most affected groups in the society by all variations of the climate change. The social factor is common for all the variations and impacts of the climate change, which means that poor people, communities or countries are most affected and have the least capacity to adapt.
The social inequality and cultural factors are in direct correlation to the people`s ability to cope and impact or mitigate the climate change and it`s negative effects. In that regard, women are still de-facto marginalized groups of people, due to the higher poverty rate among them, lower access to the means such as money, credits and property rights, as well as lower inclusion in the decision making processes. Women, are also often victims of double or multiple discrimination (gender in correlation to ethnicity, religious, educational background, place of living, (un)employment), age, etc.) which puts them into even harder position when it comes to (being exposed to effects of climate change) dealing with or combating the climate change.
Gender represents a basis for discrimination, violence (in the family and the society), unequal access to goods and services, lower income, lower inclusion in the education processes, labor market and decision-making processes. On the other hand, their marginalization represents an obstacle for including full potential of women into the societal processes. Shifting the socio-cultural stereotypes remains basic and still most challenging obstacles to be resolved.
The consequences from the climate change would represent a double negative impact on that already existing social and cultural human`s right violation, such as gender inequality, minorities` discrimination and marginalization. Due to that, not only introduction, but ensuring a strong gender and minorities` responsive mechanisms and in policies, programs and projects in the field of climate change, the environment, the use of natural resources and all of the constituent elements, is not only mandatory, but it should be a state of awareness and essential part of work of the decision making actors. Therefore, by narrowing the focus into the socially vulnerable groups it can be concluded that while developing policy, strategic and other related documents in the frames of the soft law, a special attention should be paid to target this groups at different levels of program/project cycle.



The socio-economic status is related to the poverty and employment/unemployment rate, and is directly contributing towards the GHG emission, having in mind the fact that poverty is correlated to the energy poverty, the household heating patterns, etc. In that regard the Chart 1 shows a gender distribution of the socio-economic status, by which it can be concluded that female`s share is bigger than male (numbers are given in the chart). This indicator can be used as a basis for decision-making and policy making processes for targeting the population for decreasing the energy poverty and GHG emissions, which means that the Socio-economic status indicates and targets the population that is more likely to contribute towards GHG emissions.

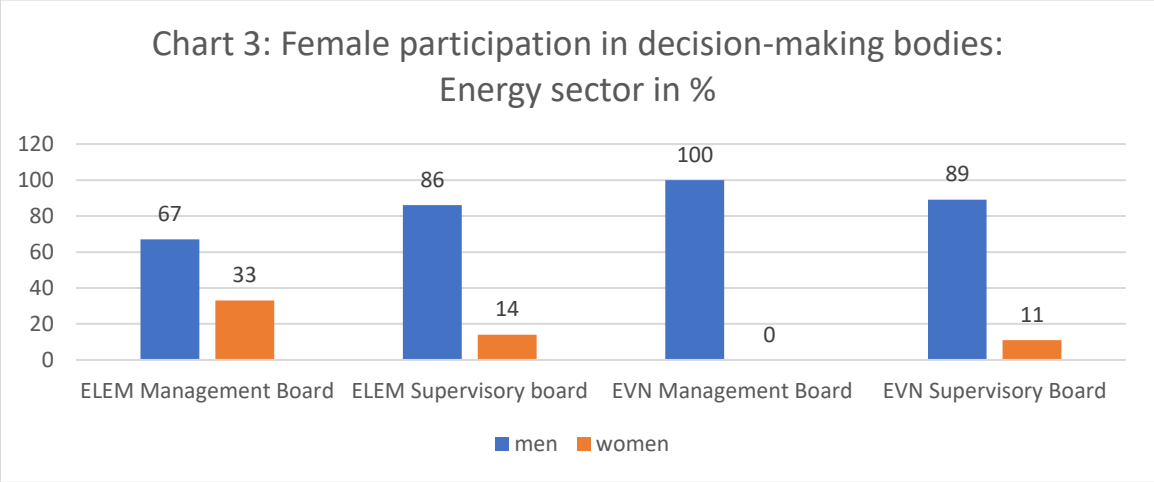
INDICATOR 2: DECISION MAKING STRUCTURE (MINISTERIAL LEVEL).

The gender data in the Governmental` institutions decision making structure, after the Parliamentarian Elections 2020, shows extremely low female participation in the Ministerial, Deputy Ministerial and State Secretary positions in the Ministries related to GHG and Mitigation sectors. Namely, out of 7 Ministries (shown in the Decision making Chart), only one woman held the position of the Minister, in the traditionally defined female sector- which is the Ministry of Labor and Social Policy, only one woman holds a position of Deputy Minister in the Ministry of Environment and Physical Planning, and only one woman holds the position of the State Secretary in the same Ministry. At this point, this Ministry, which is highly important in the climate change policies has sufficient female representation at the decision-making positions, still, other ministries are male dominated.



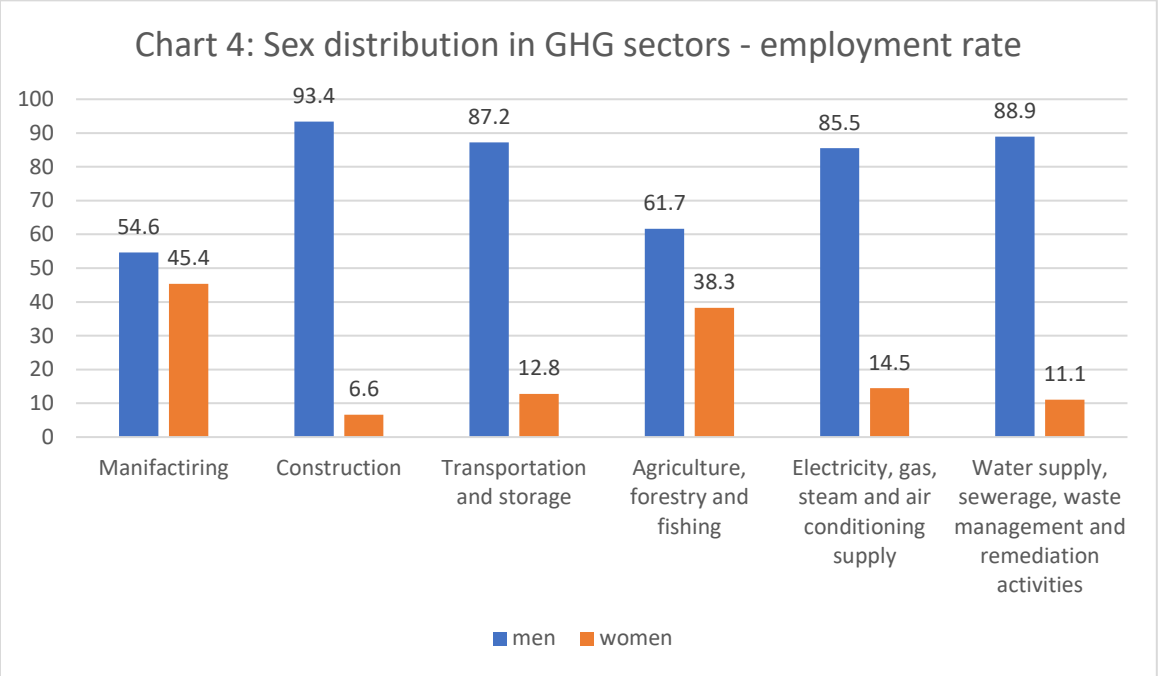
Ministries	Minister	Deputy Minister	State secretary
1. Ministry of Agriculture, Forestry and Water Economy:	♂	♂	♂
2. Ministry of Transport and Communications	♂	♂	♂
3. Ministry of Environment and Physical Planning:	♂	♀	♀
4. Ministry of Finance	♂	♂	♂
5. Ministry of Health	♂	♂	♂
6. Ministry of Economy	♂	♂	♂
7. Ministry of labour and social policy	♀	♂	?

On the other hand, the two biggest companies that are producing electricity are dominantly led by men. Only the ELEM Management Board has 33% female representation which is in line with the other international statistics.



INDICATOR 3: SEX DISTRIBUTION OF THE EMPLOYMENT RATE IN GHG SECTORS

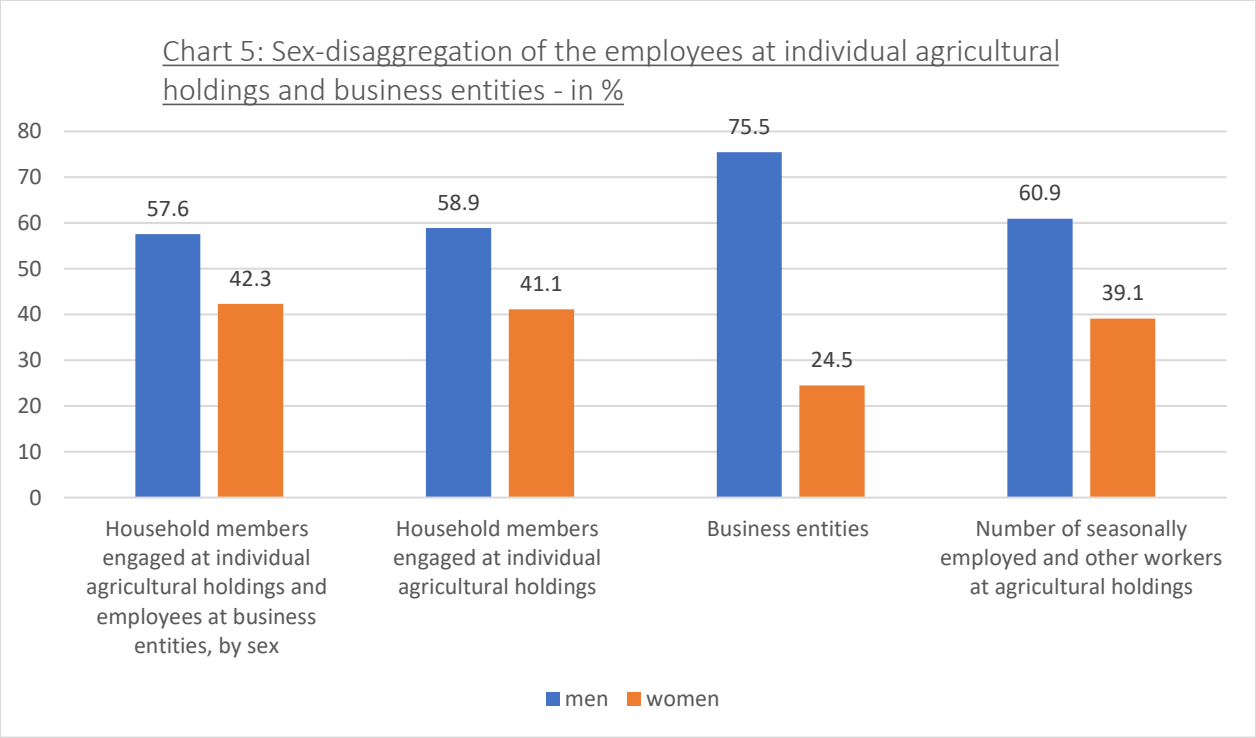
The female`s share in the employment rates of the GHG related sectors are also confirming lower rate of women employed in those sectors. As expected, female`s share in the employment rate is lowest in the construction sectors with 6.6% and the gender gap is lowest in the Manufacturing sector. It is tightly related to the traditional gender roles in the family and society, which determines female participation to be bigger in occupations related to health and social care, educational activities and other administrative tasks.



There are no available sex-disaggregated data for the employment rate in the Industrial Processes and Product Use sectors, and for the Agriculture.

INDICATOR 4: SEX-DISAGGREGATION OF THE EMPLOYEES AT INDIVIDUAL AGRICULTURAL HOLDINGS AND BUSINESS ENTITIES

Women are also less represented as employees at individual agricultural holdings and business entities which reflects their economic dependence and lower capacity to decide on the usage of measures related to mitigation/adaptation, as well as access to resources is limited.



INDICATOR 5: GENDER AND AGE STRUCTURE OF PERSONS ENGAGED IN AGRICULTURAL HOLDINGS

As we can see from the gender and age distribution of the persons engaged in the agricultural holdings, it can be concluded that men dominate in the persons engaged, and the most represented is the age group 55-64. This indicator shows and defines the target group that should be reached by the adaptation and mitigation measures in the context of the climate change activities of the government in the area of agriculture.

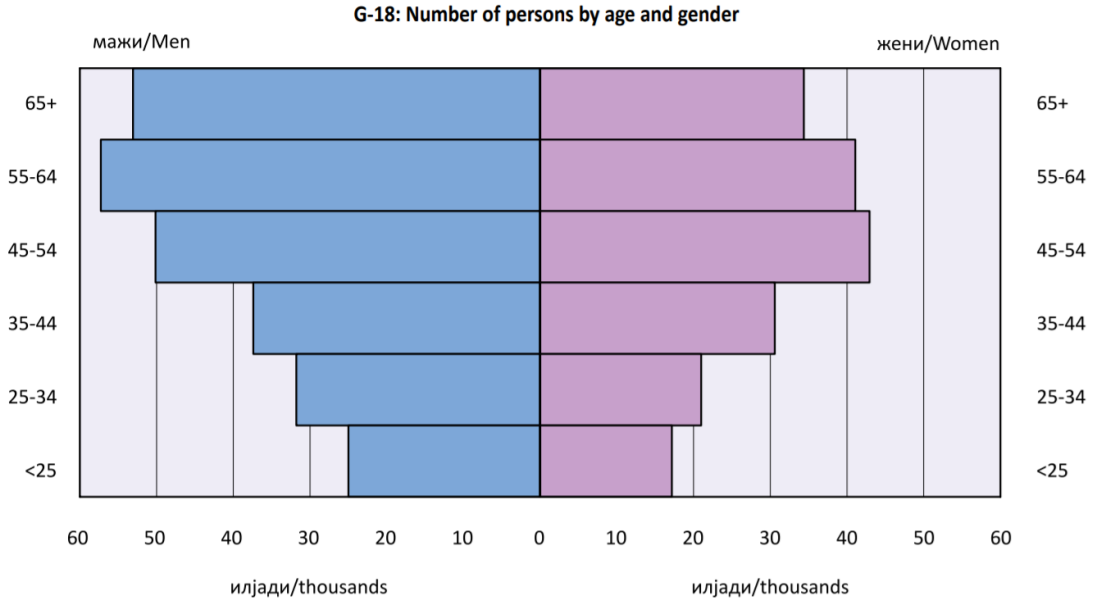
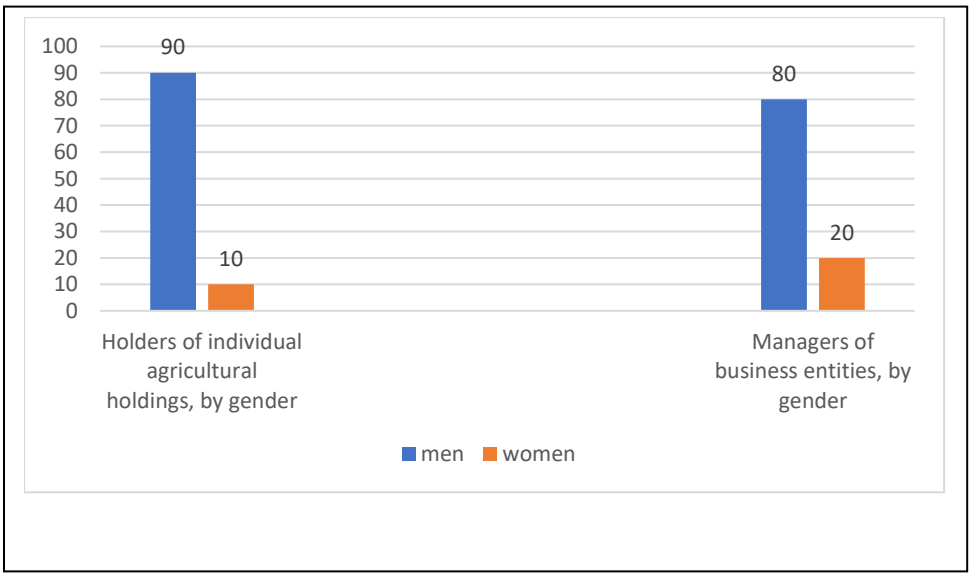


Chart 6: Gender and age structure of persons engaged in agriculture

Picture is Taken from the http://www.stat.gov.mk/Publikacii/5.4.17.02.pdf

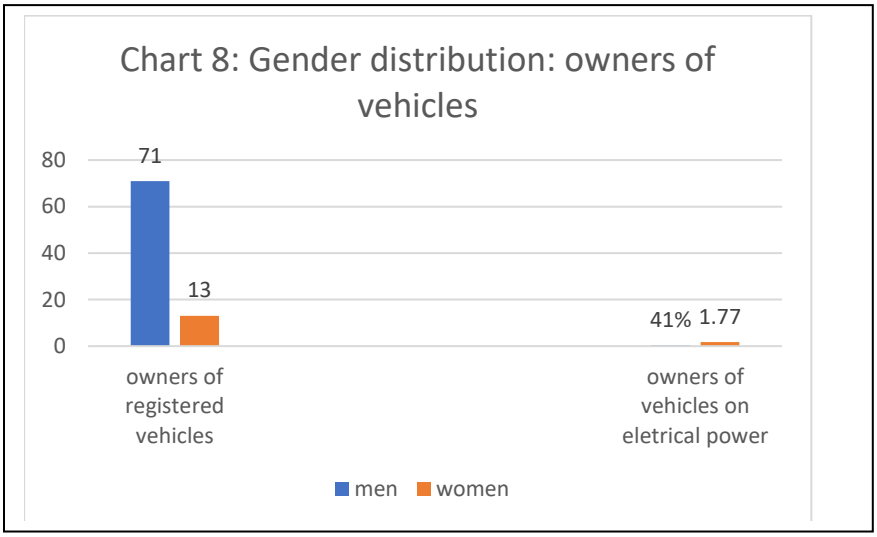
INDICATOR 6: CHART 7: SEX-DISTRIBUTION OF HOLDERS OF INDIVIDUAL AGRICULTURAL HOLDINGS AND MANAGERS OF BUSINESS ENTITIES.



Women are less represented also as skilled agricultural and fishery workers (the statistical category is defined by the Official Statistical Office) and are dominating the category of unpaid family workers in the agricultural holdings and therefore their approach to the financial instruments in terms of developing "climate resilient" practices are lower.

INDICATOR 6. OWNERS OF VEHICLES

This indicator shows that women are less users of vehicles, especially as owners of vehicles on electrical power. Therefore, they are more likely to use public transport and alternative, environmental-friendly methods of movement. Female behavior is more likely to show bigger concerns on the environmental protection.



INDICATOR 7: MSC/PHD STUDENTS/GRADUATES IN ENVIRONMENT AND CLIMATE CHANGE MITIGATION SECTORS RELATED FIELDS, BY SEX IN %

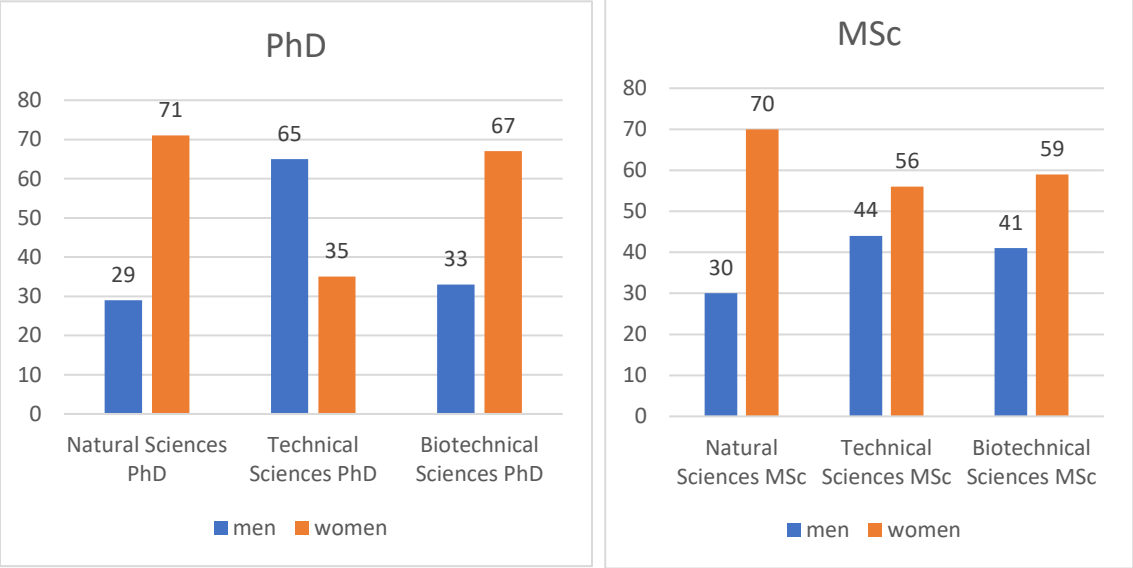


Chart 9: MSc/PhD students/graduates in environment and climate change mitigation sectors related fields, by sex

The educational structure of the main educational fields related to the Climate Change Sectors presents an interesting fact: women are more represented in these educational branches (at MSC level) but are still less presented as a labor force in the main labor branches related to Climate Change fields.

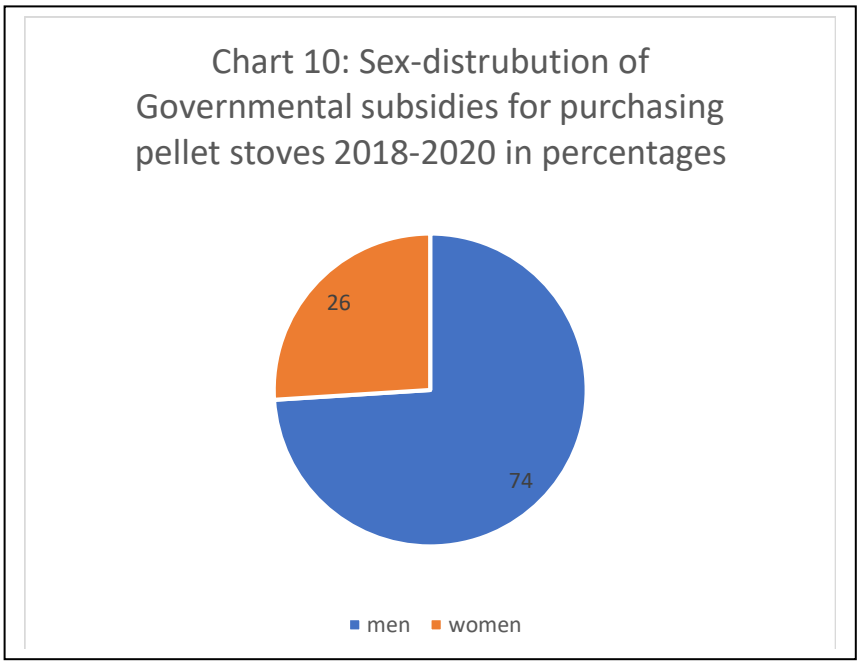
V. Gender data in the energy and transport related governmental subsidies (Mitigation activities)

The Climate change mitigation is related to the scenarios, activities and efforts that countries are developing with a purpose of reducing the GHG emissions, by targeting both, small and large scale GHG emissions producers. In that regard, activities are being designed in the Mitigation assessment reports, targeting everyday people`s practices to increase the usage of new technologies, change of the "awareness" and behavior of the consumers, increase of the usage of energy efficient devices (equipment), as well as other household-level changes with a purpose of decreasing the GHG emmisions. Having this in mind, the Mitigation reports as well as mitigation activities (especially those ones refereeing to households and users` level) are urged to incorporate the socio-economic dimension and respectively the gender dimension.
Without these two aspects, the Mitigation reports and activities will remain ineffective, inefficient and may contribute towards increase of the existing gender socio-economic inequalities in their ability to cope with climate change negative effects, and in the existing societal inequality in general.

This section will present main indicators designed to target and identify the sex-distribution of the governmental activities and mitigation measures.

INDICATOR 8: SEX DISTRIBUTION OF THE GOVERNMENTAL PELLET STOVES SUBSIDIES

Ministry of Economy of the Republic of North Macedonia has adopted Program for promotion of renewable energy sources and encouraging energy efficiency in households for 2019 and 2018, which are developed in purpose of reimbursement of part of the costs for purchased and installed solar thermal, collector systems in households, reimbursement of part of the costs for purchased and installed PVC or aluminum household windows and reimbursement of part of the cost of purchasing pellet stoves with linear household distribution. This program does not foresee vulnerability criteria for granting the reimbursement costs, but the principle is "first come first serve".

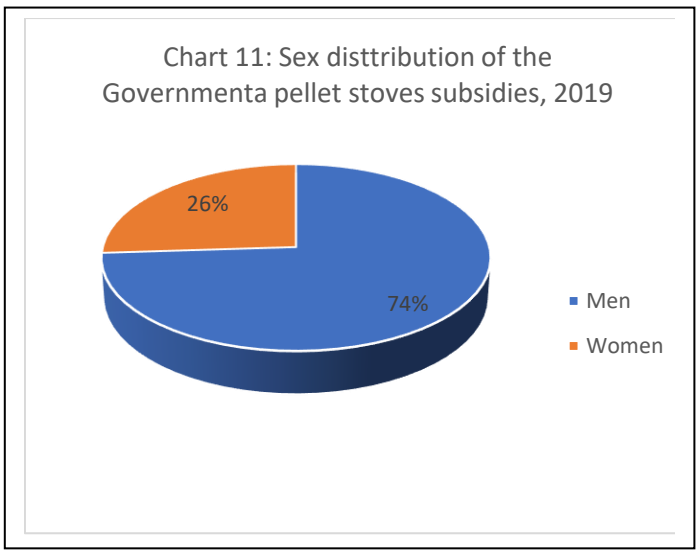


In general, the female participation in the usage of mitigation activities for decreasing the GHG emissions by changing the heating practices is 26% compared to male which is 75%. If we compare this number to the statistical data for women as Heads of households (recipients of social cash benefits), which was 27% in 2017 (SSO, 2017), we can maybe conclude that the number of female applicants for subsidies for pellet stoves is comparable to the number of female households. Still, more in-depth analysis is required here, mainly to be done by gathering the statistical data by the Ministry of Economy in the application forms, where it is possible to identify where the applicant should provide more data on the socio-economic status.

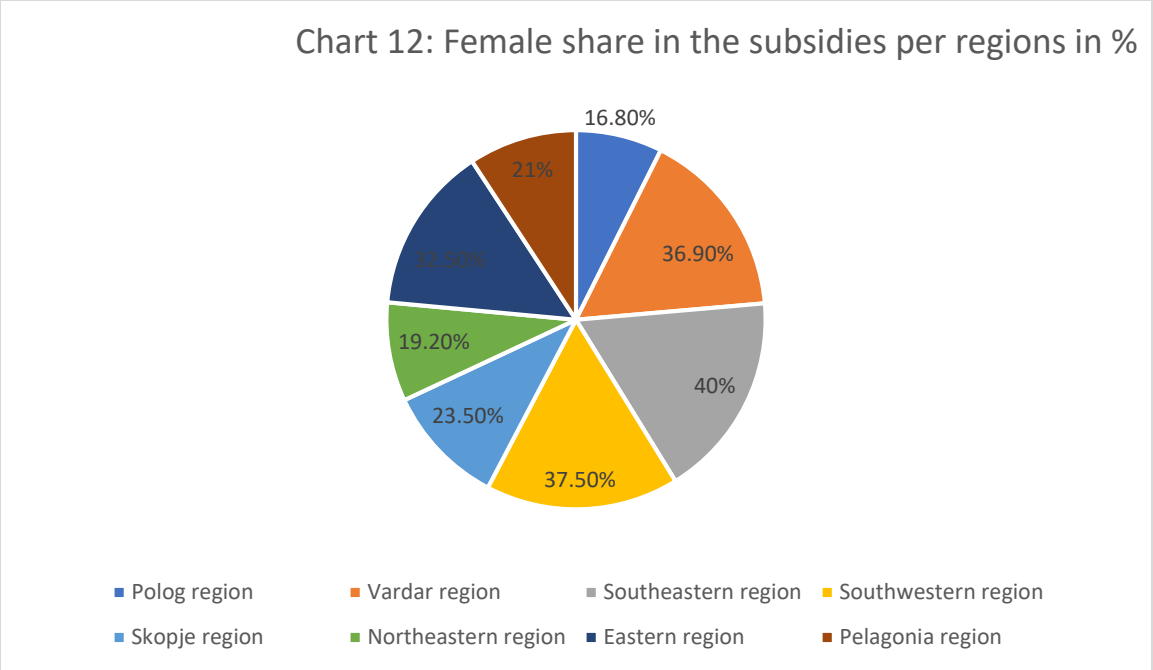
Additional analysis of the Program for amendment and supplementation of the program for promotion of renewable energy sources and encouragement of energy efficiency in households for 2019, adopted on September2019 , is needed due to the fact that this Program **defines changes in the applicants criteria, including the vulnerability concept upon the measure "low incomes"** for the pellet stoves` subsidies.

The PUBLIC Call for reimbursement of part of the costs for purchasing pellet stoves in households for 2019 and the List of granted persons are giving the following gender distribution of the subsidies:

As shown at the Chart 11, 74% of the subsidy's recipients are men, versus 26 % women. By this we can confirm the fact that men are dominating in the family budget management, as well as household owners, and decision-making processes. One of the criteria of the Call is that "One person, i.e. one household can submit only one application for obtaining of compensation", although there are no separate data on single households in the list of subsidies recipients.
If we compare this indicator (women are 1/3 of the recipients) with the data from the Socio-economic analysis on heating patterns which defines that single mothers and older women aged 65+ are the most vulnerable groups when



it comes to heating practices and energy poverty, it is clear that the Government should design separate policy measure to increase female participation in these governmental measures.
Although Section 1.2 of the Call defines several social and health criteria for awarding the subsidies, such as the low income, vulnerable groups, social risk – motherhood, illness, injury and disability, still, it can be concluded that the "motherhood" criteria is not sufficient for equal distribution of the subsidies.
There is a huge gender gap in the subsidy's distribution, that should be addressed while measures` designing and promotion.



The sex distribution of the subsidies per regions shows the biggest gender gap in Polog region, with the smallest share of female usage of the subsidies with 16.8%, while the gap is smallest in the Southeastern region with 40% of female participation of the subsidies. The conclusion is that the energy poverty as well as the heating patterns should be taken into consideration in defining the groups and target beneficiaries when designing such measures.
Further analysis is required for the detailed causes of these data.

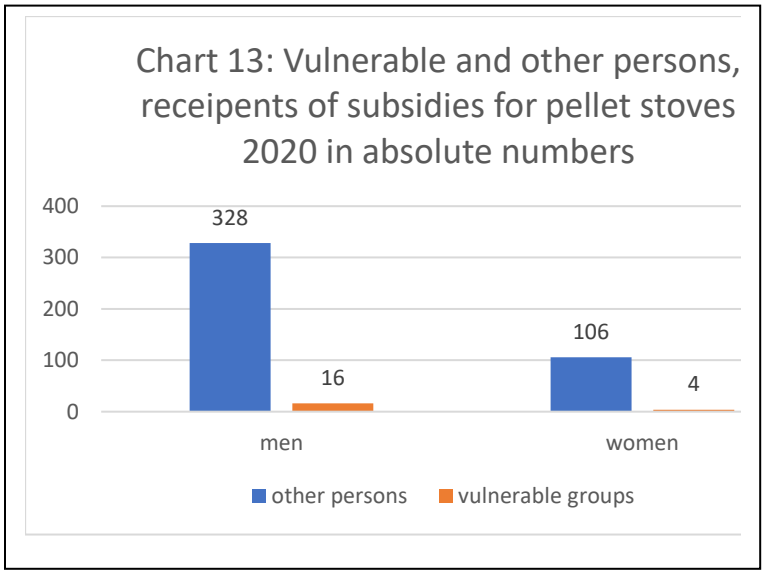
A Call for reimbursement of part of the costs of purchasing pellet stoves 2020 was published based on a Program for protection of vulnerable energy consumers for 2020[5] which entered into force on January 2020, where Vulnerable consumer is a household:

1) who uses a guaranteed minimum assistance and realizes a monetary allowance to cover part of the costs for energy consumption in the household in accordance with Article 42 of the Law on Social Protection and the Elderly in accordance with Article 7 of the Law on Social Security of the Elderly and

2) in which household where a person lives in a state of social risk (motherhood, illness, old age, injury and disability) to whom the energy supply and / or the right to use the network is given under special conditions and manner determined in the rules for supply with a separate kind of energy.

[5] Off. Gazette of the Republic of Macedonia no. 13/2020 from 17.01.2020, Source: GOVERNMENT OF THE REPUBLIC OF NORTHERN MACEDONIA

As we can see from the numbers above and from the existing studies on vulnerability in heating patterns, "motherhood" is not sufficient criteria, and should be amended with single parents households, due to the fact that they are found to be most vulnerable group in terms of heating patterns.

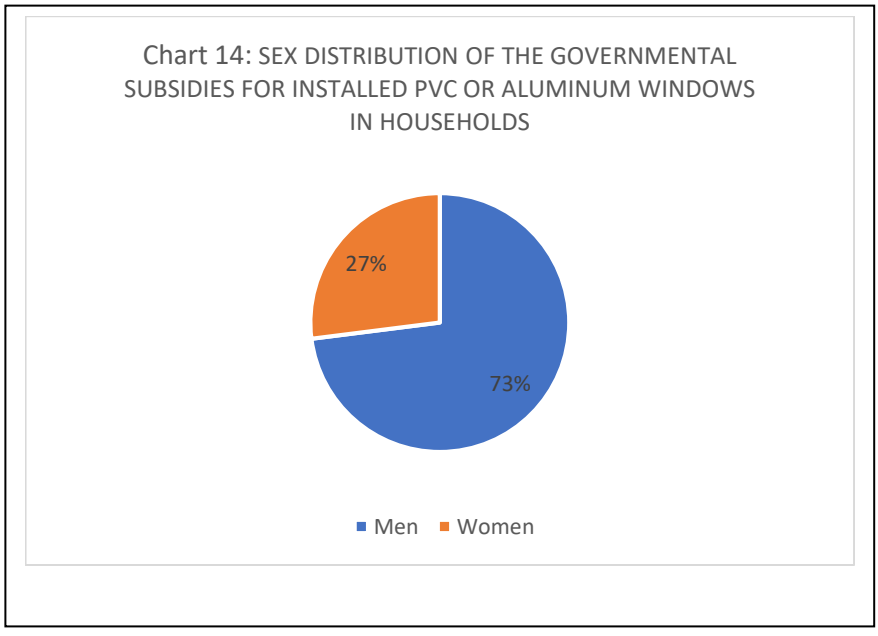


A group that is referring to single households are also found at biggest risk of energy poverty and should be therefore considered as one of the most vulnerable group. Female participation in the share of subsidies in the category "vulnerable group" is 20%, and if we compare it to the recipients of social cash benefits in 2017 which is 27% women, we should highlight that more gendered approach is needed in this mitigation measure, targeted for vulnerable groups.

This Call is also eligible for persons that are not defined as vulnerable groups or persons with low incomes and are defined as "others". Therefore, two different categories are eligible to apply for this type of subsidies in 2020. From the Chart 13 we can see that female participation is lower in both categories, and even lower on Category Vulnerable persons. **4 women that received this subsidy from the Governmental support in mitigation measures for households is a dissapointing number**. Women are less represented in the division of these categories by insulation type of the household, but the concerning fact is that their percentage and respectively number, is highest in the "wood without insulation category.

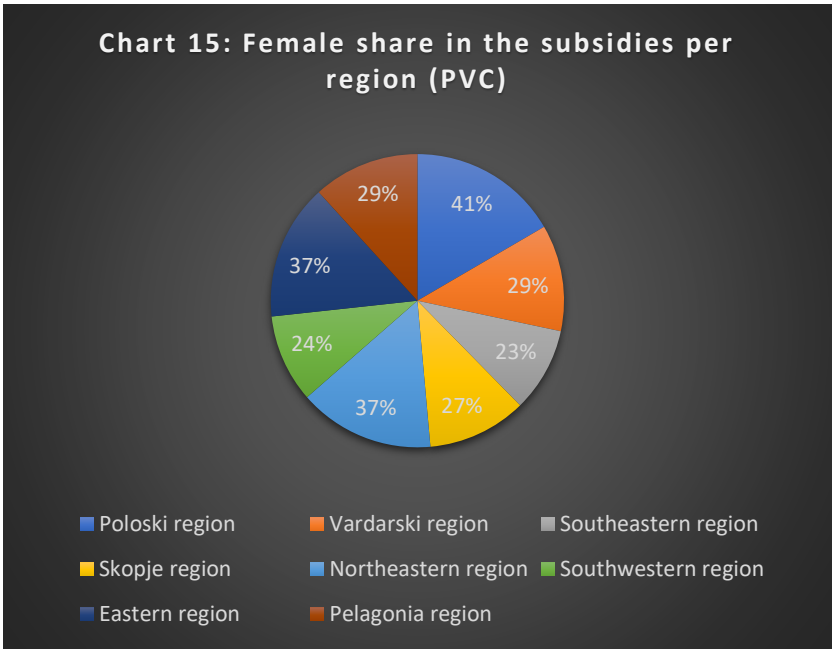
INDICATOR 9: SEX DISTRIBUTION OF THE GOVERNMENTAL SUBSIDIES FOR INSTALLED PVC OR ALUMINUM WINDOWS IN HOUSEHOLDS

Public Calls for reimbursement of part of the costs for purchased and installed PVC or aluminum windows in households for 2018 and 2019 were also published by the Ministry of Economy, based on the Program for promotion of renewable energy sources and encouraging energy efficiency in households for 2019 and 2018, subsidizing part of the costs for installed PVC or aluminum windows in households on a "first come-first serve" principle, without



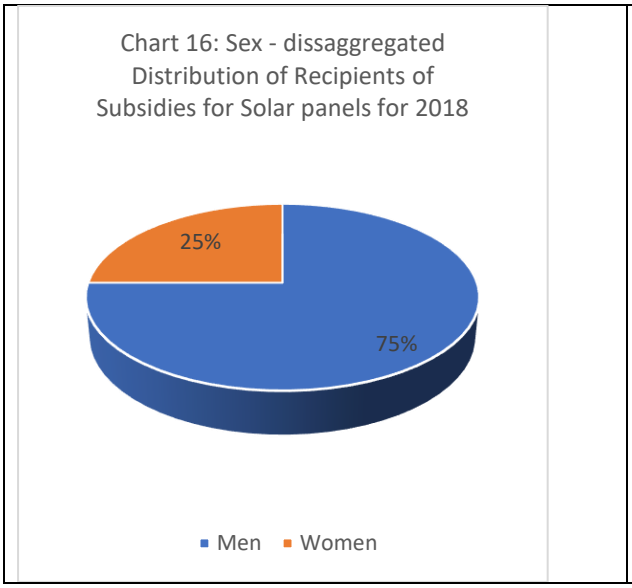
defining vulnerable categories of persons.
Sex-disaggregated distribution of recipients of subsidies for PVC or aluminum windows in households in 2018 and 2019 are more-less similar as the ones for pellet stoves with 73% male, and 27% female participation (usage of the measure).
The gender gap is obvious here as well, and the same factors can apply on the reasons determine the gap, as the ones described in the Pellet subsidies above.

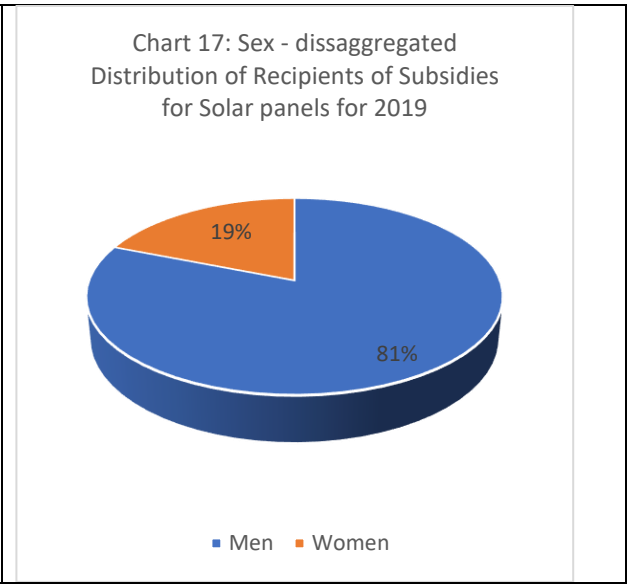
Regional distributions shows the highest rate of female share in the Polog region – 41%, and the lowest share in the Southwestern region – 23% (Chart 15).Factors contributing towards this difference should be a part of additional regional gender based analysis.



INDICATOR 10: SEX DISTRIBUTION OF THE GOVERNMENTAL SUBSIDIES FOR INSTALLED SOLAR PANELS

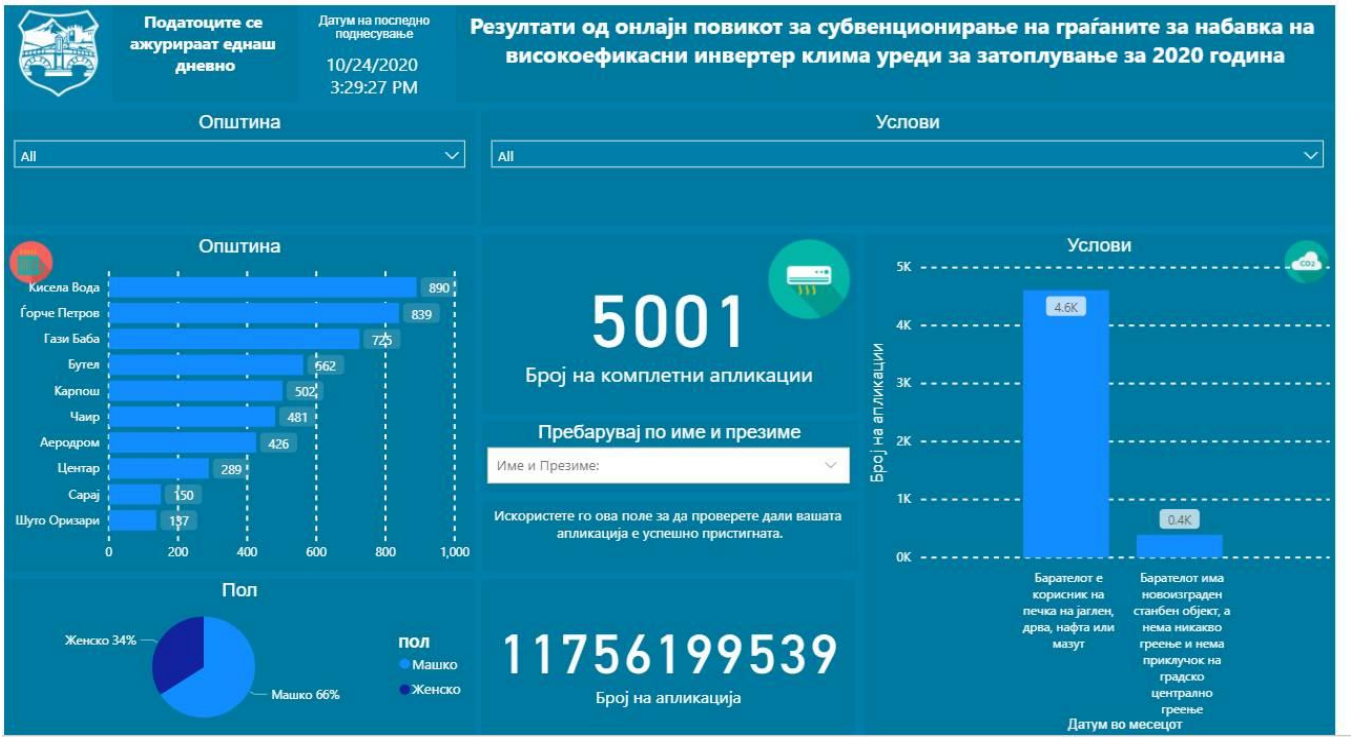
Sex-disaggregated data for the recipients of the part of the costs for purchased and installed solar thermal collector systems in households upon the Public Calls for reimbursement of part of the costs for purchased and installed solar thermal collector systems in households for 2018 and 2019 are showing the decreasing tendency of the female share in this measure.
Namely, female`s share in 2018 Call was 25% which decreased to 17% in 2019 (Chart 16 and 17). No data are available for the causes of this tendency, but for sure it should be considered in the announcement and the design of the new Calls.





These Calls are published upon the Program for promotion of renewable energy sources and encouraging energy efficiency in households for 2019 and 2018, subsidizing part of the costs for installed PVC or aluminum windows in households on a "first come-first serve" principle, without defining vulnerable categories of persons, which has to be re-defined upon the gender gap in the distribution of the subsidies.

Women are represented in 1/3 of the recipients of subsides for inverter air conditioners at the Public Call of City of Skopje, and once again in we compare this data with the data from the Skopje region heating practices survey (www.skopjesezagreva.mk) where the vulnerable groups of women and men (single parents with low incomes and single women and men aged 65+ with low incomes) are almost equal, it can be concluded that the distribution of this subsidies are marking big gender gap that should be addressed in the next Calls.



Gender gap and gender differences are existing in the poverty, income, labor force (socio-economic status), decision making level and are not proportionately reflected in the mitigation measures (nor governmental nor in City of Skopje).

This gender gap, as well as the vulnerability of women in front of the climate change negative impacts as well as in their abilities to cope with them, as well as their economic background and resources to mitigate GHG emissions should be properly reflected into the national and local policy measures for adaptation and mitigation measures for climate change.

Climate change measures must not remain gender blind but have to contain strong and evidence-based measures targeting vulnerable groups of citizens, among which, as argued above women are representing the majority.

In other words, policies have to be developed based on numbers on one hand, and on the other it`s implementation has to be tracked by indicators based on sex. On contrary, gender blind policies will remain ineffective and without appropriate economic and climate change (mitigation and adaptation) impact.

VI. Gender and the National GHG Inventory

Methodology for data collection and analysis of the GHG Inventories refers to the technical aspects and are analyzing only emissions and are not related to the social dimension, i.e. the different activities of women and men that contribute to GHG emissions.
At the same time, there are only recommendations that inventories should be gender responsive, but there is no official classification in place. Such classification of indicators should be sex disaggregated in order to support the gender aspect of the GHG emissions. However, greenhouse gas emissions come from and are managed by human activity, and at the same time affect (negatively) the human being, due to which the analyzes cannot be separated from the social dimension, i.e. from the gender-based differences on several

levels: economy, decision making, behavior, etc. Gender analysis of sectors in the inventories can contribute to much more realistic and transparent planning of measures to reduce GHG emissions.
The general conclusion regarding the National GHG Inventory and the gender perspective is that it is not crucial to count female and male share in the emissions producing, but more likely to target the "polluters" and to approach them. On the other hand, female participation is lower in each sector of activity and respectively producing GHG emissions, which can be explained by general lower female participation into the decision making, labor force and societal activities.

It can not be urged that GHG Inventory Reports must be in-depth analyzed by a gender perspective, but still, the gender distinctions must be considered among the decision makers, the GHG Inventory team, first of all, in order to investigate whether there are different gender practices and impacts that can contribute towards decrease of the GHG emissions, on one hand, and on the other, to make sure that mitigation and adaptation efforts are not contributing to the existing gender inequalities.

Development of GHG Inventory	Data	Indicator	
Female participation in the development of the GHG Inventory	% of women participating in the National Coordinating body for GHG inventory and Technical Working Group	List of nominated persons/affiliations included in the process	yes