



Ministry of Environment  
and Physical Planning



*Empowered lives.  
Resilient nations.*

# First biennial update report for the Republic of Macedonia

Workshop for facilitative sharing of views at the  
forty-fourth session of the Subsidiary Body for  
Implementation

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# Introduction

*Presenter:*

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Ministry of Environment and Physical Planning*

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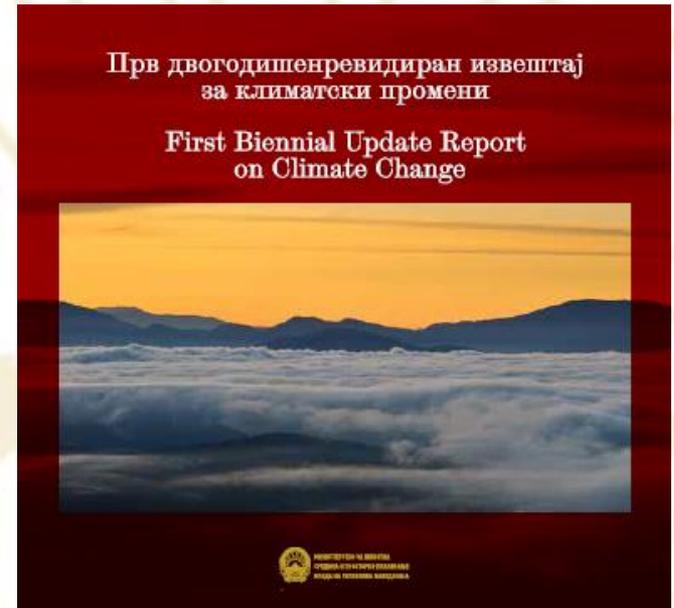
The First National Communication on Climate Change submitted to the UNFCCC Secretariat in 2003

**2**

The Second National Communication on Climate Change submitted to the UNFCCC Secretariat in 2008.

**3**

The Third National Communication on Climate Change submitted to the UNFCCC Secretariat in 2014



The first non-Annex I country in Europe and the CIS region to submit its First Biennial Update Report on Climate Change to the UNFCCC so far (Feb 2015), and the 11th country in the world to have done so.

UNFCCC

Party to the United Nations Framework Convention on Climate Change (UNFCCC) as a non-Annex I country

QELRC

Party to the Kyoto Protocol without a quantified emissions limits and reduction commitment (QELRC).

Записот од Копенхаген

Acceded to the Copenhagen Accord by submitting a list of non-quantified mitigation actions.

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Climate change issues are incorporated into the Law on Environment



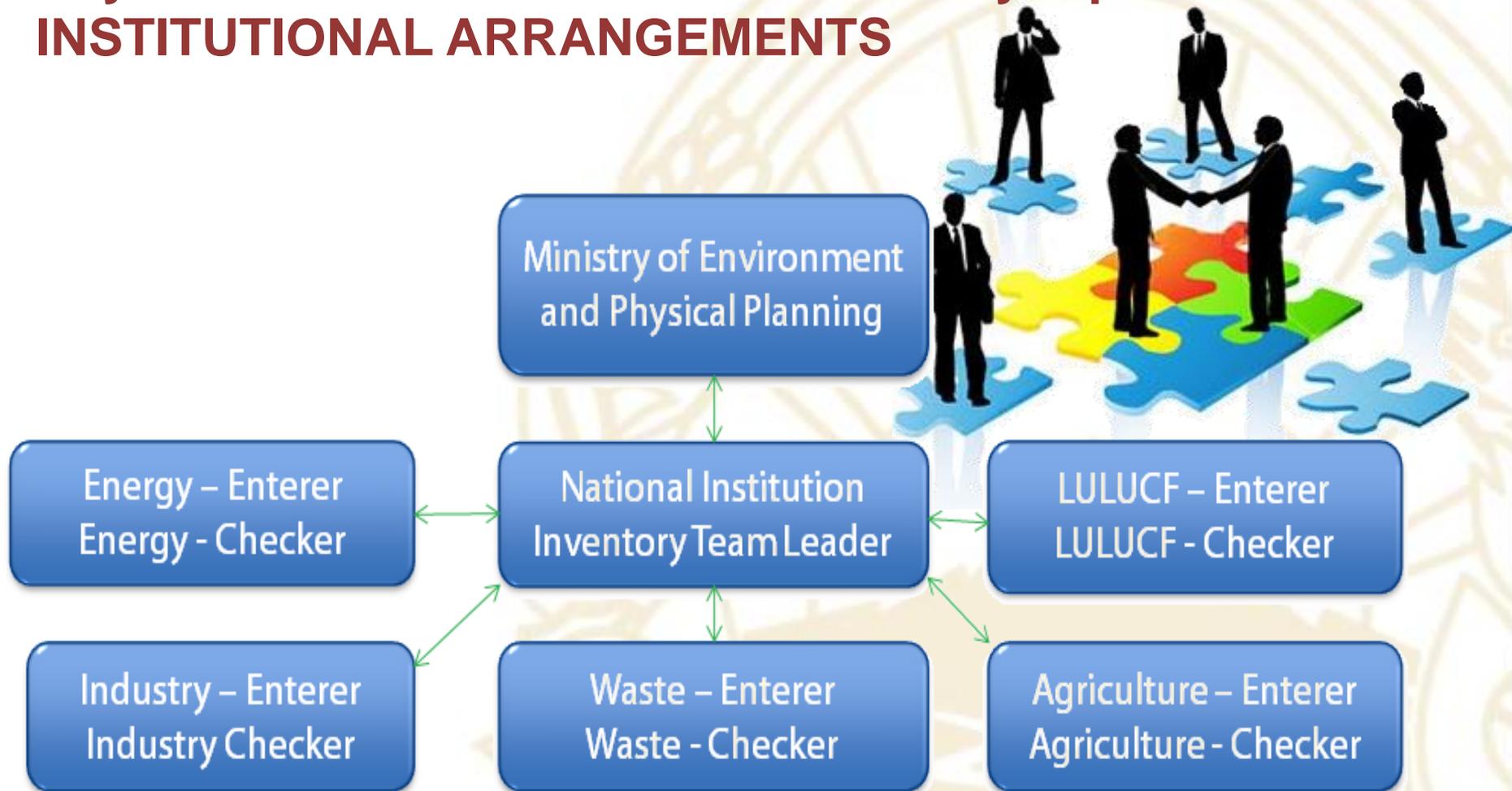
Urban Typology (populacion)	
1	Below 5,000
2	5,000 - 10,000
3	10,000 - 25,000
4	25,000 - 50,000
5	50,000 - 100,000
6	100,000 - 250,000
7	250,000 - 500,000

Transportation	
Yellow line	Highway
Red line	Main road

# Key outcomes - national GHG inventory report

## INSTITUTIONAL ARRANGEMENTS



	Annex I UNFCCC countries	Non Annex I countries (including the Republic of Macedonia)	The Republic of Macedonia
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**GHG Inventory Requirements**

<b>Frequency</b>	Submit annual GHG inventories to the UNFCCC in an electronic format.	No set frequency; can be submitted in hard copy. Upon availability of resources	GHG inventory submitted in electronic format as part of the National Communication or Biennial Update Reports.
<b>Coverage</b>	Trends in emissions of the six primary GHGs <sup>1</sup> , from 1990 to the most recent year for which data is available; includes sectoral background data.  Kyoto inventory systems have additional structural detail.	Trends in emissions for CO <sub>2</sub> , CH <sub>4</sub> , and N <sub>2</sub> O only, with estimates for other gases encouraged but not required from 1990 or 1994 for the first inventory and 2000 or later for the second; sectoral background data is not required.	Trends in emissions of the six primary GHGs are reported for 1990-2012, including the sectoral background data.
<b>Standards</b>	Use both the IPCC Guidelines and Good Practice Guidance and thoroughly document emissions estimation methods and data sources.	Use IPCC Guidelines; use of the Good Practice Guidance encouraged but not required. Documentation of methodologies is encouraged.	The IPCC Guidelines and Good Practice Guidance used for reporting and thoroughly document emissions estimation methods and data sources, as well as 2006 IPCC Guidelines for National GHG Inventories.  Also, country specific emission factors have been developed, adopted by IPCC and inserted into their EF database.
<b>Methods</b>	Generally adopt higher-tier methods	Generally adopt lower-tier methods	Generally adopt higher-tier methods.
<b>Review</b>	Subject to annual review by expert teams following agreed upon review guidelines. At least once every five years, inventory systems are subject to a more detailed in-country review.  Parties to the Kyoto Protocol are subject to more rigorous review, and if review teams determine a Party's inventory report or system is deficient, the Party may be judged to be out of compliance and subject penalties	No subject to review	Subject to voluntary review by experts under the Global Support Programme (GSP).  The review of the FBUR confirmed significant progress in improvement of the quality of the national GHG inventory.

## National Communications, BURs, and Mitigation Action Requirements

<b>NC Frequency</b>	Submitted every five years Biennial Update reports should be submitted every two years	No specified frequency  The First Biennial Update Report should be submitted by December 2014	Voluntary, submitted every five years The First Biennial Update Report is finalized in the required deadline - December 2014, will be adopted by the Government in early 2015.
<b>NC Content</b>	National Communications include a description of each mitigation policy and measure, organized by sector and gas. Description includes status, implementing body, and, if possible, estimated effect on emissions to date and in the future.	Encouraged but not required to report on mitigation policies and measures.	National Communications include a description of each mitigation policy and measure, organized by sector and gas. Description includes status, implementing body, and, if possible, estimated effect on emissions to date and in the future.
<b>Actions</b>	Subject to binding national emissions targets, and international monitoring and reporting requirements to verify the achievement of these targets	None	Voluntary international monitoring and reporting requirements
<b>Review of NC</b>	National Communications are also subject to international expert review, conducted in accordance with internationally-agreed guidelines	Not subject to review	Not subject to review
<b>NC Frequency</b>	Submitted every five years Biennial Update reports should be submitted every two years	No specified frequency  The First Biennial Update Report should be submitted by December 2014	Voluntary, submitted every five years The First Biennial Update Report is finalized in the required deadline - December 2014, will be adopted by the Government in early 2015.

# Key outcomes - national GHG inventory report

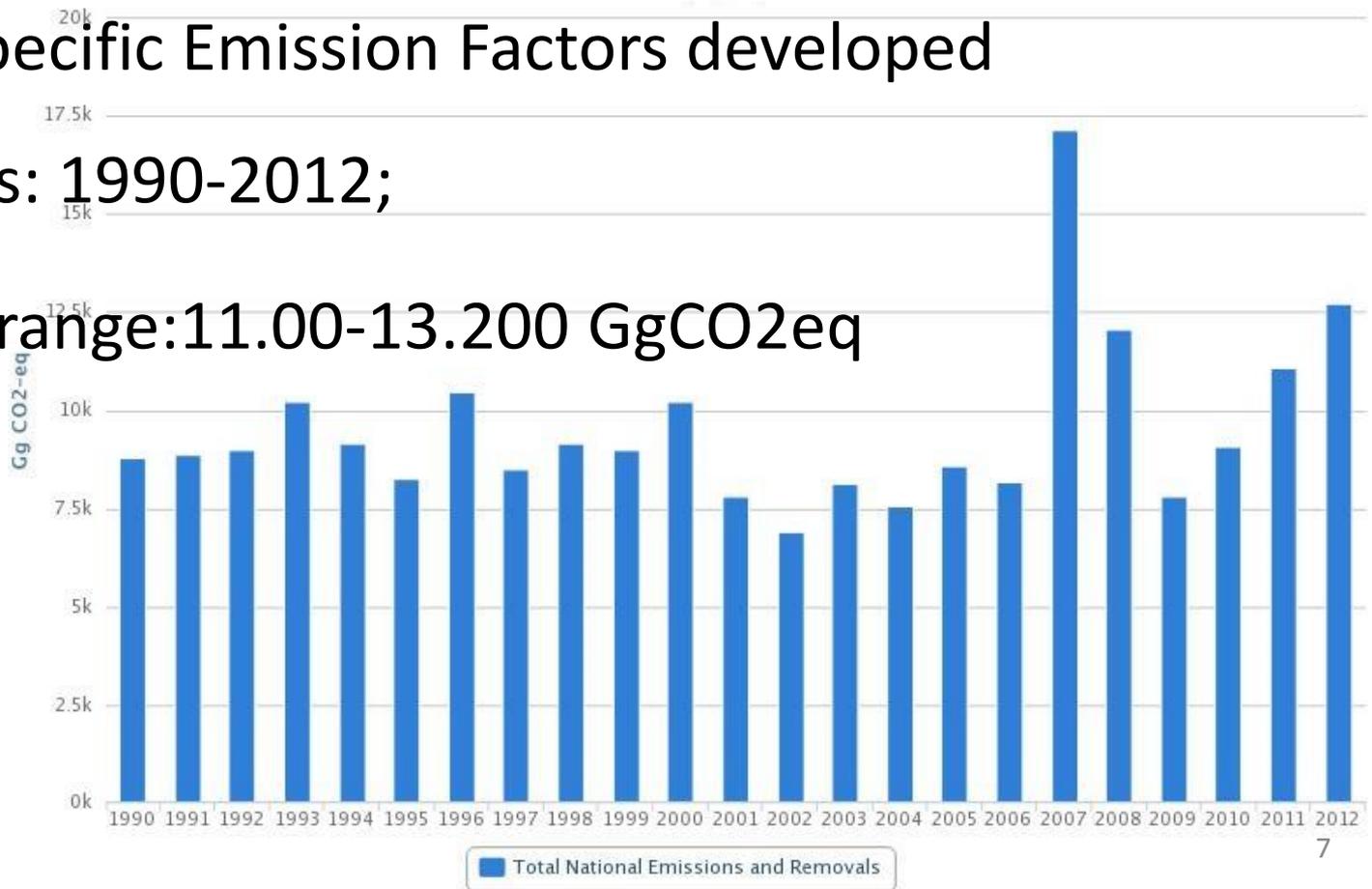
**Methodology:** the newest IPCC 2006 Inventory

Software used;

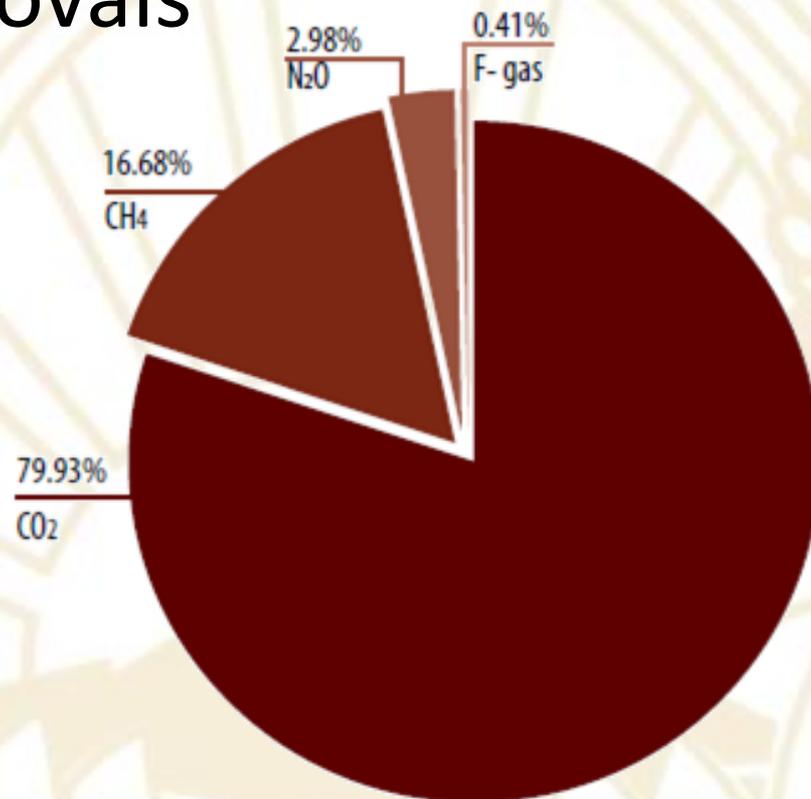
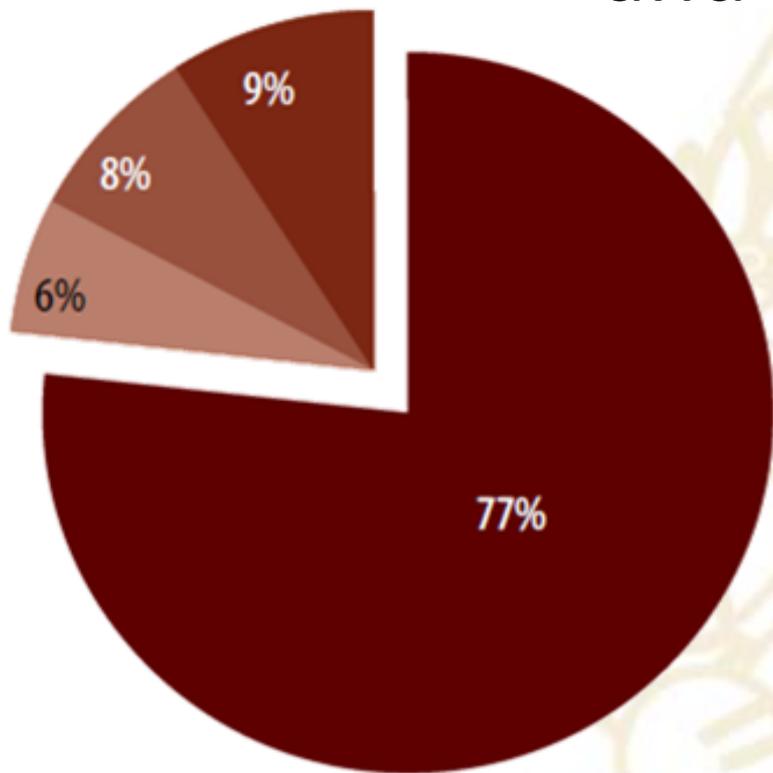
Country Specific Emission Factors developed

Time series: 1990-2012;

Emissions range: 11.00-13.200 GgCO<sub>2</sub>eq



# Summary of the key sectors for emissions and removals



■ Энергетика  
Energy

■ Отпад  
Waste

■ AFOLU\*  
AFOLU\*

■ Индустриски процеси  
Industrial Processes

CO<sub>2</sub> emissions from Energy Industries (coal, lignite) (49.5%);  
CH<sub>4</sub> emissions from Solid Waste Disposal Sites (11.7%);  
CO<sub>2</sub> emissions from Mobile Combustion, including Road Vehicles (11.6%);  
Manufacturing industries and construction (8.8%);  
and  
CH<sub>4</sub> emissions from Enteric Fermentation in Domestic Livestock (3.9%).

# Key outcomes - mitigation actions and their effects

Building upon mitigation assessment in TNC

Bottom-up approach used

Three sectors analyzed: energy supply, buildings and transport

Three scenarios developed: without measures - WOM, with existing measures - WEM and with existing measures - WAM

Criteria for prioritization identified and used in participatory manner

App. 20 mitigation actions modelled

App.50 mitigation actions considered, planned and underway

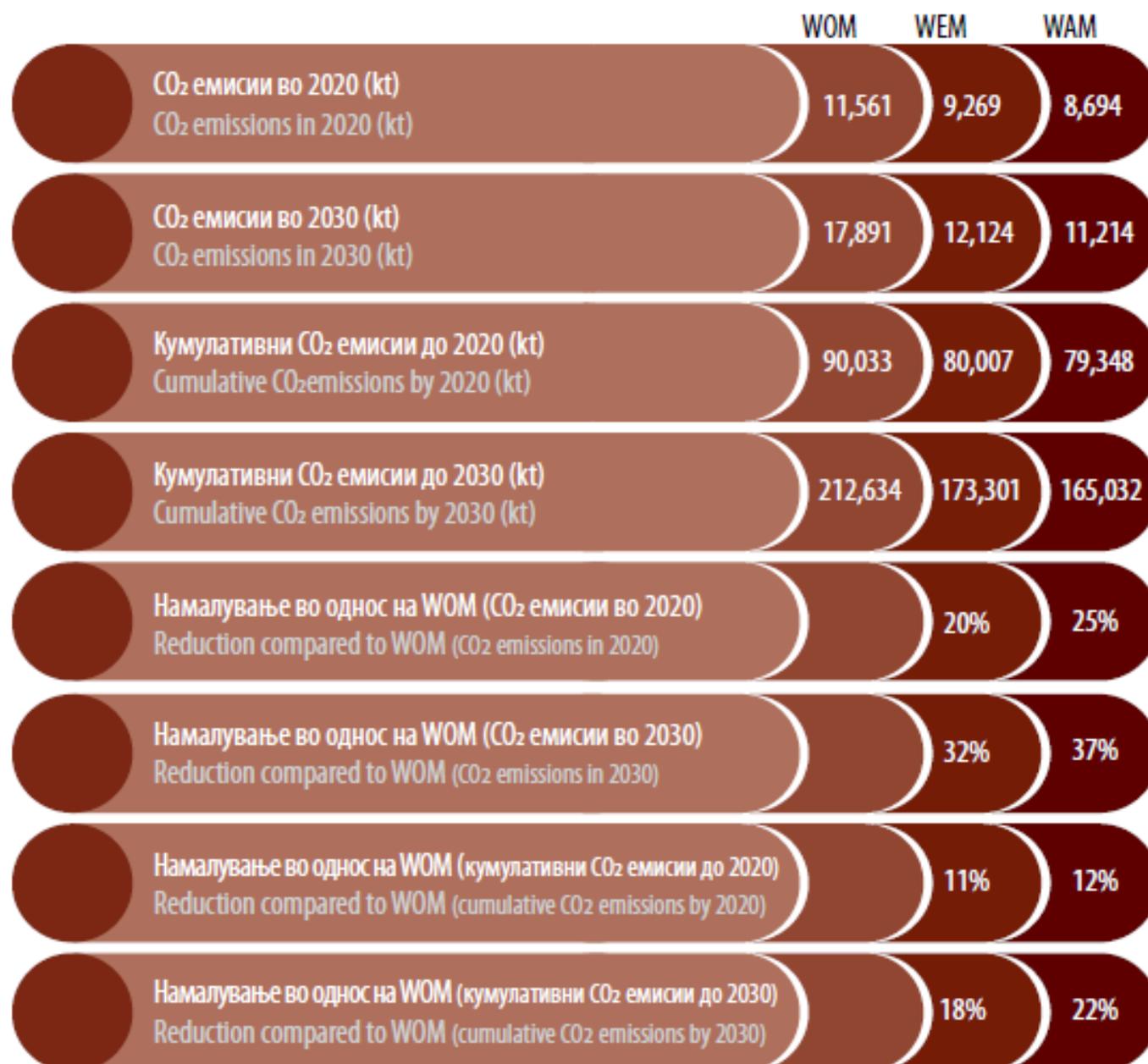
# Example -Transport Renewal of the vehicle fleet

- One of the EE measures in the transport sector is to replace the old and inefficient vehicle fleet.
- It is assumed that the old vehicle fleet is renewed based on the lowest price, so the old vehicles are replaced with vehicles having internal combustion engines.
- These vehicles are cheaper compared to the others, such as hybrid vehicles, Plug-in Hybrid Electric Vehicles, electrical vehicles etc.
- According to the analysis, the replacement of the old vehicle fleet during the whole period will have negative specific costs.

<b>Renewal of the vehicle fleet</b>	<b>2020</b>	<b>2030</b>	<b>Cumulative 2020</b>	<b>Cumulative 2030</b>
CO <sub>2</sub> (kt) reduction	20	140	240	1,345
Total cost difference (mil €)	-2	-13	-49	-217
Specific costs (€/t)	-93	-93	-203	-161

Comparison of CO<sub>2</sub> emissions  
Scenarios: WOM, WEM and WAM

Power sector, Residential sector and transport  
Years: 2020, 2030



# Key outcomes – finance, technology and capacity-building needs and support received

## Challenge

- Relevant data on climate change related financial support collected – both national (governmental budget) and international (donors).
- Facing many difficulties and cross matching various sources (no CC specific data on financing)
- Recommendations addressed in the MRV scheme
- Financial support needed for implementation of the MRV scheme

## **Key challenge**

in using the BUR guidelines and/or the training materials

### **Development of domestic MRV system**

- The MRV Guidelines were available late and were very general
- What should be MRV-ed?
- Lack of relevant knowledge/expertise in the country
- Difficulty to identify appropriate international consultant
- Specific position of Macedonia as UNFCCC signatory and EU candidate country

# Key outcomes - domestic measurement, reporting and verification

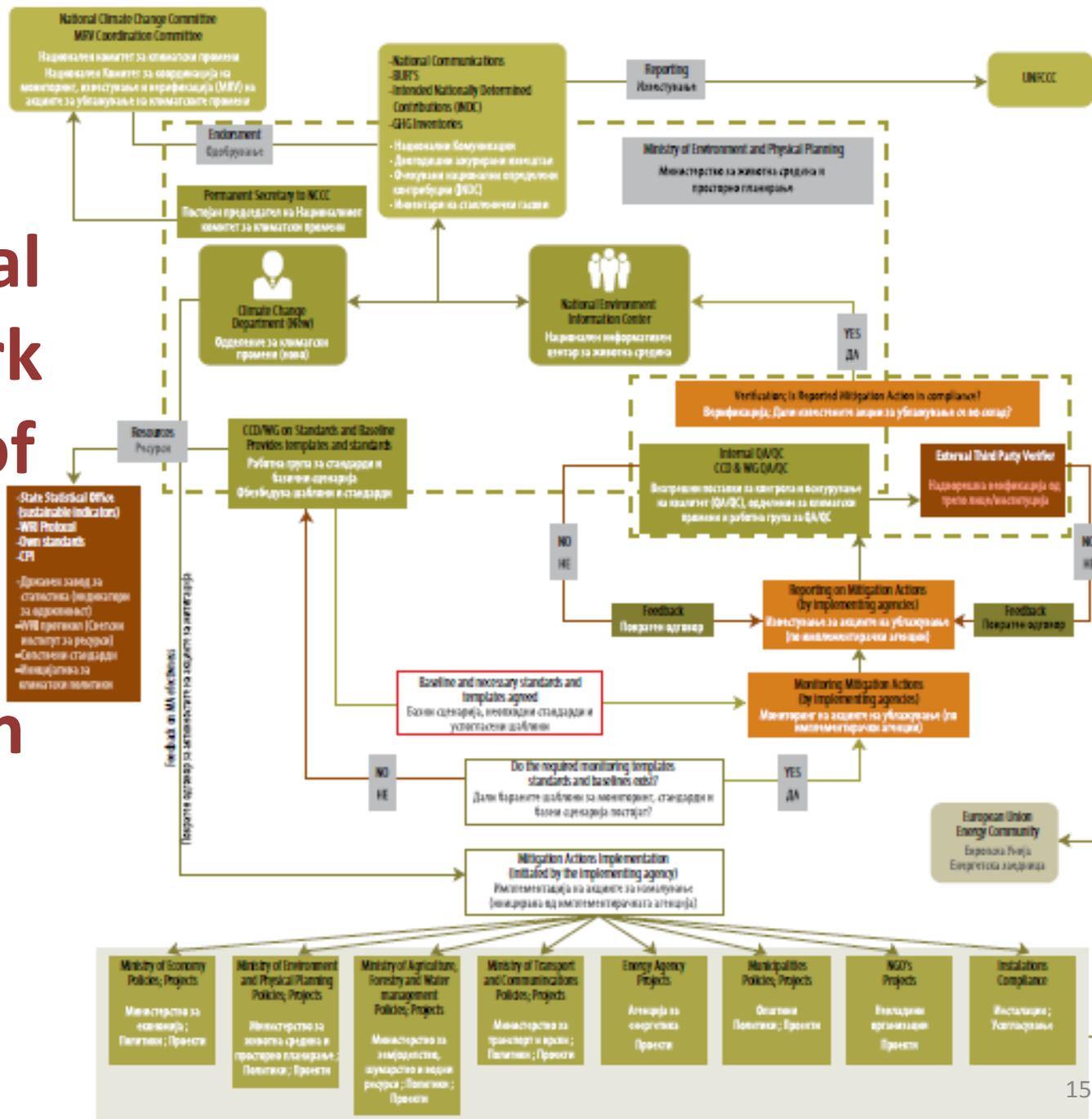
Development of Conceptual Framework for MRV of climate change mitigation actions

Development of Pathway for implementation of the proposed domestic MRV framework

Development of indicators for the domestic MRV system

- Wide team of national and international consultants
- Close cooperation with other donors/projects
- Close cooperation with other non-Annex I countries in the region

# Conceptual Framework for MRV of climate change mitigation actions



## CRITERIA

### Transparency:

Is the process open, accessible, and comprehensible to relevant audiences?

### Comparability:

Is information comparable across time, agencies, and different levels of government? Is it comparable to other countries' data or reports?

### Reliability:

Is information likely to be accurate?

### Usefulness:

Does the MRV system connect to the policymaking process?

### Timeliness:

Is information collected and delivered frequently enough to support decision-making and meet other needs?

### Completeness:

Does the system provide sufficient information to support decision-making in all important sectors?

## INDICATORS

### Very:

All or almost all of the indicators are present in the country's MRV system.

### Fairly:

Most indicators are present, but some are missing or only partially present.

### Somewhat:

Some indicators are present but others are not; or indicators are present, but only to a limited extent.

### Not very:

Some indicators are present but most are not.

### Not at all:

None or almost none of the indicators are present.

# Pathway for implementation of the proposed domestic MRV framework

1.

Establish institutional arrangements and processes

2.

Define GHG Mitigation Action Accounting Standards

3.

Define monitoring and data collection responsibilities

4.

Define reporting obligations

5.

Verify and assure compliance

# Lessons learned/best practices

- Data flow to enable continuity of preparation of future GHG inventories established

- data that are missing/not collected were identified
- Responsible institutions for their collection in the future were identified
- Relevant legal changes were made and draft sublaw on GHG inventory was prepared (serving as a input for future Law on Climate Action)
- Direct contact with private sector was established
- Digital “smoke signs”: Innovation, Blogs, Infographics

## **Macedonian experience from the technical analysis**

under the international consultation and analysis (ICA)  
process for non-Annex I Parties

- New for the country and team
- Positive experience
- Many aspects cleared in the process of the technical analysis

The Summary report on the technical analysis of the Macedonian FBUR notes the efforts the country has been undertaking and suggests specific improvements in the chapters that the country will take into consideration in order to improve reporting in following BURs

# Thank you for your attention!

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