



РЕПУБЛИКА СРБИЈА  
Министарство  
заштите животне средине  
REPUBLIC OF SERBIA  
Ministry of  
Environmental Protection



DEVELOPMENT OF CLIMATE  
CHANGE MONITORING,  
REPORTING AND VERIFICATION  
(MRV) SYSTEM

PROPOSAL FOR CONCEPTUAL FRAMEWORK FOR MONITORING, REPORTING AND  
VERIFICATION (MRV) AT THE NATIONAL LEVEL

1ST MEETING OF INTER-INSTITUTIONAL WORKING GROUP FOR THE ESTABLISHING TRANSPARENCY  
FRAMEWORK FOR THE REPUBLIC OF SERBIA – DEVELOPMENT PHASE

21 APRIL 2021

# MRV SYSTEM - SUMMARY



- EXECUTIVE SUMMARY
- MODULES OF THE MRV SYSTEM – TEMPLATES WITH IT REQUIREMENTS
- Q&A – NEXT SESSION

# EXECUTIVE SUMMARY



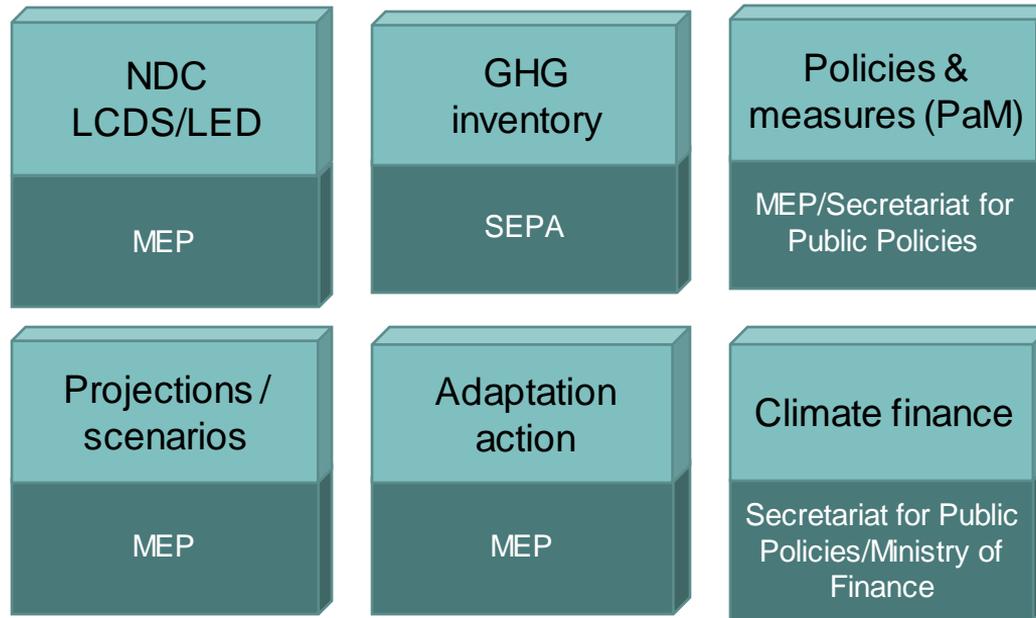
- Creating a robust, efficient and purposeful MRV reporting system that fulfils the Paris Agreement transparency requirements and ensures the basis for EU reporting
- Overview of data needs, data sources, inputs and outputs as well as stakeholders for each Module of the MRV system presented in Chapter 7 of Deliverable 3
- Proposal based on two national documents – draft Climate Change Law and the draft Climate Strategy with Action Plan
- Focus on already existing IT systems with MRV relevance as well as existing legislation
- Governance structure consists of six reporting modules – **NDC, GHG Inventory, Policies and Measures (PAMs), Projections and Scenarios, Adaptation to Climate Change and Climate Finance**

# EXECUTIVE SUMMARY



- **MRV tool** – a database for collecting and linking available climate-relevant information that will not carry calculations
- It will need to be regularly and quality checked by national experts to reach maximum value-added
- Findings should be shared with the stakeholders – this will bring clear understanding of its purpose, will provide for streamlining of information and reducing the reporting burden
- Meetings with the most important stakeholders – Statistical Office, Department of Forestry and Secretariat for Public Polices used to enable finalisation of Deliverable 3
- Presentation of each module with IT requirements to initiate a careful review of the proposed MRV system and allow for coding work for the IT tool to finalised by end of May

# Modules of the Framework for Monitoring, Reporting and Verification (MRV) at the national level



## Landing page of the MRV IT tool

16:30 - Monday, December 7, 2020

Home

NDC - NATIONALLY DETERMINED CONTRIBUTIONS

GHG - GREENHOUSE GAS INVENTORY

NMA - POLICIES AND MEASURES

AAU - ADAPTATION AND ACTIONS

FNE - PROJECTIONS AND SCENARIOS

CF - CLIMATE FINANCE

DS - DATA SERVICE

ADM - ADMINISTRATION

Dashboard

MRV-System

The Serbian Monitoring Reporting and Verification System - MRV - is enhancing transparency through the tracking and projecting of national GHG emission levels, the tracking of climate finance flows received or the impact of mitigation and adaptation actions. It provides various stakeholders proven reported data for further actions.

News

- Monday, December 7, 2020  
Homepage of the Ministry of Environmental Protection
- Saturday, December 5, 2020  
Homepage of the Environmental Agency Austria

My To-do's

Status	Task	Content	Due date
Overdue	Obnova ovog NDC dokumenta...	NDC / 11.12.2020	12/8/2020
Open	Komentari na dokumentu NDC	NDC dokument / 01.12.2020	11/30/2020

My Appointments

Today

- 7 NDC - Ubaci komentare NDC dokument

Next 7 days

- 10 GHG rok predaje GHG - Popis stabilizitit gasova
- 11 Ažuriraj scenarije Projekcije i scenarij
- 11 Pregledajte politike i mere FM - politika i mere

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# POLICIES AND MEASURES (PAMS) MODULE



- collect and merge information on climate mitigation policies and measures
- enable Serbia to:
  - fulfil its international reporting obligations according to the UNFCCC (MPGs) and the EU Governance and its Implementing Regulation
  - monitor its progress towards its targets through a linking with the GHG inventory, the projections and the NDC module
- make policies and measures publicly available

# POLICIES AND MEASURES (PAMS) MODULE REPORTING REQUIREMENTS



- UNFCCC:

- The modalities, procedures and guidelines (MPGs) for the transparency framework for action and support, referred to in Article 13 of the Paris Agreement are defined in **Decision 18/CMA.1**.
- paras 80–90: Mitigation policies and measures

- EU:

- Governance Regulation (EU 2018/1999) and Implementing Regulation (EU 2020/1208)
- are fully in line with the Paris Agreement
- reporting by 15.March 2021 and every two years thereafter; substantial changes to the information shall be communicated annual

- Serbian Climate Change Law (recently adopted)

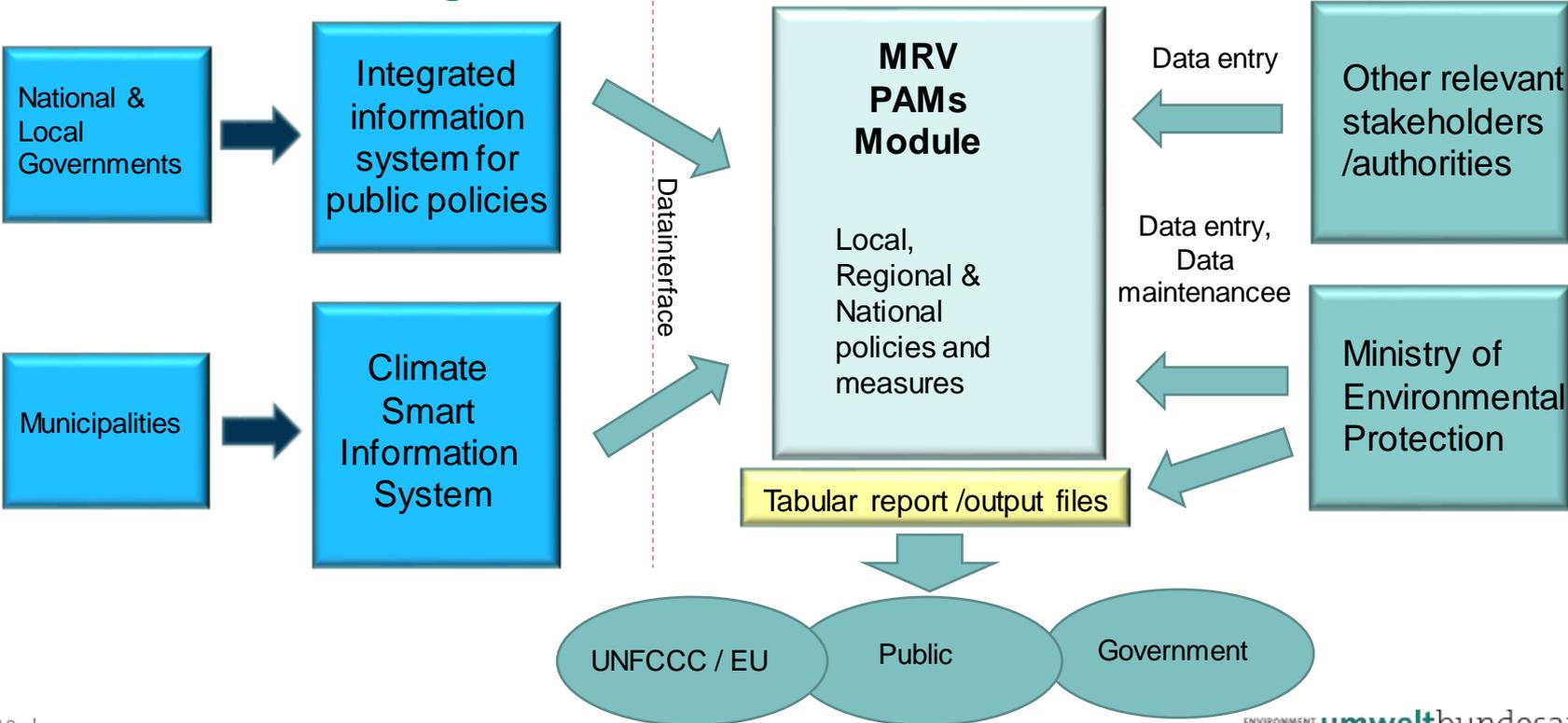
- Article 64 and Article 65: A system for reporting on policies, measures and GHG projections shall be set up, kept and continuously improved

# POLICIES AND MEASURES (PAMS) MODULE IMPLEMENTATION



- Online questionnaire
  - according to Article 37 and Annex XXIV of the Implementing Regulation (2020/1208)
  - with predefined mandatory and optional fields
  - additional national relevant fields (e.g. responsible person, comments, implementation roadmap, access to information - open to public or restricted etc.)
- Links within the MRV tool
  - to projections: within the PAMs questionnaire it must be indicated whether the measure is considered within an emission scenario (e.g. WEM or WAM); a query e.g. of WEM or WAM measures only is possible

# POLICIES AND MEASURES (PAMS) MODULE IMPLEMENTATION



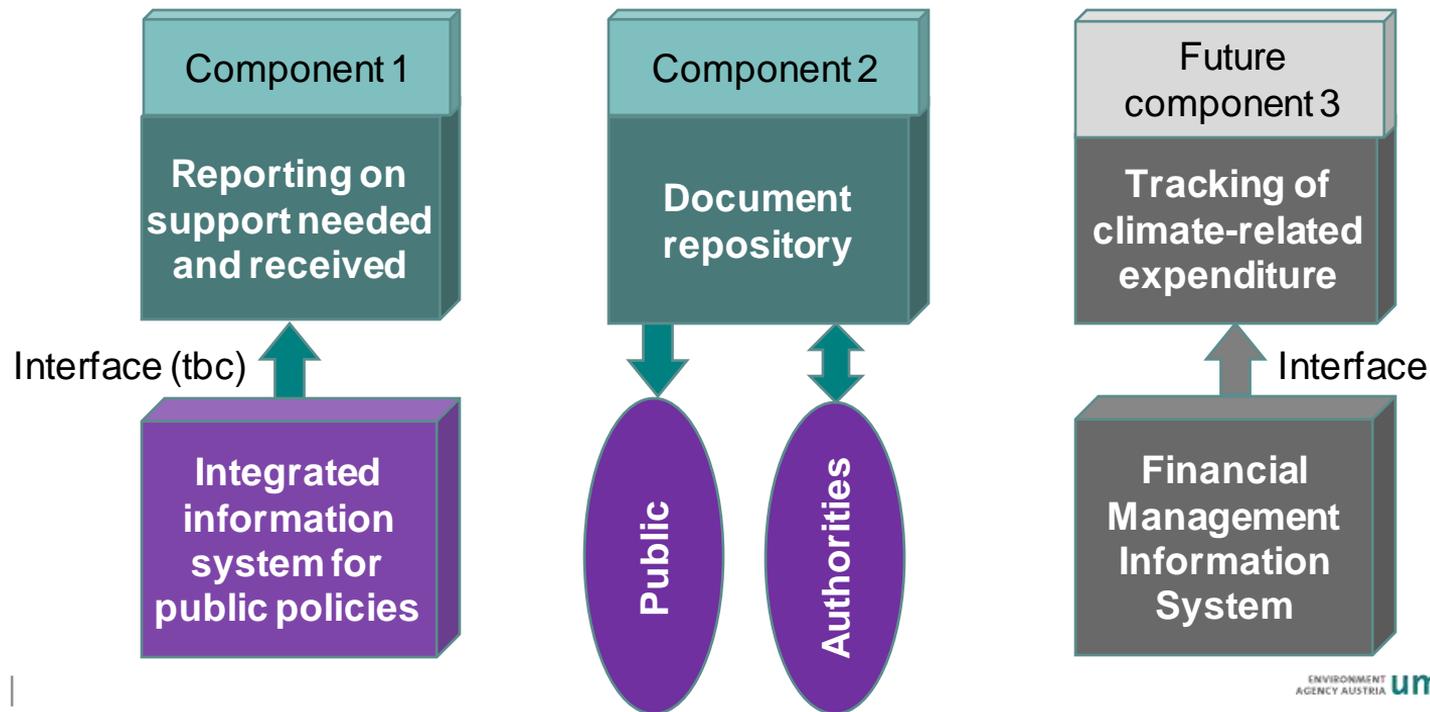
# POLICIES AND MEASURES (PAMS) MODULE DATA MATCHING



- Matching of the PAMs questionnaire with data from Public Policy Secretariat and the Climate Smart Information System
    - A few fields are in the IIS available: Name of measure, Type of policy instrument, Implementation period, Responsible entity and the indicators are available;
    - Some are missing: GHG emissions reductions Ex-ante and ex-post, the costs and non GHG-mitigation benefits;
    - A 'short description of the measure' is a mandatory field under the Implementing Reg. but it is not mandatory within the IIS.
- Recommendation PPS and CSIS add additional fields

## MODULE CLIMATE FINANCE (1) – OVERVIEW

**Purpose:** To collect and compile information on climate finance that can be used for a) fulfilling international reporting obligations, b) decision base for authorities and c) (optional) information of the public.



# MODULE CLIMATE FINANCE (2) – COMPONENT 1



**Article 9** of the **Paris Agreement** stipulates that **developed country Parties shall provide financial resources** to assist developing country Parties.

This support has to be **reported transparently**:

- developed country Parties **shall**
- other Parties are **encouraged** to



provide **transparent and consistent information**

on support for developing country Parties *provided* and *mobilised* through public interventions **biennially**.

- developing country Parties **should**



provide (transparent and consistent) **information** on support *needed* and *received* **biennially**.

# MODULE CLIMATE FINANCE (3) – COMPONENT 1

Focus on tabular information

Integrated information system for public policies

Interface  
(tbc)

Missing data to be entered by authorities

134. Information on financial support received	
(a) Title	of activity, programme or project
(b) Description	of programme / project
(c) Channel	
(d) Recipient entity	
(e) Implementing entity	
(f) Amount received	in domestic currency in United States dollars
(g) Time frame	
(h) Expected financial instrument	grant concessional loan non-concessional loan equity guarantee other
(i) Status	committed received
(j) Sector and subsector	
(k) Type of support	mitigation adaptation cross-cutting

Tabular report

Aggregated data in tables and graphs

# MODULE CLIMATE FINANCE (4) – COMPONENT 2

## DOCUMENT REPOSITORY

- Share all available information on climate finance, e.g.
  - List of support needed from the Second National Communication / First Biennial Update report (available)
  - Analysis of climate-related expenditure in Serbia in the years 2016-2018 (available)
  - Future reports to the UN and the EU on support needed and received / provided
- Publish selected documents (transparency)

## MODULE CLIMATE FINANCE (5) – NEXT STEPS

- Decision by Public Policy Secretariat whether additional fields can be added and whether interface is feasible

# ADAPTATION MODULE – REPORTING REQUIREMENTS



- Reporting to UNFCCC – all data relevant for adaptation part
- ❖ Decision 18/CMA.1 - Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement (MPGs)
- ❖ IV. Information related to climate change impacts and adaptation , incl. loss and damage associated with climate change impacts (IV.G)
- Monitoring Mechanism Regulation (MMR, 2014 ) - Regulation on the Governance of the Energy Union and Climate Action (repeals the MMR)
- Reporting on adaptation actions:
  - ❖ from March 2021, every 2 years
  - ❖ Annex VIII, Part 1.
- Implementing regulation (EU) 2020/1208 (from 7 August 2020)
- Included: Financing, Technology transfer, Mitigation/cross-cutting

# ADAPTATION MODULE



## PUBLICLY AVAILABLE:

- Historical and projected climate data (National and Sub-national level) - NAP project
  - EEA Indicators
- PAMs Adaptation + Adaptation Indicators (in Indicator part will be also)
- NDC Adaptation – aa NDC document in NDC module
- Link with CSUD project
- Link with Loss&Damages – DES\_Inventar
- Documents: NAP, NC\_Adaptation, LAPs, etc
- Templates: indicators and PAMs (planning&reporting)

# ADAPTATION MODULE - INDICATORS

**Economic losses from climate- related extremes**

**Change in annual temperature**

**Change in annual precipitation**

**Mean precipitation**

**Hail storm and wind storm events**

**Extreme precipitation events/ Heavy precipitation**

**Snow cover extent and snow mass**

**Heating and cooling degree days**

**River flows**

**Water temperature of rivers and lakes**

**Soil moisture**

**Soil moisture deficit**

**Soil organic carbon**

**Meteorological droughts (precipitation deficit) and hydrological droughts (minimum river flow)**

# EEA INDICATORS



- NAP Project/RHMSS

- SEPA as already collect/has responsibility

- SORS



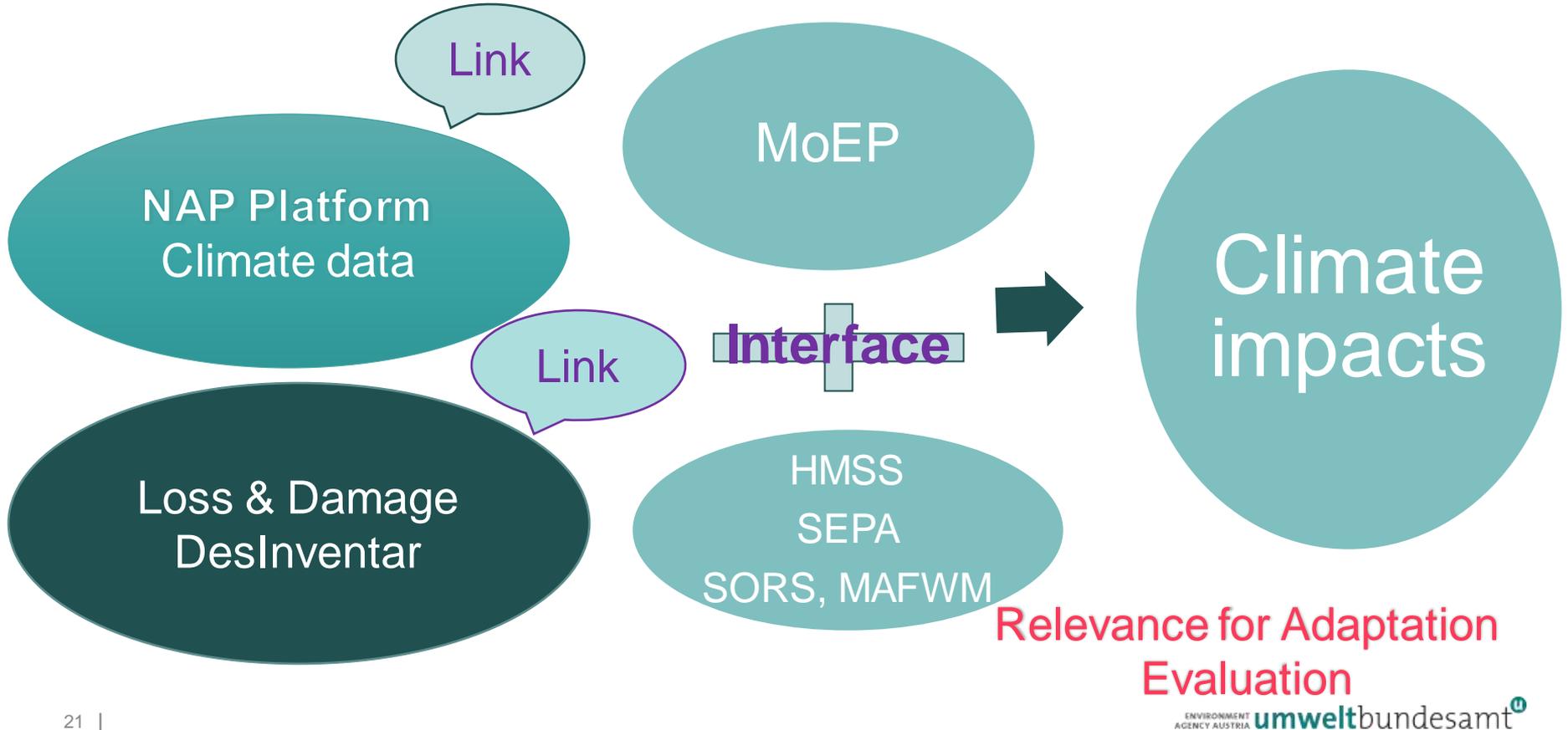
***LACK OF LEGAL BASIS***

- FIS

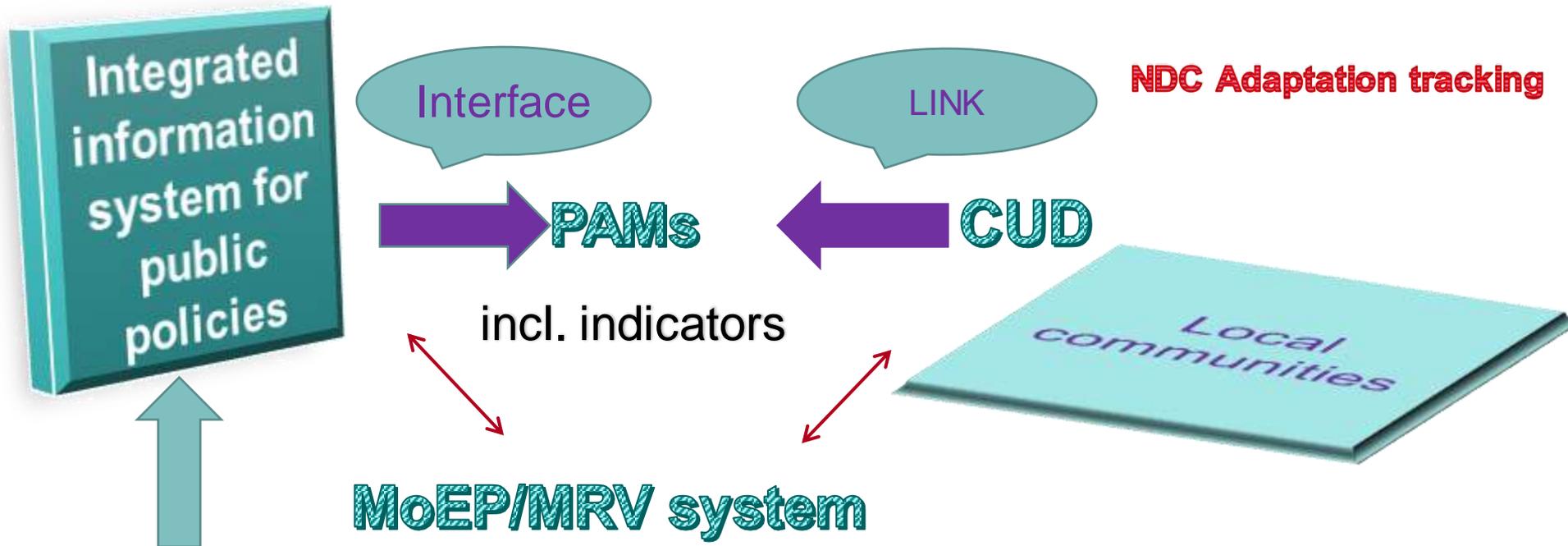
- MoEP not recommended

- Des\_Inventar - could be improved through CSUD

# VULNERABILITY ASSESSMENT



# PAM ADAPTATION + ADAPTATION INDICATORS



**Tagging** = clear requirements = targets in new adaptation actions/indicators

# ADAPTATION MODULE - TEMPLATE



<b>Name of activity/measure: <sup>1</sup></b>	
<b>Compliance with national activity/measure: <sup>2</sup></b>	Title of specific NAP measure which is reporting
<b>Description of activities / measures:</b>	Provide location and basic information
<b>Objective</b>	Objective shall be described as in NAP or other document that is basis for the measure
<b>Type of<sup>3</sup> measure</b>	Policies
	Financial
	Technological / Infrastructural
	Capacity Building / Training
	Organizational / Institutional
	Prevention Recovery
<b>Measure status<sup>4</sup></b>	Planned Adopted Implemented Completed

# TEMPLATE



<b>Link to other measures<sup>5</sup></b>	<p>List all relevant measures that will contribute to achievement of the reporting measure. Eg. if reporting is: Development of flood barriers</p> <ol style="list-style-type: none"> <li>20 flood barriers will be developed in the next 5 years</li> <li>Measures to reduce the risk of erosion will be identified in 2022.</li> </ol>
<b>Legal and policy basis</b>	<p>Provide reference to local document(s) define measure/activity ESPECIALLY if it is not NAP related</p>
<b>Implementation phases</b>	<p>Provide dates when different phases of implementation were started (eg. In a case where 20 km of flood barrier was firstly built, and then extended by another 4 km.. years and months of start of construction of all phases shall be listed).</p>
<b>Realized measure/activity in the reporting period and investment</b>	<p>E.g. 20km of flood barriers were rebuilt and 14,000 USD was spent</p>
<b>Problems and barriers</b>	<p>Expected for planned and identified for implemented</p>

# TEMPLATE



<b>Potential improvements</b>	E.g. Repair after flood	
<b>Achieved results</b>	Describe which losses and damages have been reduced or will be reduced (eg reduction of flooded areas, houses, farms, agriculture land; prevention of erosion and infrastructure damages, etc.)	
<b>Institution (s) responsible for the preparation, implementation and monitoring</b>	Preparation	e.g. Ministry for transportation
	Implementation	e.g. Local/self government
	Monitoring	Water management PU
<b>Public consultation process</b>	List organized events and realized ways for stakeholders involvement in reporting period	

# TEMPLATE



<b>Total expected investments</b> (in RSD/USD)	In the preparation and implementation (for planning phase)	
<b>Investment in reporting period</b> (in RSD/USD)		
<b>Source of funding in the reporting year</b> (if there are several sources, indicate the percentage)	Local government budget and for which sector (risk reduction, agriculture, ..)	
	National budget	
	Private investment	
	Grant/Donation (and who provided)	
	Loan	

# TEMPLATE



Lifetime of the activity/measure <sup>6</sup>	Up to 5 years	
	5-15 years	
	Over 15 years	
Exstention of activity/measure <sup>7</sup>	Indicate whether is necessary, planned and in which document, in which time period and is there ensured budget for exstention of measure	
<p>If the activity/measure is not from the NAP in the next 2 fields is MANDATORY to provide qualitative and quantitative information, if it is NAP measure only quantitative values relevant for local community is needed.</p>		

# TEMPLATE



<b>Other benefits</b>	Reduction of area with erosion....	
<b>Impact on GHG emissions</b> (quantitative data)		
<b>Indicators</b>	Initial value (specify unit)	
	Target value (last year if multi-year) (specify unit)	
	Achieved value (specify unit)	
	Describe the methodology used to monitor and for QA/QC or links reference in the next row	
<b>Links to relevant documents, technical documentation, etc.</b>		
<b>NOTES</b>		

# Reports

- **NDC Adaptation**
- **NAP**
- **NC\_Adaptation**
- **Other documents**

# PROJECTIONS & SCENARIOS MODULE



The purpose of this module is to:

- collect and merge information on climate mitigation projections and scenarios
- assist and enable Serbia to fulfil its international reporting obligations according to the UNFCCC (MPGs) and the EU Governance and its Implementing Regulation
- visualize projected emissions trends (total and sectoral)
- make projections and scenarios publicly available

# PROJECTIONS & SCENARIOS MODULE

## REPORTING REQUIREMENTS



- UNFCCC:

- The modalities, procedures and guidelines (MPGs) for the transparency framework for action and support, referred to in Article 13 of the Paris Agreement are defined in **Decision 18/CMA.1**.
- paras 92–102: **Projections of greenhouse gas emissions and removals**

- EU:

- Governance Regulation (EU 2018/1999) and Implementing Regulation (EU 2020/1208):
  - **Article 38: Reporting on national projections**
- are fully in line with the Paris Agreement
- reporting by 15<sup>th</sup> March 2021 and every two years thereafter; substantial changes to the information shall be communicated annual

- Serbian Climate Change Law (recently adopted)

- Articles 57 to 61: A system for monitoring and reporting on national GHG emissions

# PROJECTIONS & SCENARIOS MODULE



## Input data:

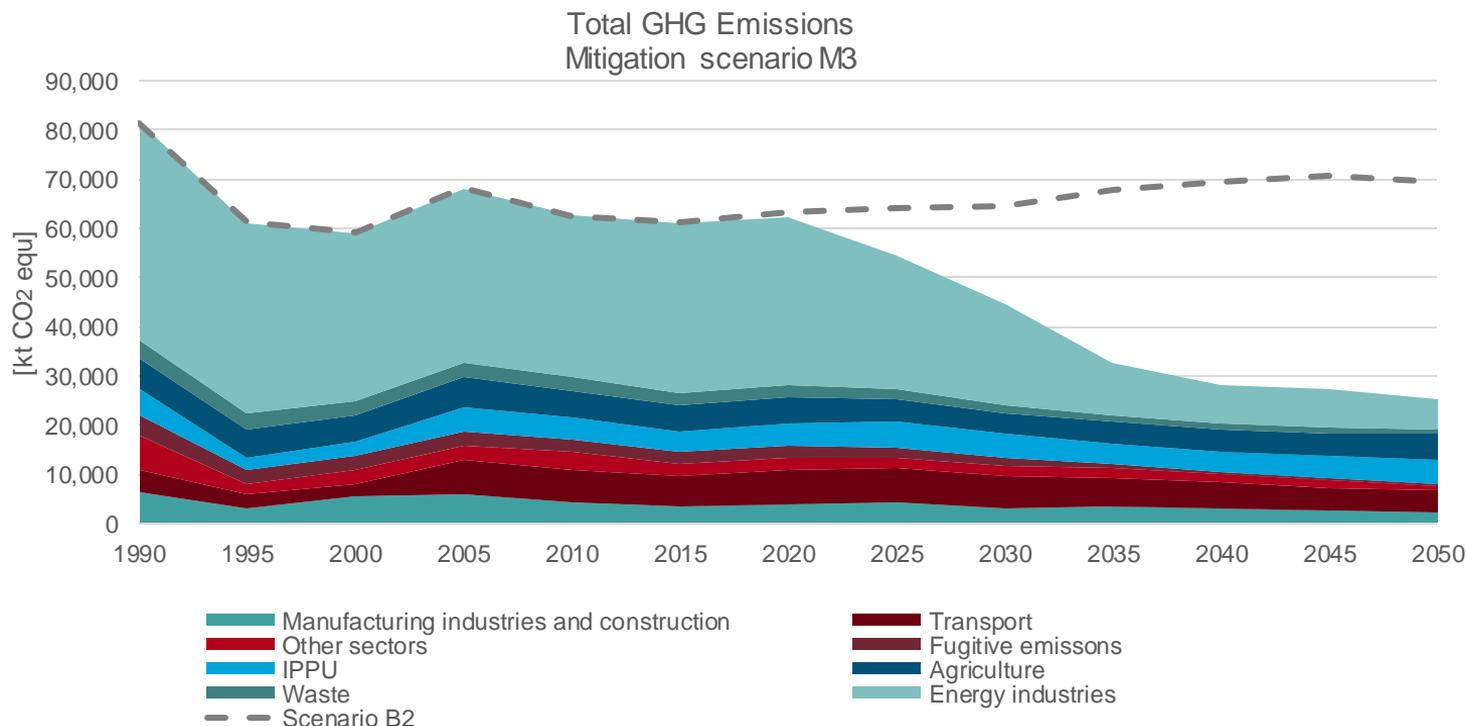
- Scenarios (B2, M1-M4) as reported in Serbia's long-term strategy
  - GHG emissions
  - Economic parameters (GDP, labour force, GVA, consumption expenditure per household)
  - Costs by policy/measure
- Modelling parameters

## Output files:

- EU Reporting templates, partly prefilled with available information

**Graphs:** total and sectoral trends/scenario

# MODULE PROJECTIONS 2



# NDC MODULE



The purpose of this module is to:

- monitor and visualize progress towards 2030 targets
- make current version of NDC publicly available

# NDC MODULE – REPORTING REQUIREMENTS



Nationally determined contributions (NDCs) are at the heart of the Paris Agreement and the achievement of these long-term goals. NDCs embody efforts by each country to reduce national emissions and adapt to the impacts of climate change. The [Paris Agreement](#) (Article 4, paragraph 2) requires each Party to prepare, communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve.

Starting in 2023 and then every five years, governments will take stock of the implementation of the Agreement to assess the collective progress towards achieving the purpose of the Agreement and its long-term goals.

26<sup>th</sup> February 2021: UNFCCC NDC synthesis report has been published with 48 new or updated NDCs recorded in the interim registry of nationally determined contributions as at 31 December 2020

# NDC MODULE (INPUT PARAMETERS)



The NDC module combines

## Data:

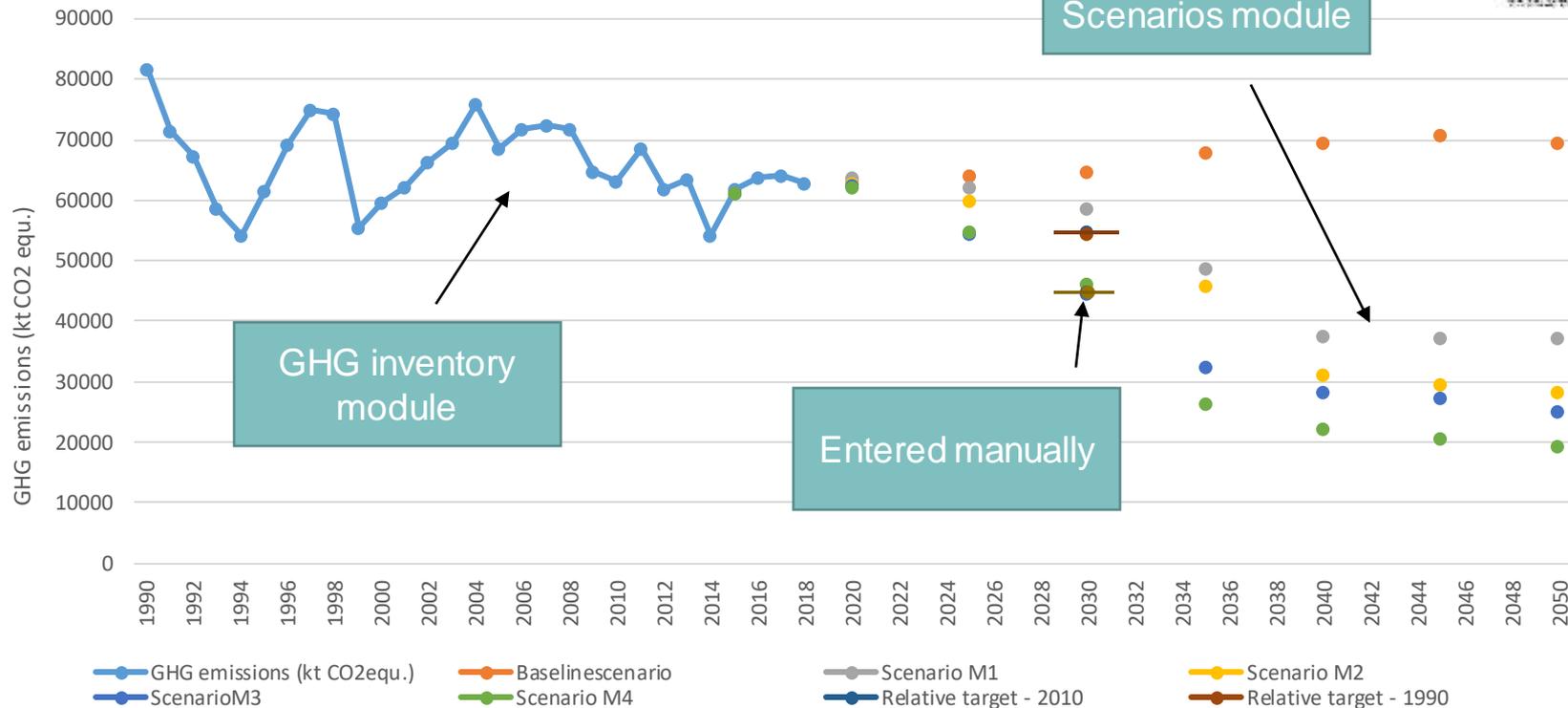
- Historic GHG emissions trends (1990-) from GHG emission module
- GHG emission scenarios (B2, M1-M4) from projection module
- NDC targets (relative, conditional)

and tracks Serbia's progress towards meeting its NDC target.

## Reports:

- NDC report

# MODULE NDC 2 (OUTPUT GRAPH)



# GHG INVENTORY MODULE



The purpose of this module is to:

- collect and merge information on historic GHG emissions from 1990 onwards
- Enable Serbia to:
  - fulfil its international reporting obligations according to the UNFCCC (MPGs) and the EU Governance and its Implementing Regulation
  - perform a ex-post evaluation of its climate change policy by the use of indicators
- provide list of activity data used for inventory preparation
- visualize historic emissions trends (total and (sub-)sectoral)
- make historic emission trends publicly available

# GHG INVENTORY MODULE

## REPORTING REQUIREMENTS



- UNFCCC:

- The modalities, procedures and guidelines (MPGs) for the transparency framework for action and support, referred to in Article 13 of the Paris Agreement are defined in **Decision 18/CMA.1**.
- paras 17–58: **National inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases**

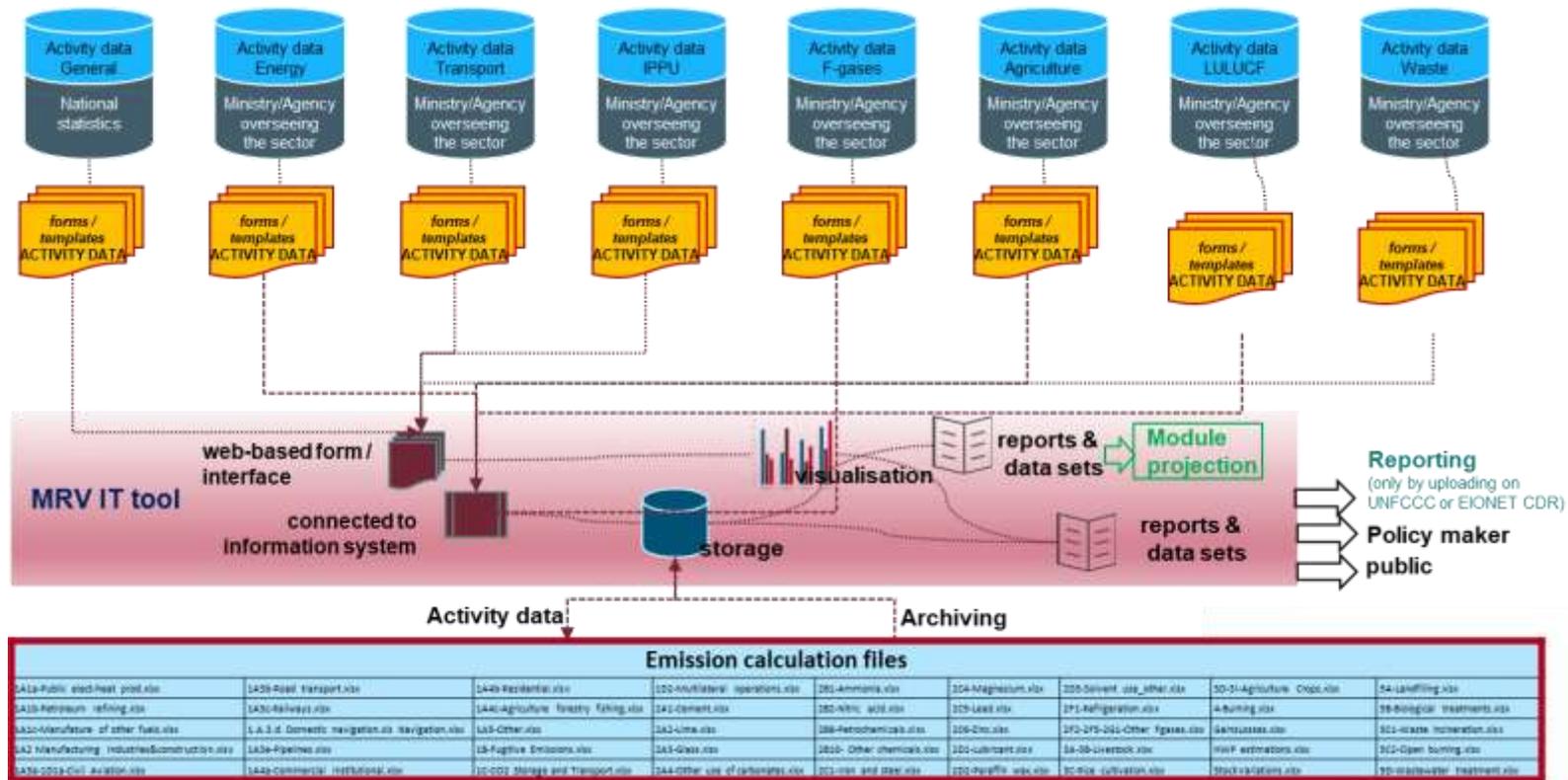
- EU:

- Governance Regulation (EU 2018/1999) and Implementing Regulation (EU 2020/1208):
  - **Article 26: Annual reporting**
  - **Article 37: Union and national inventory systems**
- are fully in line with the Paris Agreement
- Annual reporting by 15<sup>th</sup> January 2021

- Serbian Climate Change Law (recently adopted)

- Articles 62 to 66: A system for reporting on policies, measures and GHG projections shall be set up, kept and continuously improved

# DEVELOPMENT Data transfer from Activity data provider to MRV IT tool to „Inventory“: GHG Inventory



## Emission data (inventory) to MRV IT tool: GHG Inventory

