

## FACILITATIVE SHARING OF VIEWS: BOSNIA AND HERZEGOVINA



- ❖ Country context
- ❖ GHG inventory
- ❖ Mitigation actions and effect
- ❖ Barriers and support needed and received
- ❖ ETF transition and implementation

**Ozren Laganin**, Ministry of Spatial Planning, Construction and Ecology  
FSV Workshop at SB60 Bonn, June 5, 2024



## a. country context- key facts

- a sovereign state that inherits a **decentralised political and administrative structure**.
- It comprises of : **two entities**, the **Republic of Srpska** with central government, the **Federation of Bosnia and Herzegovina**, with 10 cantons, and **Brčko District**.

By Constitution (Annex IV of the DPA) the institutions at the state level are responsible for a **foreign policy, foreign trade policy and customs policy**

- All other functions and powers that **are not** explicitly assigned to the institutions of Bosnia and Herzegovina, including **environmental protection and climate change** belong to the **the Republic of Srpska, the Federation of Bosnia and Herzegovina, and Brčko District**, respectively.

Key governmental agencies responsible for environmental protection are:

- The Ministry for Foreign Trade and Economic Relations of BiH (**MoFTER**) responsible *inter alia* for defining policy basic principles, coordinating activities and harmonising plans of entity authorities and institutions at the international level in the areas of agriculture, energy, **environmental protection**, development and use of natural resources, and tourism



- In the **Republika Srpska** - Ministry of Spatial Planning, Construction and Ecology/**MPPCEE** (the **UNFCCC NFP**)
- In the **Federation of Bosnia and Herzegovina** - the Ministry of Environment and Tourism/**F** Federation of Bosnia and Herzegovina a **cantonal ministries, within their compo**
- In **Brčko District** - Department for Urban Property-Legal Issues of the Government



**Key sectors affecting the total GHG emissions are electricity production, district heating, buildings, transport, industry, agriculture and waste**

In 2018, total gross electricity generation in Bosnia and Herzegovina was 19,160 GWh, **which is an increase of 16.5% when compared to 2017 (16,438 GWh)**. (Gross) Electricity generation in hydropower plants was 6,519 GWh, in thermal power plants 12,079 GWh, and in industrial power plants 562 GWh. Own consumption in the energy sector was 1,248 GWh.

Road network has a total length of 24,358 km. When broken down by categories, motorways account for 198 km; trunk roads 4,787 km; regional roads 5,173 km; and other/local roads 14,200 km. According to air traffic information, there are 27 officially registered airports in Bosnia and Herzegovina. However, only 4 have been registered for international traffic: Sarajevo, Banja Luka, Mostar and Tuzla.

The share of the **agriculture, hunting and accompanying service** industries sector in the 2018 GDP structure was 5.89% or BAM 1.97 billion. GHG emission decreases from 2,450 Gg CO<sub>2</sub>eq in 2014 to 2,140 Gg CO<sub>2</sub>eq in 2030, i.e. by approximately 13%. GHG emission drops to 1,760 Gg CO<sub>2</sub>eq by the end of the observed period 2050, which is by around 28% less compared to 2014

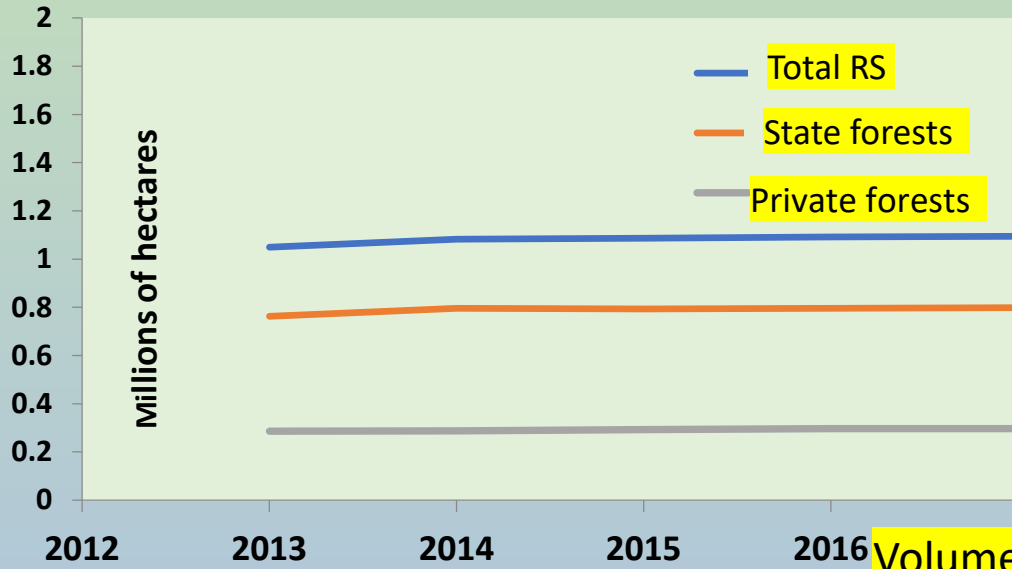
Municipal waste generated in Bosnia and Herzegovina in 2018 was estimated to 1,243,973 tons, capita annually, or 0.97 kg per capita per day. The total quantity of collected waste is comprised of m waste (90.9%), collected municipal waste separated at the source



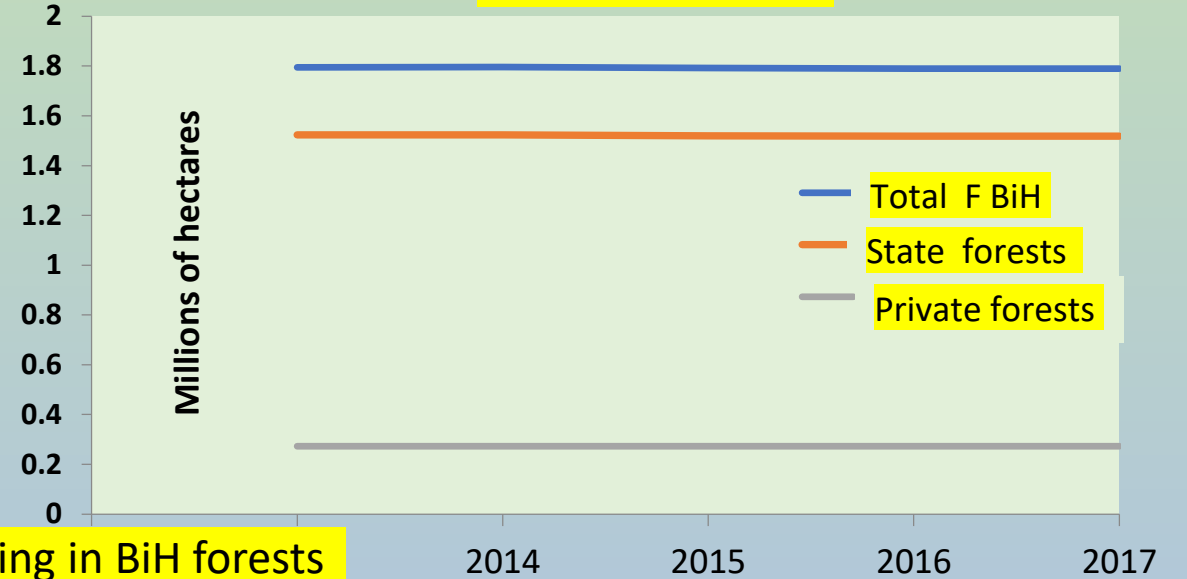
# Forest and forest land in Bosnia and Herzegovina

In 2017, forests covered 2,60 million ha/50,77% of land area

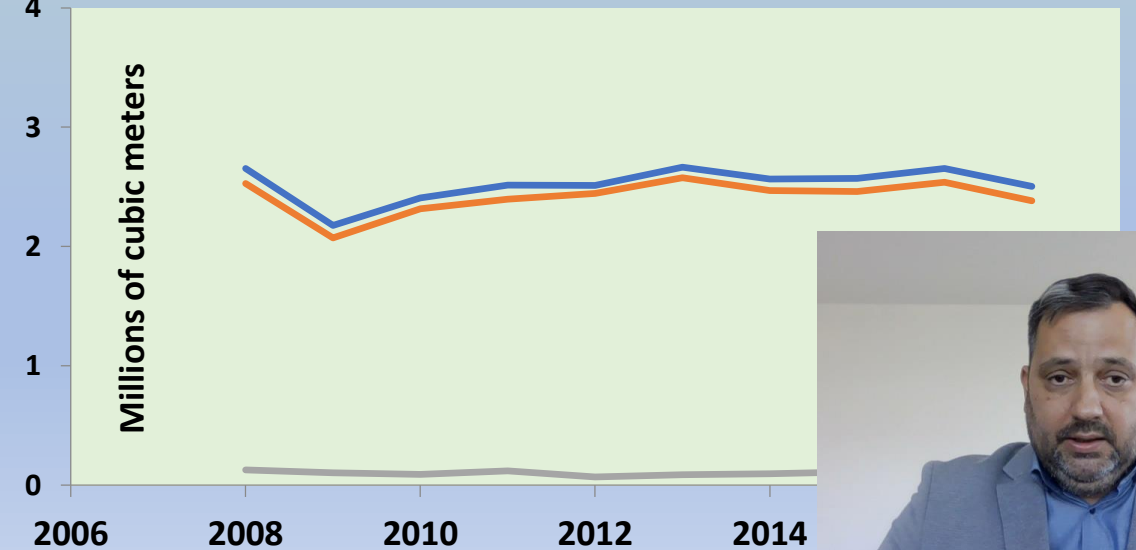
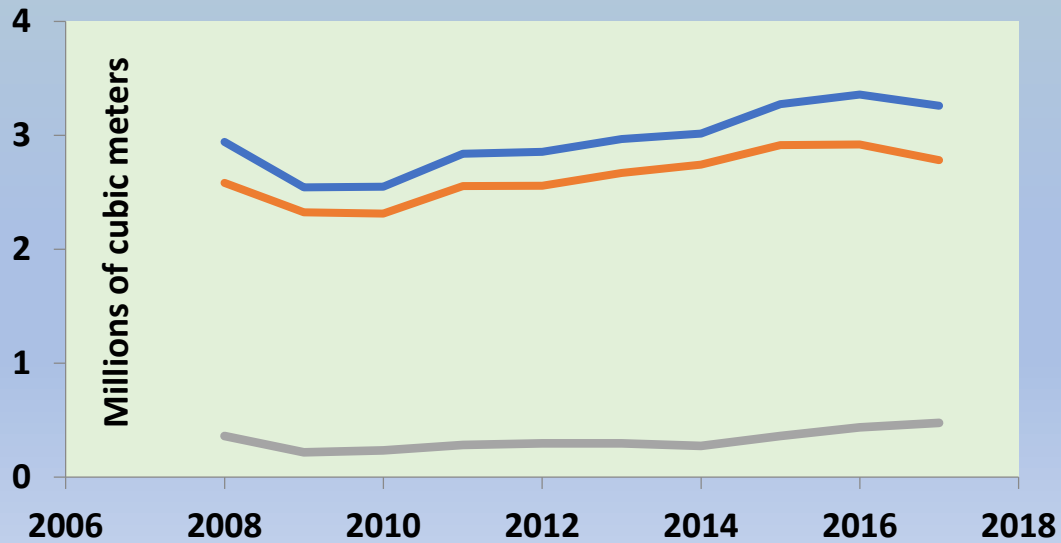
## Republic of Srpska



## Federation of BiH



## Volume of cutting in BiH forests



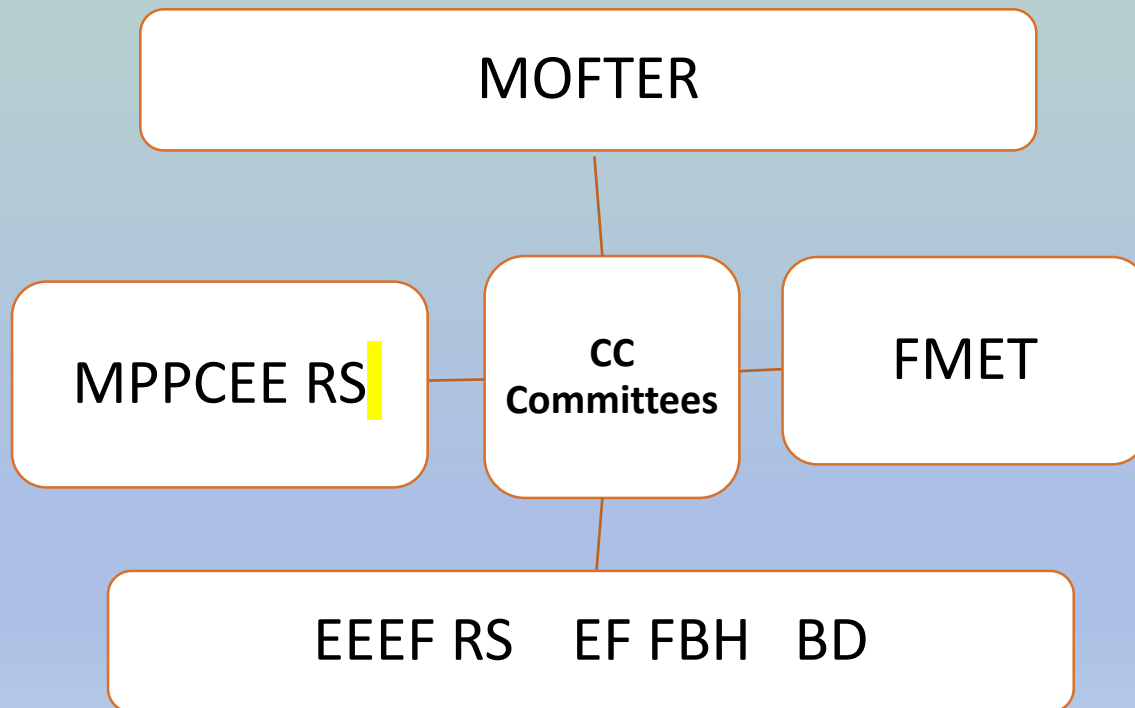
# MRV

- In 2015 the country has established key elements of the international MRV within the framework of the UNFCCC for developing countries, through establishment of the NAMA DNA/ Designated National Authority structure for approving and submitting Nationally Appropriate Mitigation Actions projects to the UNFCCC registry.
- NAMA DNA was created for the purpose of recording the demand for international support for the implementation of NAMAs and to facilitate the matching of financial resources, technology and capacity building support with these measures.
- NAMA DNA's structure includes the Executive Board, DNA Secretariats and the Expert Councils, each with different but closely related functions
- DNA Secretariats were formed at the territories of the entities and Brčko District in accordance with their jurisdiction; with task to evaluate and adopt NAMA project documentation; submit NAMA project proposals to the Expert Council and seek expert assessment of project documents, and approve or reject NAMA projects.
- Bosnia and Herzegovina still does not have a clearly defined monitoring, reporting and verification (MRV) system for data collection and reporting on GHG emissions, as there is no clear agreement manage the GHG emissions inventory and store the data at the state level. Key recommend legislation and transpose MMR by establishing a GHG inventory system with established line communication between all relevant institutions, and strengthening institutional capacities defining competencies and responsibilities.



# Domestic MRV

- Therefore, the country has directed its efforts and capacities to streamline current and future capacity building projects (CBIT 2, EU4 Energy), to further development of the domestic MRV, and establishment of a database of projects/programs for reducing GHG emissions



**Outcome of NAP project: organizational structure, for horizontal and vertical cooperation and data exchange mechanism**

between RS, FBH and BD, with competent institutions at the level of BiH in order to fulfill international obligations

Institutions responsible for M&E, data collection and maintenance of databases are responsive Environmental fu department of BD

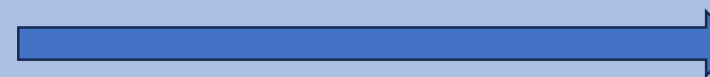
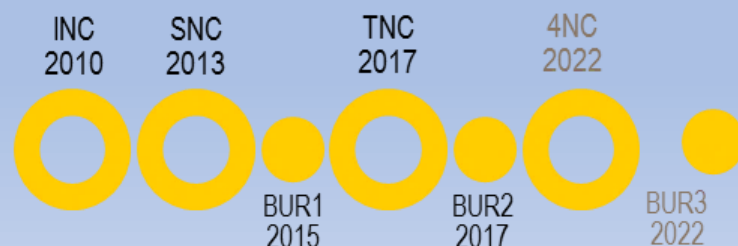


# UNFCCC compliance

- ✓ Following ratification of the Convention (2000), Kyoto protocol (2007), and a Paris Agreement (2017), Bosnia and Herzegovina has made **a number of efforts to establish appropriate political, institutional and legal frameworks**, to meet its commitments.
- ✓ The country has thus far produced and submitted to the Convention **four national communications (NCs), three biennial reports on greenhouse gas emissions (BURs) the Climate Change Adaptation and Low Emission Development Strategy (CCA LEDs), two NDCs and a National adaptation plan (NAP):**

❖ <b>INC in 2010.</b>	❖ <b>TNC jointly with the SBUR in 2017.</b>
❖ SNC and the <b>CCA LEDs in 2013.</b>	❖ revised Nationally Determined Contribution (NDC), <b>March 2021.</b>
❖ FBUR in <b>2014.</b>	❖ FNC and TBUR : <b>2022.</b>
❖ <b>Intended Nationally Determined Contribution (INDC)</b> , in October <b>2015</b>	❖ Updated CCA LEDs in 2021./submitted in <b>2023</b> ❖ BiH National Adaptation Plan- <b>NAP - 2022</b>

Integrated National Energy and Climate Plan of Bosnia and Herzegovina, until 2030  
**(NECP BiH)**

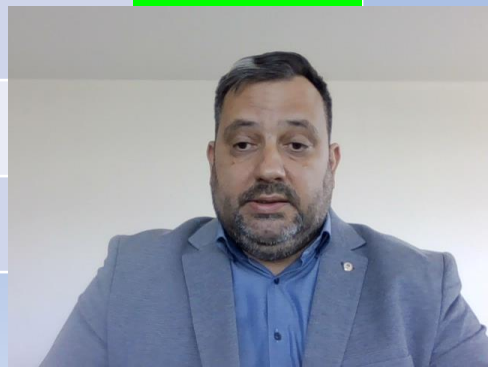


**BTR1** and com  
under the UNF  
**(NC5/BTR2) 20**



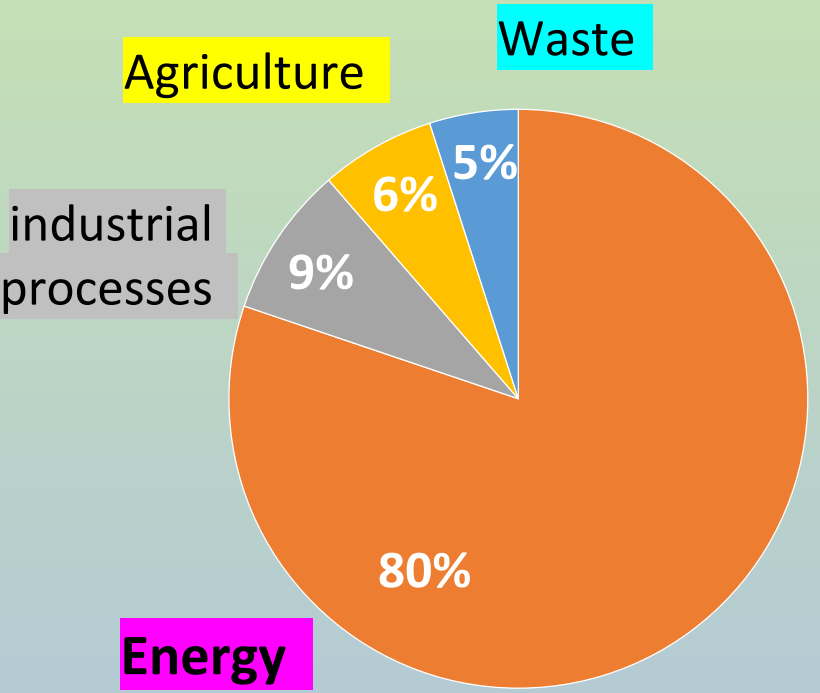
## b. GHG inventory in TBUR/overview

GHG source category/year	2017.	2018.
<b>Total emissions (Gg CO2-eq) – without sinks</b>	<b>30.438,88</b>	<b>31.170,94</b>
<b>Total emissions (Gg CO2-eq) – with sinks</b>	<b>24.594,79</b>	<b>25.339,04</b>
Energy	24.383,79	24.915,83
Fuel combustion (sectoral approach)	23.917,86	24.369,65
Fugitive emissions from fuels	465,94	546,18
Industrial processes	2.565,3	2.814,43
Solvent and other product use	NO	NO
Agriculture	1.951,36	1.890,91
<b>Land-use change and forestry</b>	<b>-5.844,09</b>	
Waste	1.507,06	
Memo items	31,38	





# Share of GHG emissions by sectors (%)



Share of GHG emissions by sectors for 2018

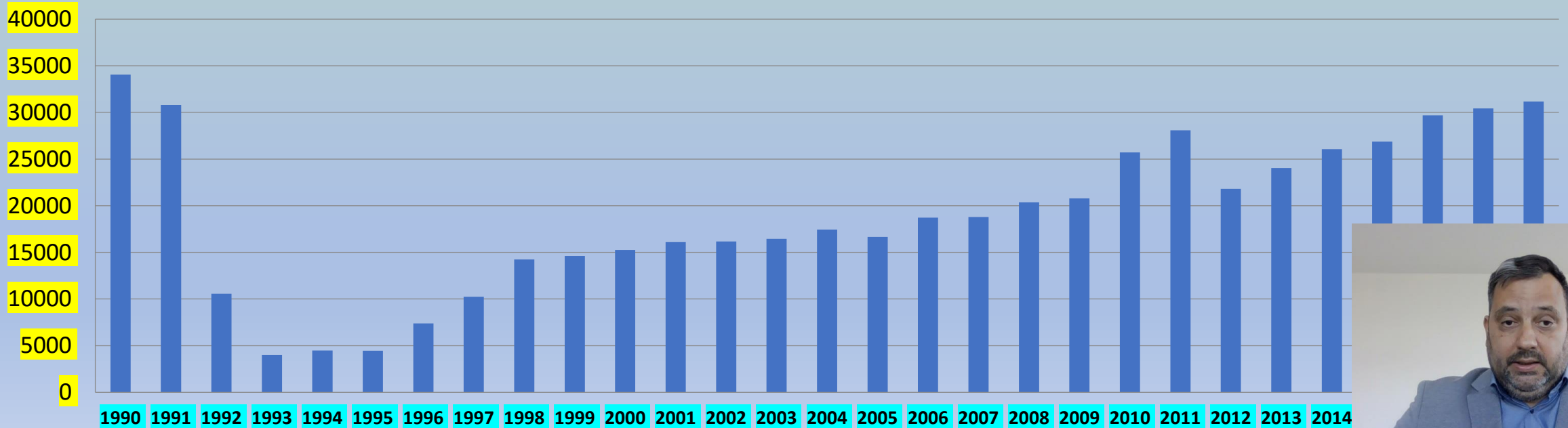
Sector/year	2015	2016	2017
<b>ENERGY</b>	76	79	80
<b>INDUSTRIAL PROCESSES</b>	11	9	9
<b>AGRICULTURE</b>	7	7	6
<b>WASTE</b>	6	5	



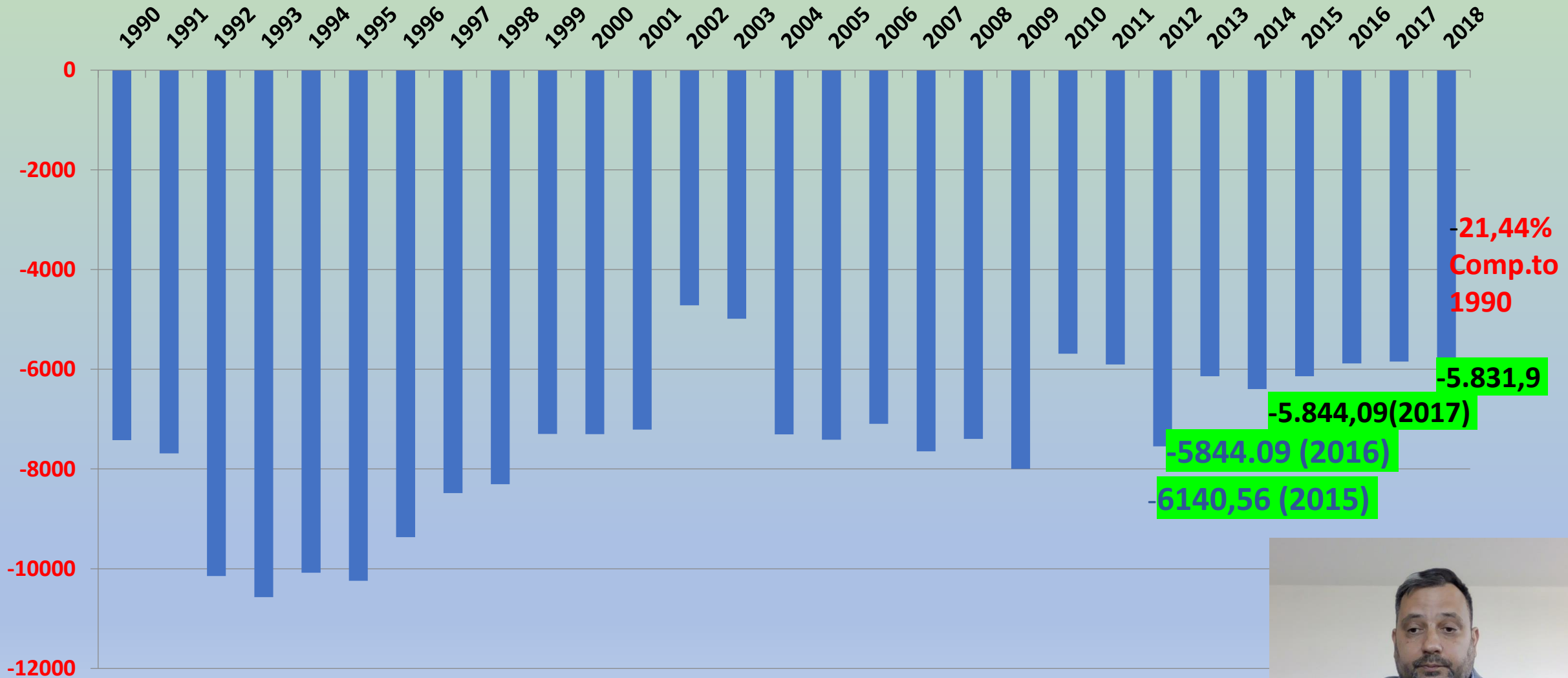
# GHG emission trends

	1990	2012	2013	2014	2015	2016	2017	2018
Total emissions (Gg CO <sub>2</sub> - eq) without sink	34.043.49	21.816.43	24.027.84	26.062.19	22.473.55	24.163.64	<b>30.438.88</b>	31.170.94
Total emissions (Gg CO <sub>2</sub> - eq) with sinks	26.461.1	14.270.09	17.886.84	19.664.52	16.377.85	18.326.97	<b>24.594.79</b>	25.339.04

Total emissions (Gg CO<sub>2</sub>eq) without sink



# Sinks (Gg CO<sub>2</sub>eq) in the forestry sector (1990-2018)



# Comparison (% increase or decrease in total GHG emissions) of year 2018

**energy sector** emissions were **24,915.83 Gg CO<sub>2</sub> eq**

Inventory year	Year comparisons (%)				
	1990	2014	2015	2016	2017
2018	0.11	23.04	22.07	6.34	2,18

total emissions of the **agricultural sector** were **1,890.91 Gg CO<sub>2</sub> eq**

Inventory year	Year comparisons (%)				
	1990	2014	2015	2016	2017
2018	-58.96	-24.51	-1.73	-5.26	-3.10

emissions of the **Industrial processes** were **2,814.43 Gg CO<sub>2</sub>eq**

Inventory year	Year comparisons (%)				
	1990	2014	2015	2016	2017
2018	-20.81	25,23	-3.18	5.79	9.71

**Waste sector emissions in 2018**  
**1526,25 Gg CO<sub>2</sub>eq**

Inventory year	Comparison year (%)			
	1990	2014	2015	2017
2018	53,78	43,96	-5,93	-2,11



# Mitigation actions and effects

➤ revised Nationally Determined Contribution (NDC), was prepared In March 2021, in accordance with Decision 1/CP.21 of the PA, includes measures on climate change adaptation and revised measures on climate change mitigation, articulating the following GHG emissions reduction targets, in comparison with 2014 as a base year and 1990 (Kyoto base year) in unconditional and conditional scenario- with more intense international assistance):

a) In comparison with 2014: reducing GHG emissions by 2030 in sectors of electricity, district heating, buildings, transport, industry, agriculture and waste **by a total of 12.8% (unconditional target), or 17.5% (conditional target -with more intense international assistance)**. Additionally, measures for increase of greenhouse gas sink in forestry were considered

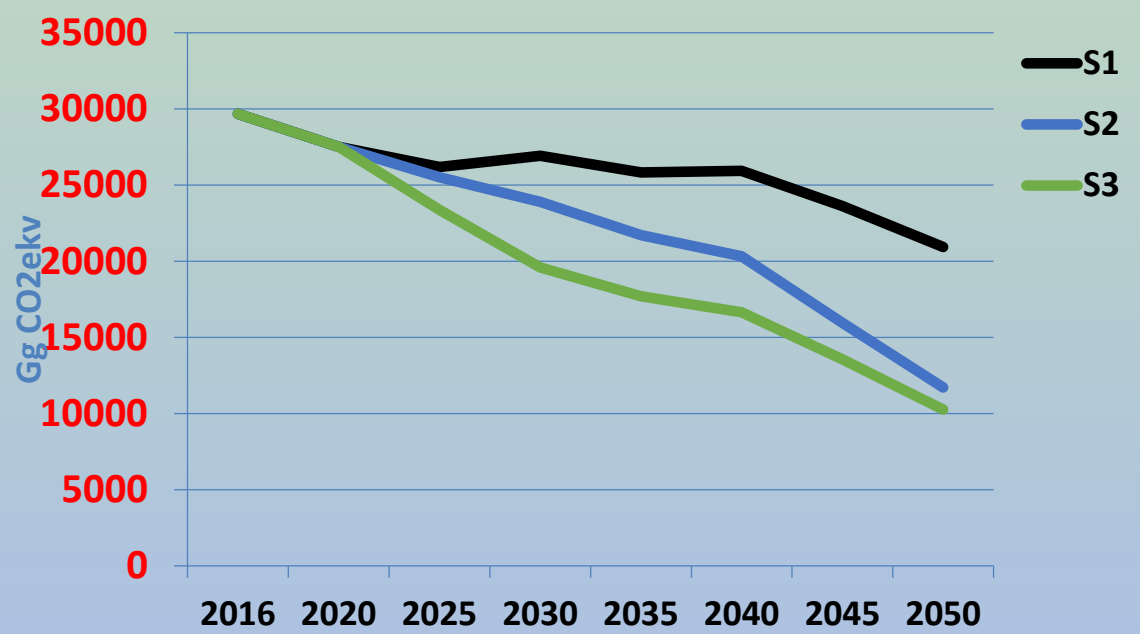
b) In comparison with 1990, reduction (unconditional), by 33.2% until 2030, or 36.8% (conditional with assistance for decarbonization of mining areas). For 2050: 61.7% reduction (unconditional) or 65.6% (conditional).

**With increase of GHG sinks in the forestry sector, the projected emissions by the 2050 will be about 80 percent less compared to the net emissions in 1990.**

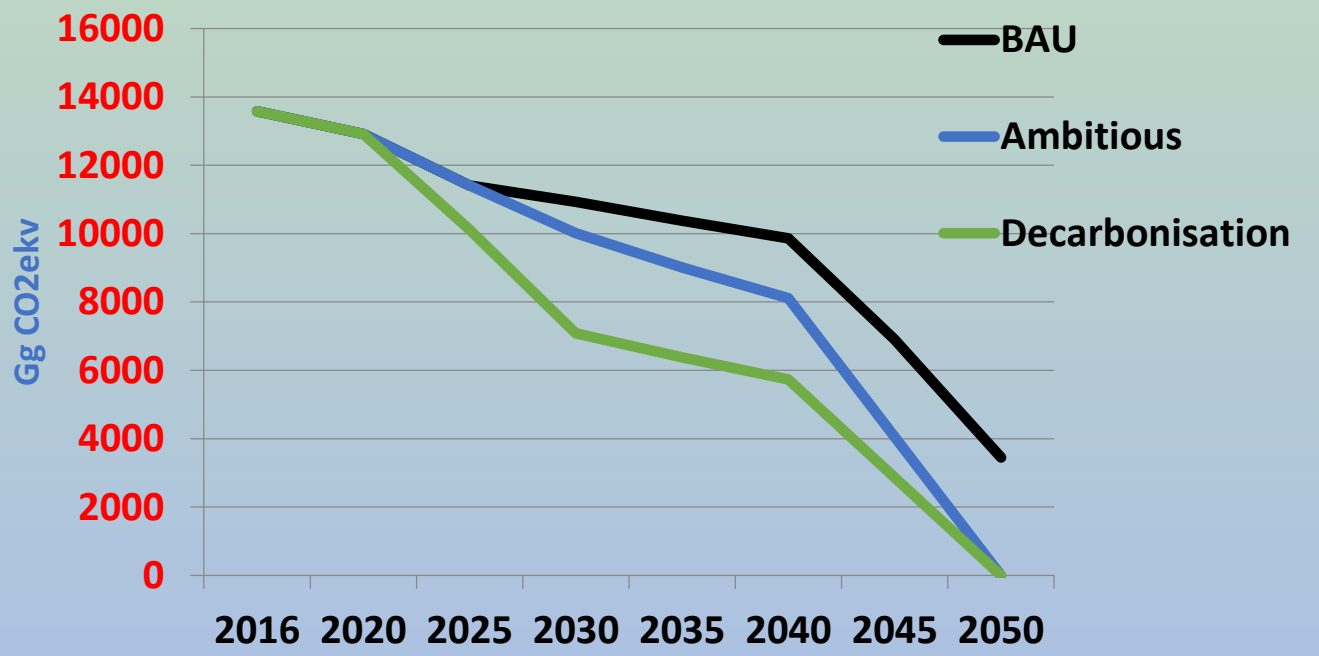
Revised CCA/LEDS Strategy (GEF funded-USD 852,000), developed under the 4NC-TBU utilizes available observed and projected CC mitigation measures in key sectors



# Scenarios of GHG emission reductions (Gg CO<sub>2</sub>eq.)



Scenarios of total GHG emission reduction



Scenarios of GHG emission from power generation



# Support received and needed (finance, technology, capacity-building)

## Finance

**Roadmap and Action Plan for NDC Implementation in BiH outlines the financial prerequisites for both greenhouse gas (GHG) emission reduction and climate change adaptation.** The Roadmap further delineated responsibilities, designated timeframes, and identified funding sources crucial for the execution of the outlined measures.

The cumulative financial outlay for **climate change mitigation** has been assessed, totalling **BAM 16.609 billion** over a decade (2020-2030). On an annual basis, the requisite investments approximate to approximately BAM 1.66 billion.

No.	Sector	Required investments until 2030 (BAM million)
1	Electricity	8,625
2	District heating	775
3	Transport	2,380
4	Buildings	4,170
5	Forestry	119.5
6	Agriculture	205
7	Waste	326
8	Cross-cutting sector (RAC sector)	9.4
<b>TOTAL</b>		

**1 EUR = 1.95583 BAM**

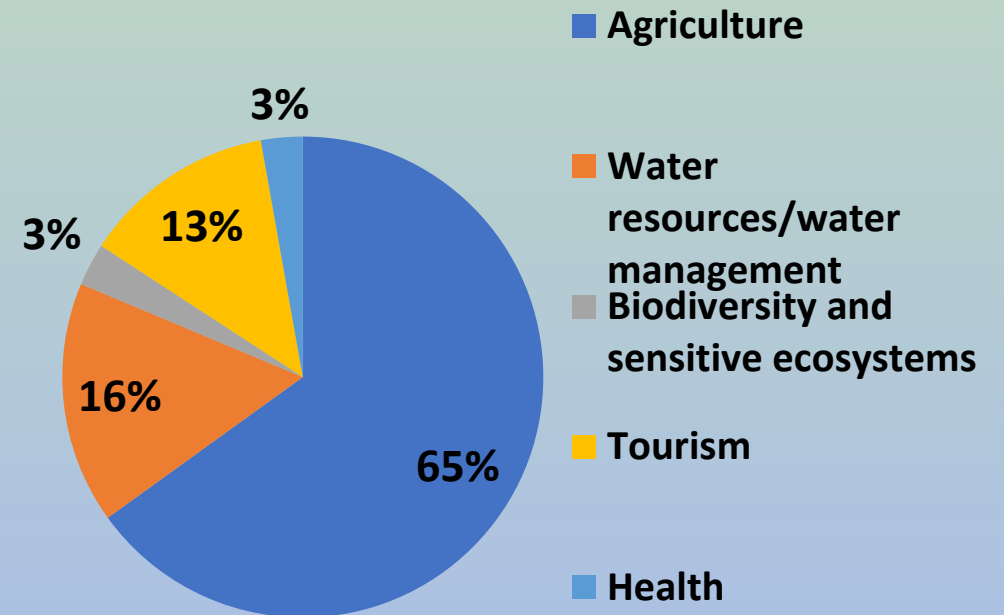


# Support received and needed (finance, technology, capacity-building)

## Finance

For climate change **adaptation**, a total sum of **BAM 91.42 million** is needed over the span of a decade. This translates to an annual allocation of approximately BAM 9.1 million.

Outcome		Required investments until 2030 (BAM million)
1	Knowledge generation, evidence and dissemination	2.00
2	Effective institutions and regulatory frameworks	1.02
3	Effective adaptation approaches	87.55
4	Adequate funding for adaptation strategy to be implemented on time, effectively, and delivering the expected outcomes	0.85
<b>TOTAL</b>		<b>91.42</b>



Requirements by sectors - Outcome





# Support received and needed (finance, technology, capacity-building)

## Technology

---

In the sector of **water resources**, several projects were implemented in the period 2015-2021, the objectives of which were related to the **development of hydrological models** and the **establishment of flood forecasting systems**, mainly for the Sava River Basin, in BiH and regionally:

- European Commission: 'Support to flood protection and river management' (for the Sava River Basin )
- WBIF/GEF/SCCF project for the Drina River Basin 'West Balkans Drina River Basin Management'
- JICA project - assistance of the Government of Japan to Bosnia and Herzegovina in meteorological equipment
- UNDP: Integrating climate changes into management of flood risk reduction in the Vrbas River Basin
- WBIF: Improvement of Joint Actions in Flood Management in the Sava River Basin-FFW
- Government of Finland: Procurement of 10 automatic meteorological and hydrological the Una River Basin



# ETF transition and implementation

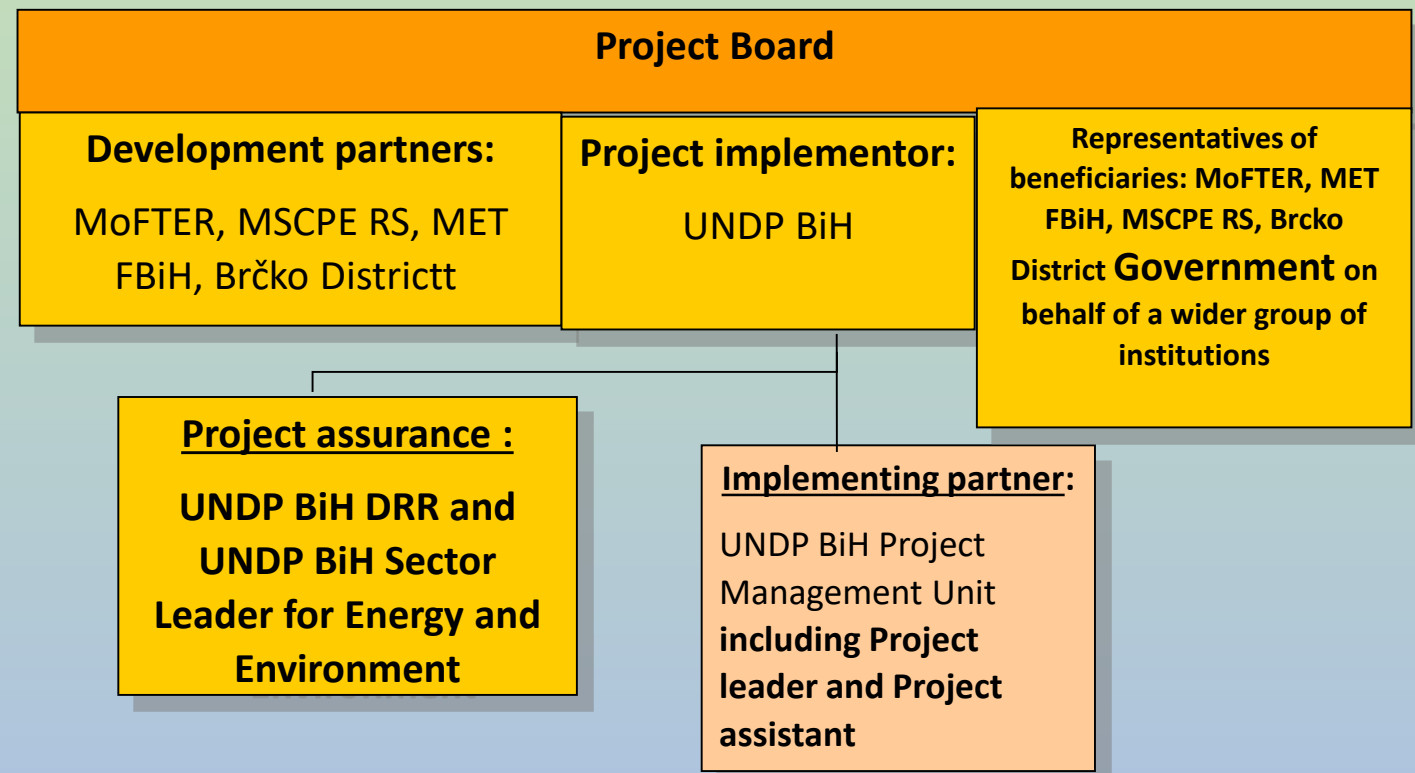
- ✓ as a candidate for membership in European Union (EU) since February 2016, Country has endorsed the **Green Agenda for the Western Balkans (Sofia Declaration) in November 2020**, thus committed to a number of actions like introducing carbon pricing instruments and market-based renewables support schemes, as well as phasing out coal subsidies or working towards the target of making the continent carbon-neutral by 2050 together with the EU through mainstreaming a strict climate policy and reforming energy and transport sectors.
- ✓ as a Signatory of the **Energy Community Treaty** (OG BiH 9/06 international agreements), the Country has taken up general obligations to harmonize the goals in the sphere of energy production, with the EU *acquis Communautaire*
- ✓ Strategic documents in accordance with domestic legislation (e.g. Environment Strategy and Action Plan-ESAP 2022-2032, adopted on November 17, 2022) establish a good grounds for monitoring and reporting actions
- ✓ Other ongoing projects: EU 4 Energy, EU 4 Green, TRATOLOW, etc. aimed to support the capacity building in the implementation of the Green Agenda, thus achieving their commitment to transforming their economies on a more sustainable path and reaching climate neutrality by 2050
- ✓ Improved monitoring and reporting process is supported by project: "The Integrated Report Transparency System of Bosnia and Herzegovina (CBIT)". **establish a domestic climate change and improve information that forms the basis of GHG inventories and NDC.** The Country also **GSP platform** aimed to support the country in development of the BTR and with submission



✓ Implementation of the Project:  
 "First Biennial Transparency Report of Bosnia and Herzegovina, and the Fifth National Communication and Second Biennial Transparency Report as combined report under the UNFCCC (BTR1 – NC5/BTR2)" has commenced in March **2024**. total budget is USD 1,233,000

✓ 5 NC shall build upon the results of GHG inventory (FNC 2015-2016, TBUR 2017-2018, including CO2, CH4, N2O, indirect GHG (SOX,CO,NOX and NMVOC), HFC, PFC, SF6 for sectors: energy, industry, agriculture, ground water, waste.

**BTR1 – NC5/BTR2 Project management structure**



✓ Further, the report shall provide updated information regarding national circumstances, vulnerabilities to climate taken to adapt to climate change and information awareness, education, training, systematic observation and technology transfer



# Thank You!

**Mr. Ozren Laganin**, Ministry of Spatial Planning, Construction and Ecology

[o.laganin@mgr.vladars.rs](mailto:o.laganin@mgr.vladars.rs)

Team of technical experts:

Mrs. Maja Maretic Tiro/Ms. Jasmina Comic [maja.maretic-tiro@enova.ba](mailto:maja.maretic-tiro@enova.ba)

Mr. Azrudin Husika [husika@mef.unsa.ba](mailto:husika@mef.unsa.ba)

Mrs. Melisa Ljuša [melisa.ljusa@gmail.com](mailto:melisa.ljusa@gmail.com)

Mr. Milan Mataruga [milan.mataruga@sf.unibl.org](mailto:milan.mataruga@sf.unibl.org)

