

# Regional climate cooperation ECRAN Environment and Climate Regional Accession Network

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This Project is funded by the European Union



Project implemented by Human Dynamics Consortium

# Overview of National system



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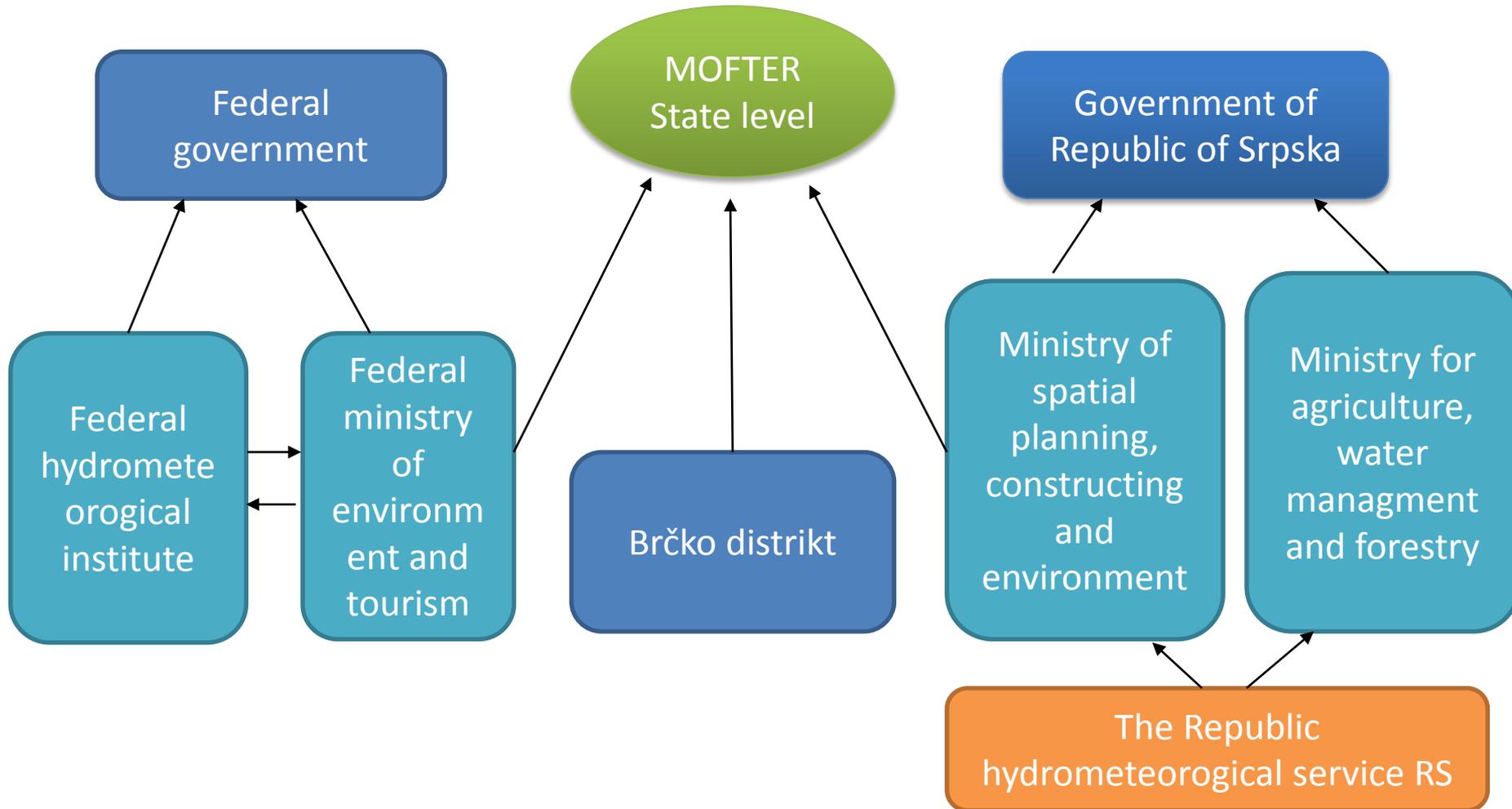


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- BiH is sovereign state with decentralized political and administrative structure. There are two Entities (Federation of Bosnia and Herzegovina and The Republic of Srpska) and Brčko District.
- In the environment sector in BiH, Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina (MOFTER) is at the state level responsible for coordinating activities and harmonizing plans of the Entity authorities at the international level, while the questions about the environment in BiH responsible government entities. Appropriate authorities are the Ministry of Environment and Tourism of the Federation BiH, Ministry of Physical Planning, Civil Engineering and Ecology (which is Focal Point to the UNFCCC) and the Department of Spatial Planning and Property Affairs of Brcko District.



# Scheme of data circulation



- The most important ratified international agreements in the field of environmental protection include the United Nations Framework Convention on Climate Change (UNFCCC). Bosnia and Herzegovina (BiH) became a party to the United Nations Framework Convention on Climate Change (UNFCCC) on December 6, 2000.
- BH is submitted to the Secretariat of the Convention Initial National Communication under the UN Framework Convention on Climate Change in 2010 . In October 2013, adopted the Second National Communication to the UNFCCC and forwarded to the Secretariat of the Convention.



# The legal framework

- Protecting the environment and the status of development of emissions inventories in Bosnia and Herzegovina is primarily prescribed by the Environmental Protection and laws on the protection of air FBiH and RS, which are currently in force. These laws should emphasize the following:
- Ministry of Physical Planning, Civil Engineering and Ecology is responsible for the overall quality of environmental protection in RS.
- Republic Hydrometeorological Service RS leads the air quality information system, and prepares and publishes annual and monthly reports on the condition of air quality in the RS. This institution is also responsible for creating an inventory of greenhouse gas emissions in RS.



- At the level of BiH there is no institution for the environment and inventory of GHG, and reporting to the UNFCCC GHG inventory includes integrated for the entire BiH
- At both National Communications were participating individual experts in various fields because there is no National Institutions in charge of the preparation of GHG inventory.
- Creating of BUR BiH is finished, funded by UNDP, which complete version is expected to the end of this year (emission inventory 2010 and 2011).



# Completeness and non-estimates in Inventory

- For the first time BiH completed inventory of greenhouse gases for FBU for 2010 and 2011 year
- The main problem with creating an inventory is to collect input data. At the level of Bosnia and Herzegovina as well as at the entity level, statistics are not adjusted in a way that matches the input data according to the IPCC methodology. Due to the absence of any register of pollutants have not been able to collect all of each pollutant.



Година	2010.								
Гас	CO <sub>2</sub> емисија (Gg)	CO <sub>2</sub> понори (Gg)	CH <sub>4</sub> (Gg)	N <sub>2</sub> O (Gg)	N O <sub>x</sub> (Gg)	CO (Gg)	NMVOCs (Gg)	SO <sub>x</sub> (Gg)	
<b>Укупна емисија</b>	22.402	-6.476	171	7	85	129	23	461	
<b>1. Енергија</b>	20.534	NE	36	NE	84	120	22	459	
А. Сагоривање горива (секторски приступ)	20.534		2	NE	84	120	22	459	
1. Енергетика	15.151		NE	NE	46	3	1	407	
2. Производне индустрије и грађевинарство	1.331		NE	NE	4	2	NE	30	
3. Транспорт	3.223		NE	NE	33	101	19	5	
4. Остали сектори	829		1	NE	1	13	1	18	
5. Остало	NE		NE	NE	NE	NE	NE	0	
Б. Фугитивне емисије из горива	NE		34		NE	NE	NE	NE	
1. Чврста горива			34		NE	NE	NE	0	
2. Уље и природни гас			NE		NE	NE	NE	0	
<b>2. Индустриски процеси</b>	1.868	NE	NE	NE	NE	9	1	2	
А. Минерални производи	708				NE	NE	NE	NE	
Б. Хемијска индустрија	NE		NE	NE	NE	NE	NE	NE	
Ц. Производња метала	1.159		NE	NE	NE	9	NE	1	
Д. Остала производња	NE		NE	NE	NE	NE	1	NE	
Е. Производња халокарбоната и SF <sub>6</sub>									
Ф. Потрошња халокарбоната и SF <sub>6</sub>									
Г. Остало	NE		NE	NE	NE	NE	NE	NE	
	NE			NE				NE	
<b>2. Употреба растварача и других производа</b>								NE	
<b>3. Пољопривреда</b>			46	7	NE	NE	NE	NE	
А. Цријевне ферментације			40						
Б. Ђубрива			6	1			NE		
Ц. Култивација рике			NO				NO		
Д. Пољопривредна земљишта				6			NE		
Е. Прописано паљење савана			NO	NO	NO	NO	NO		
Ф. Теренско спаљивање пољопривредних остатака			NE	NE	NE	NE	NE		
Г. Остало			NE	NE	NE	NE	NE		
<b>5. Промјена намјене земљишта и шумарство (понори)</b>	NE	-6.476	NE	NE	NE	NE	NE	NE	
А. Шуме и дрвна биомаса	NE	-6.476							
Б. Промјена намјене шуме и травнатих површина	NE	NE	NE	NE	NE	NE	NE		
Ц. Напуштена земљишта		NE							

Година	2011.									
Гас	CO <sub>2</sub> емисија (Gg)	CO <sub>2</sub> понори (Gg)	CH <sub>4</sub> (Gg)	N <sub>2</sub> O (Gg)	NO <sub>x</sub> (Gg)	CO (Gg)	NMVOCs (Gg)	SO <sub>x</sub> (Gg)		
<b>Укупна емисија</b>	25.297	-6.174	177	8	93	133	25	531		
<b>1. Енергија</b>	23.248	NE	39	NE	93	123	22	529		
А. Сагоривање горива (секторски приступ)	23.248		2	NE	93	123	22	529		
1. Енергетика	17.558		NE	NE	54	4	1	473		
2. Производне индустрије и грађевинарство	1.492		NE	NE	4	2	NE	31		
3. Транспорт	3.274		NE	NE	34	103	19	5		
4. Остали сектори	924		1	NE	1	15	2	20		
5. Остало	NE		NE	NE	NE	NE	NE	NE		
Б. Фугитивне емисије из горива	NE		36		NE	NE	NE	NE		
1. Чврста горива			36		NE	NE	NE	NE		
2. Уље и природни гас			NE		NE	NE	NE	NE		
<b>2. Индустриски процеси</b>	2.049	NE	NE	NE	NE	10	3	2		
А. Минерални производи	782				NE	NE	NE	NE		
Б. Хемијска индустрија	NE		NE	NE	NE	NE	NE	NE		
Ц. Производња метала	1.267		NE	NE	NE	9	NE	1		
Д. Остала производња	NE		NE	NE	NE	NE	3	1		
Е. Производња халокарбоната и SF <sub>6</sub>										
Ф. Потрошња халокарбоната и SF <sub>6</sub>										
Г. Остало	NE		NE	NE	NE	NE	NE	NE		
<b>3. Употреба растварача и других производа</b>	NE			NE				NE		
<b>4. Пољопривреда</b>			45	7	NE	NE	NE	NE		
А. Цријевне ферментације			39							
Б. Ђубрива			6	1			NE			
Ц. Култивација рике			NO				NO			
Д. Пољопривредна земљишта				6			NE			
Е. Прописано паљење савана			NO	NO	NO	NO	NO			
Ф. Теренско спаљивање пољопривредних остатака			NE	NE	NE	NE	NE			
Г. Остало			NE	NE	NE	NE	NE			
<b>5. Промјена намјене земљишта и шумарство (понори)</b>	NE	-6.174	NE	NE	NE	NE	NE	NE		
А. Шуме и дрвна биомаса	NE	-6.174								
Б. Промјена намјене шуме и травнатих површина	NE	NE	NE	NE	NE	NE	NE			
Ц. Напуштена земљишта		NE								

## Key categories

Key Source	Gas	CO <sub>2</sub> eq (Gg)	%	The cumulative percentage
1A1 Energy Industries	CO <sub>2</sub>	15.151,37	53,63%	53,63%
1A3b Transport	CO <sub>2</sub>	3.176,89	11,25%	64,88%
4D Agricultural Soils	N <sub>2</sub> O	1.961,46	6,94%	71,82%
6A Solid Waste Disposal on Land	CH <sub>4</sub>	1.787,95	6,33%	78,15%
1A2 Manufacturing Industries and Construction	CO <sub>2</sub>	1.331,44	4,71%	82,86%
2C1 Iron and Steel Production	CO <sub>2</sub>	993,50	3,52%	86,38%
4A A Enteric Fermentation	CH <sub>4</sub>	841,02	2,98%	89,36%
1B1a Fugitive emissions from fuels (Solid Fuels)	CH <sub>4</sub>	710,59	2,52%	91,87%
1A4b Residential Sector	CO <sub>2</sub>	569,57	2,02%	93,89%
2A1 Cement Production	CO <sub>2</sub>	474,92	1,68%	<b>95,57%</b>

Key Source	Gas	CO <sub>2</sub> eq (Gg)	%	The cumulative percentage
1A1 Energy Industries	CO <sub>2</sub>	17.558,13	56,06%	56,06%
1A3b Transport	CO <sub>2</sub>	3.233,30	10,32%	66,38%
4D Agricultural Soils	N <sub>2</sub> O	1.999,74	6,38%	72,77%
6A Solid Waste Disposal on Land	CH <sub>4</sub>	1.883,61	6,01%	78,78%
1A2 Manufacturing Industries and Construction	CO <sub>2</sub>	1.492,20	4,76%	83,55%
2C1 Iron and Steel Production	CO <sub>2</sub>	1.095,57	3,50%	87,04%
4A A Enteric Fermentation	CH <sub>4</sub>	822,23	2,63%	89,67%
1B1a Fugitive emissions from fuels (Solid Fuels)	CH <sub>4</sub>	762,47	2,43%	92,10%
1A4b Residential Sector	CO <sub>2</sub>	567,33	1,81%	93,91%
2A1 Cement Production	CO <sub>2</sub>	446,64	1,43%	<b>95,34%</b>



# Critical Issues

Sectors	AD	EF	Method
<b>Energy</b>	<ul style="list-style-type: none"> <li>- Difficulties in collecting individual data of pollutants due to the lack of a registry of polluters</li> <li>- Data from the Entity Statistics and Agency for statistics BiH are not compliant with the input data according to the IPCC methodology</li> <li>- In the transport sector in FBuR we used data on fuel consumption obtained COPERT IV, as a mass balance approach, we used fuel derived from gas stations. Because of this approach in the calculation, totally fuel is spent in transportation because we did not have an adequate categorized division of statistics data that would except fuels consumed in transport could divide on other sectors</li> </ul>	<ul style="list-style-type: none"> <li>- Due to the inability to collect individual data on all pollutants, it is impossible weighted emission factors (eg. With pollutants that use coal as an energy source) at sectoral approach, but in this case using emission factors as in the reference approach</li> <li>- Emission factors in the transport sector (sectoral approach) were used according to the IPCC methodology for fuel combustion, while the total fuel consumption in the energy sector used for the reference approach</li> </ul>	The methodology of the IPCC 1996
<b>Industrial Processes</b>	<ul style="list-style-type: none"> <li>- Difficulties in collecting data in the field of industrial process due to the lack of a list of all types of industry in BiH</li> <li>- Entity statistics as well as statistics on the state level is not developed to the level that can be traced IPCC methodology (Eg. statistics in this country, accompanied the production of a certain product in monetary value rather than the quantity of produced products)</li> <li>- In the chemical industry it is almost impossible to get information about solvents and their use in industry</li> <li>- Due to lack of data and the short time period in FBUR not done fugitive emissions in the oil refinery Brod, and it is planned to be done in the GHG inventory for the Third National Communication</li> </ul>	<ul style="list-style-type: none"> <li>- Emission factors in the process of developing GHG inventories for the sector of industrial processes are mainly used in the IPCC 1996, and if there was some kind of product (eg, the number of produced pairs of shoes per pair of shoes and not produced tires used for shoes) for which there was no emission factor in the IPCC methodology was used motodologija CORINER</li> </ul>	The methodology of the IPCC 1996
<b>Agriculture</b>			
<b>Land- use Change and Forestry</b>			
<b>Waste</b>			



# In progress and some questions

Sectors	AD	EF
<b>Energy</b>	<ul style="list-style-type: none"> <li>- define a way of collecting input data</li> <li>- improve the statistics (RS, FBIH and Agency for statistics BiH) so that the data required as input data correspond to inputs from the IPCC methodology</li> <li>- On which way make assess of the relevance of the data if we do not have accurate input data (eg, in the transport sector we have the estimate fuel consumption based on estimates from COPERT IV, but we have no real consumption of these fuels in other sectors, so that the inventory of GHG in BiH can be judged to be fuel is consumed only in traffic which is not true)</li> </ul>	<ul style="list-style-type: none"> <li>- When we create an inventory of GHG emissions, we use default emission factors according to the IPCC. We expect of ECRAN project that we will be able to create our own emission factors especially for coals</li> </ul>
<b>Industrial Processes</b>	<ul style="list-style-type: none"> <li>- define a way of collecting input data</li> <li>- improve the statistics (RS, FBIH and Agency for statistics BiH) so that the data required as input data correspond to inputs from the IPCC methodology</li> <li>- Recommendation: On the way to collect data on solvents, if no such statistics is specified, and industry does not have the correct information. Is there an opportunity to evaluate (for example a European standard per unit of product)</li> </ul>	
<b>Agriculture</b>		
<b>Land- use Change and Forestry</b>		
<b>Waste</b>		



*Thank you for your attention*



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