

Regional Training Seminar on assessment of GHG Inventories in the Forestry and Other Land Use

Kosovo

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Overview of National system

- Institutions

- Ministry of Environment and Spatial Planning, (*Policies, National contact point*)
- Kosovo Environmental Protection Agency (*Data collection, Inventory of GHG, Reporting*)
- Ministry of Agriculture, Forestry and Rural Development, Kosovo Forestry Agency, Kosovo Cadastral Agency, Kosovo Statistical Agency, (*Data provider, statistics, analyses, sector experts*)

- Legislation

- Law on Environmental Protection,
- Law on Air Protection,
- Climate Change Strategy (CCS) 2014-2024 (MESP)
- Climate Strategy on Forestry Sector (Draft/ MAFRD).

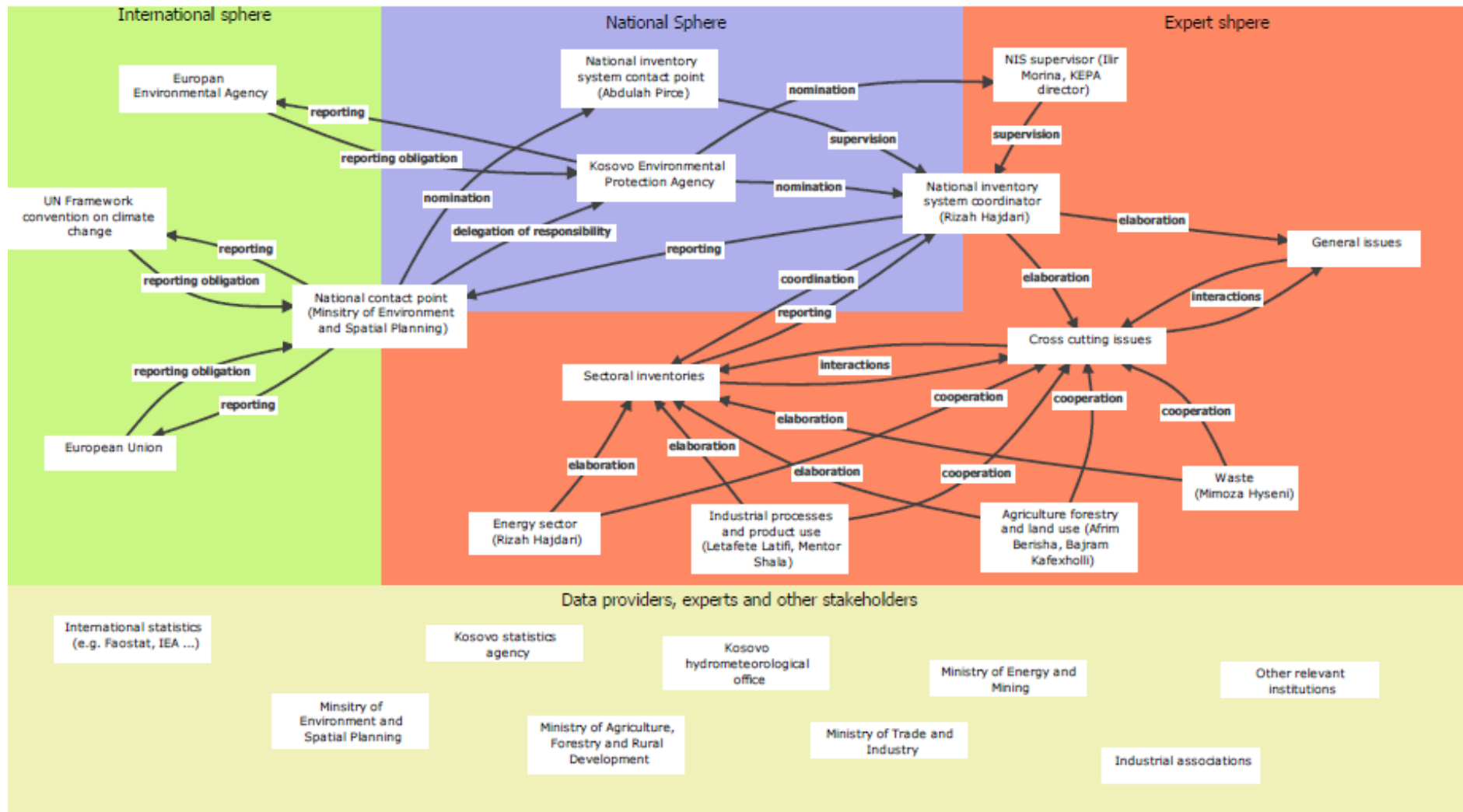


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Organisation-NIS



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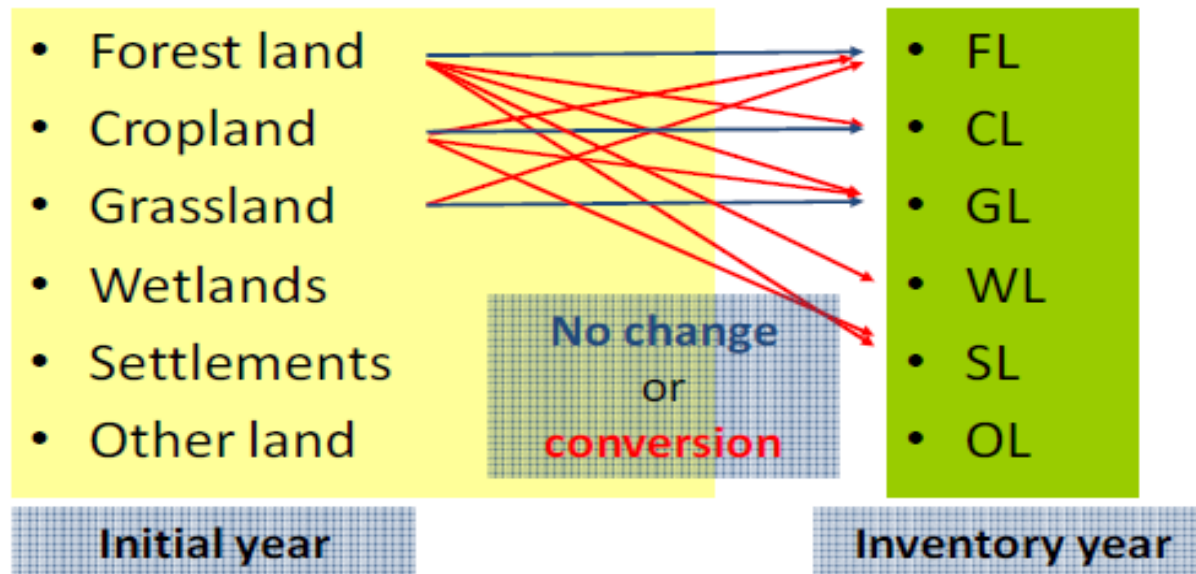
Completeness

- Kosovo has inventory of GHG for 2008, 2009, 2010, 2011 and 2012.
- **Years 2008 and 2009**
 - Experts from Charles University, Czech Republic, Under the project “Transfer of Czech Experience: Developing Kosovo Greenhouse Gas (GHG) Inventory Management System”. (Supported by UNDP)
 - During the process National expert were trained and collect relevant data.
- **Years 2010, 2011, 2012**
 - From KEPA under the “Transfer of Czech Knowledge: Activating Kosovo Greenhouse Gas (GHG) Monitoring System.” (Supported by UNDP),
 - National Experts- Assessment, collect data, calculation, NIR, with supervising from Czech Expert.
- **Year 2013 in the process...**
 - KEPA experts ...



Methodology/Used approaches

- IPCC 2006 Methodology for 3B Category,
- Quantifying Carbon Stock Changes in carbon pools/stocks (loss or accumulation of carbon),
- Default emission factors from IPCC 2006.
- Land use Conversion Matrix for six categories.



Methodology-Land type manager

Climate Region	Cool Temperate Dry ▼	Soil Type	High Activity Clay Mineral ▼
Forest Land Data			
Ecosystem type	Temperate steppe ▼	Continent type	Unspecified ▼
Species	Other Broadleaf ▼	Age class (yr)	Unspecified ▼
Natural Forest	<input checked="" type="radio"/>	Growing stock level (m3/ha)	101-200 ▼
Plantation	<input type="radio"/>		
	Carbon fraction of aboveground forest biomass (tonne C/tonne d.m.)		0.500 ▼
	Ratio of below-ground biomass to above-ground biomass (R) (t root d.m./ t shoot d.m.)		0.250 ▼
	Biomass conversion and expansion factor for wood and fuelwood removal (BCEFr) (t / m3		1.170 ▼
	Above-ground biomass in forests (t d.m. / ha)		75.300 ▼
	Above-ground biomass growth in plantation/natural forests (t d.m. /ha/yr)		1.250 ▼
	Reference soil organic carbon (SOC) stock (t C / ha)		50.000 ▼
	Litter carbon stocks of mature forests (t C / ha)		28.000 ▼
	Relative stock change factor		
	Land use (FLU)		1.000
	Management (FMG)		1.000
	Input (FI)		1.000



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Data sources

- Kosovo National Forest Inventory, 2002 and 2012 (MAFRD & KFA),
- Agricultural Households Survey (MAFRD&KSA),
- Other data from,
 - Ministry of Agriculture, Forestry and Rural Development,
 - Kosovo Forestry Agency,
 - Kosovo Statistical Agency,
 - Kosovo Cadastral Agency.



Data sources

	2009	2010	2011	2012
LAND USE Categories	ha	ha	ha	ha
Forest land	474940	476960	478980	481000
Cropland	319020	315680	312340	309000
Grassland	187840	188760	189680	190600
Waterl and	6000	6000	6000	6000
Settlements	45600	46400	47200	48000
Other land (Wasteland & Unclassified)	57400	57000	56600	56200
TOTAL	1090800	1090800	1090800	1090800



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Land use Conversion Matrix/ Year 2012

Inventory year 2012							
	FL	CL	GL	WL	SL	OL	Final area
FL	478980	2020					481000
CL		309000					309000
GL		920	189680				190600
WL				6000			6000
SL		400			472 000	400	48000
OL						56200	56200
Initial area	478980	312340	189680	6000	472000	56600	1090800



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Specific data for Forestry

The forest area by forest composition and stand structure (ha)

Forest composition	Stand structure				
	Regeneration	Even-aged	Two-storied	Uneven-aged	Total
Coniferous	2200	6600	6200	8800	23800
Mixed	0	400	3200	4200	7800
Broadleaved	45400	236000	123600	44400	449400
Total	47600	243000	133000	57400	481000

Harvesting (cutting) (ha)

(m ³)			
Year	Public Forest	Private forest	Public +Private
2010	15,149.00	77,958.96	93,107.96
2011	35,790.67	133,910.21	169,700.88
2012	35,496.27	160,460.03	195,956.30
Total	86,435.94	372,329.20	458,765.14



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Results 2012

Inventory Year: 2012			
Categories	(Gg)		
	Net CO2 emissions / removals	Emissions	
		CH4	N2O
3.B - Land	-39.06	0	0
3.B.1 - Forest land	-42.92	0	0
3.B.1.a - Forest land Remaining Forest land	-39.21		
3.B.1.b.i - Cropland converted to Forest Land	-3.70		
3.B.3 - Grassland	3.86	0	0
3.B.3.b.ii - Cropland converted to Grassland	3.86		



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Biomass burning

3.C - Aggregate sources and non-CO2 emissions sources on land

Categories	Activity Data	Emissions 2012		
	Area burnt i ha	CH4 (Gg)	N2O (Gg)	NOx (Gg)
3.C.1 - Emissions from biomass burning		0,554	0,029	0,0135
3.C.1.a - Biomass burning in forest lands	5604,53	0,521	0,028	0
3.C.1.b - Biomass burning in croplands	3090	0,033	0,0008	0,013

- Non-CO2 emission estimate

$$Emission = A \bullet EF$$

A = activity data

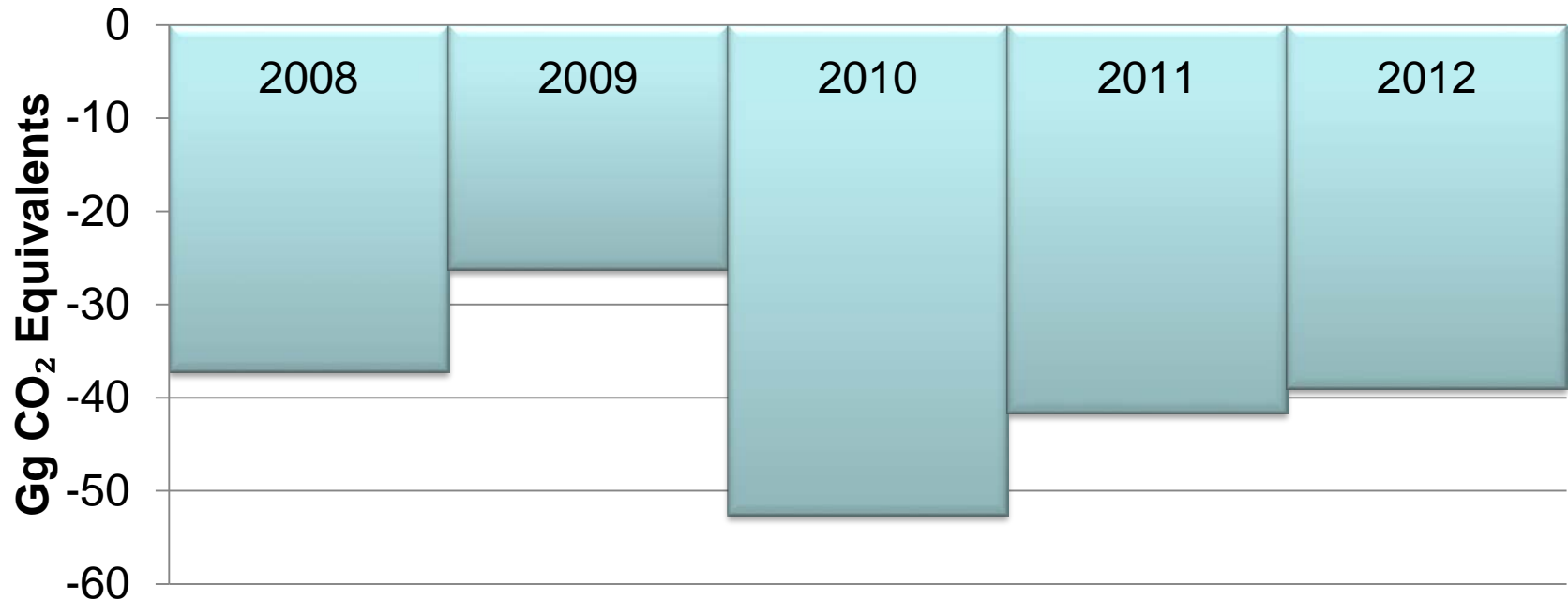
EF = emission factor

The general approach calculating the non-CO2 emissions



Time series results 2008-2012

Emissions of CO₂ - Forestry and Other Land Use



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Reporting

- Actual Reporting
 - National Reporting (Government and Kosovo Assembly)
 - European Environment Agency/EEA
- No Reporting
 - UNFCCC Convention
 - FAO



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Categories - IPCC 2006

➤ 3. Agriculture, Forestry and Other Land

3B Land / Subcategories

✓ 3B1 Forest Lands

✓ 3B2 Croplands

✓ 3B3 Grasslands

✓ 3B4 Wetlands

✓ 3B5 Settlements

✓ 3B6 Other lands

3 C / Aggregate sources and non-CO2 emissions sources on land

3.C.1 - Emissions from biomass burning

3.C.1.a - Biomass burning in forest lands

3.C.1.b - Biomass burning in croplands



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Critical issues/Needs

- Improve data:
 - Forestry
 - Other Land use types.
- Improve Cooperation:
 - Kosovo Statistical Office, Ministry of Agriculture, Agency of Forestry, Cadastral Agency.
- Improve Inventory,
 - Quality control, Quality assurance, Quality of data...
- Capacity building
 - Specific trainings and seminars.
- Completeness of legislation (No specific law for Climate Change).
- Define Referent year!!!



Progress made

- Climate Change Strategy, (Policies),
- Preliminary inventory (2008-2012), (GHG Inventory),
- National Inventory Report 2012, (Reporting),
- Reporting to the European Environment Agency 2008-2013 (International Reporting),
- Group of national experts trained for relevant sectors according IPCC 2006 (Methodology),
- CLC 2006 to 2012 Completed (Improve data quality)



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Identified gaps

- Gap of data for some subcategories,
- Lack of time series data,
- Gap of relevant studies and analyses in this sector,
- Limited knowledge of relevant national institutions,
- Limited knowledge of expert judgment in this sector,
- Lack of experience.
- Referent year (Not yet determined)!!



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Thank you for your attention!

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