



## NATIONAL ENVIRONMENTAL AGENCY

### Climate change, policies and data management in Albania

14th Joint Task Force on Environmental Statistics and Indicators,  
ROME, 02/10/2017 - 03/10/2017

### Short presentation related to the three national communications done until now

National Communication	Main Activities - Years	Results
Initial National Communication	Included seven main GHG-emitting sectors: (i) energy; (ii) industrial processes; (iii) agriculture and livestock; (iv) land use change and forestry (LUCF); (v) waste; (vi) solvents; and (vii) international bunkers. Estimated emissions for the year 1995.	The inventory was the basis for the GHG mitigation analysis, which projected GHG emissions for each year up to the end of 2020.
Second National Communication	Built on the results of the INC and the 2004 Technology Needs Assessment (TNA).  Estimated GHG emissions and removals to the period 1990-2000, 2000 was used as the base year.  Estimated GHG emissions for the following sectors: i) energy; ii) industrial processes; iii) agriculture; iv) waste; v) LUCF; and vi) solvent and other product uses. Overall uncertainty in the second GHG inventory was much less than for the INC though data gaps remained in certain categories, particularly fuel wood consumption.	The inventory of the SNC was the basis for the GHG mitigation analysis, which was extended to 2025 and had a pronounced focus on fuel combustion technologies (the main emitting sector).

**Third national communication**  
**Includes 5 main GHG – emitting sectors.**  
**Covers the refined time-series for the period 2000 – 2009, and the**  
**base year is 2005.**  
**Solvents were not considered.**  
**Were considered three direct GHGs: CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O,**  
**three indirect GHGs: CO, NO<sub>x</sub>, SO<sub>2</sub> and NMVOC,**  
**emissions and removals expressed in CO<sub>2</sub> Eq.**

Albania's third GHG inventory covers all sources and sinks as well as all gases as mandated by 10/CP2

Five main modules				
ENERGY	INDUSTRIAL PROCESSES	AGRICULTURE	WASTE	LUCF

The national inventory has considered :

three direct GHGs

- CO<sub>2</sub> - CH<sub>4</sub> - N<sub>2</sub>O

and

three indirect GHGs

- CO - NO<sub>x</sub> - SO<sub>2</sub> and NMVOC.

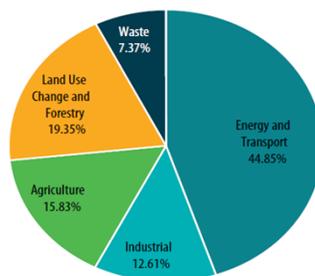
**Total direct GHG emissions**

2000	2005	2009
9,075.0 Gg	8,863.3 Gg of CO <sub>2</sub> eq  (a decrease of 211.70 Gg)	LUCF sector – emission are diminishing  Industrial Processes sector – emission are increasing

**Total emissions of indirect GHG emissions**

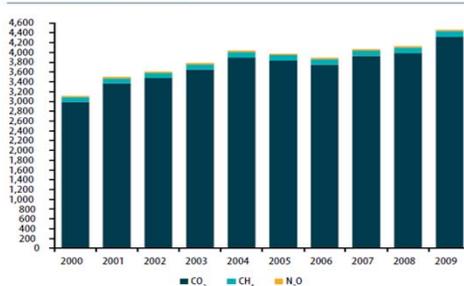
2000	2005	2009
	CO-172,21 Gg SO <sub>2</sub> -0,91 Gg NO <sub>x</sub> – 25,89 Gg NMVOC – 27,75 Gg	

Figure 1 CO<sub>2</sub> eq. emissions from all economic sectors for the year 2005 (%)



## Energy/transport sector emissions (Gg)

Figure 2 Direct GHGs from Energy Sector for three main GHGs, 2000 - 2009 (Gg)



The Energy sector is the main source of GHG emissions in Albania.

Energy production is based mainly on :

- hydropower,
- domestic and imported fuels,
- and fuel wood used for

electricity production, heat production and for transport.

**CO<sub>2</sub> emissions from the energy sector accounts for 97.07% of overall emissions in 2005.**

## GHG emissions from LUCF

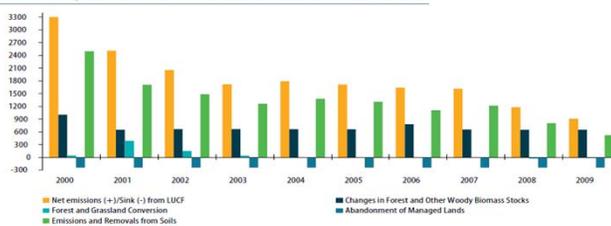
Emissions and removals of greenhouse gases sector

From six land uses

Forests	Cropland (CO <sub>2</sub> ),	Grasslands (CO <sub>2</sub> ),	Wetlands	Settlements	Other lands
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Emissions from the LUCF sector in the year 2005 amounted to 1714 Gg.

Figure 3 Total CO<sub>2</sub> gas emissions from Land-use Change and Forestry (Gg)



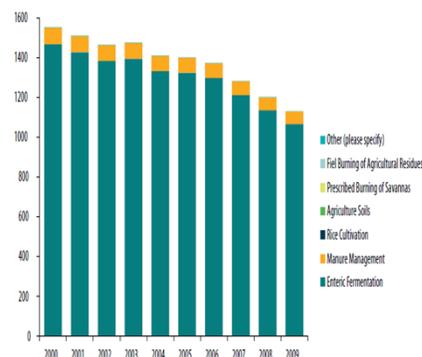
There are specific circumstances in regard to this sector:

1. effectiveness of investments in the implementation of afforestation programs
2. new trends regarding changes of forest land to agricultural land
3. increase in the enforcement of electricity prices in the energy sector, that lead to a fragile and unstable situation with regards to the health of forests.

## GHG emissions from Agriculture (Gg)

1. Around 94.65% of CH<sub>4</sub> gases are emitted by the livestock sector during enteric fermentation and manure management.
2. N<sub>2</sub>O emissions were mainly produced from the application of nitric fertilizers.
3. The emissions of CH<sub>4</sub> and N<sub>2</sub>O as a result of burning agricultural residues are insignificant.

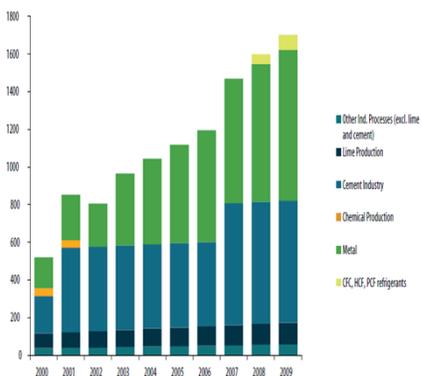
Figure 4 Total emissions in CO<sub>2</sub> eq. from Agriculture sub-sectors, 2000 - 2009 (Gg)



## GHG emissions from Industrial Processes Sector (Gg)

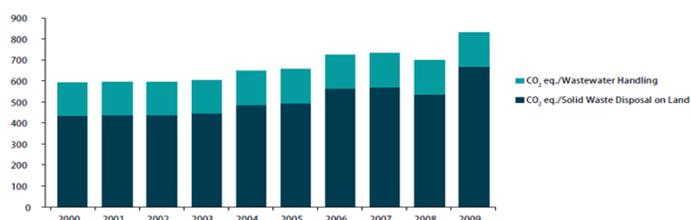
1. The Industrial sector has been expanding due to accelerated annual growth rates of metal and cement production.
2. In 2005 total emissions from the whole Industrial subsectors were 1,118 Gg of CO<sub>2</sub>eq.

Figure 5 CO<sub>2</sub> eq. emissions from Industrial Sub-sectors, 2000 - 2009 (Gg)



## GHG Emissions from Waste Sector (Gg)

Figure 6 CO<sub>2</sub> eq. emissions from Waste subsectors, 2000 - 2009 (Gg)



1. From Figure 6, it can be seen that the main contributor of GHG emissions from the Waste Sector is the solid waste disposal on land subsector.
2. Methane emissions for the whole period are also found to be increasing as are nitrous oxide and methane emissions for the wastewater handling sub sector.
3. For the year 2005 the total CO<sub>2</sub> eq. emissions for the waste sector amounted to 652.96 Gg.

## Sources of Information for the GHG Inventory

- All activity data concerning each sector are national. The main activity data source/provider are :
  - Institute of Statistics (INSTAT)
  - Ministry of Environment
  - Ministry of Transport and Infrastructure
  - Ministry of Energy and Industry
  - National Agency for Natural Resources
- Ministry of Agriculture, Rural Development and Water Administration
- Extractive Industries Transparent Initiative
  - The Bank of Albania

- General Directory of Customs and different data bases
- surveys and studies assisted by international organizations (including World Bank, UNDP, EBRD, EIB, FAO, EU, etc.)
- Public/private universities and different NGOs.

### **Specific considerations, data uncertainties, barriers**

- The increase in cement production, there was a need for a detailed study on CO2 equivalent emissions from cement factories
  - Fuel wood consumption/transport sector : the inventory has maintained a strong data validation focus on the energy and transport
- There was a high data uncertainty foreseen in the industrial processes and solvents sectors, due to both data shortcomings and lack of trained inspectors
  - The calculated level of uncertainty is 9.946%, for the year 2005
- The liberalization, privatization and subsequent fragmentation of the oil and energy sector have made it more difficult to obtain data

## GHGs considered

Table 2.3: Anthropogenic greenhouse gas emissions in Albania, by gas and sector (In Gg)  
Source: IPCC Methodology-Albania, years 2000-2009

Gases	Sectors	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CO <sub>2</sub>	1 Energy	2,987.90	3,372.10	3,477.95	3,648.75	3,896.11	3,835.33	3,749.38	3,925.06	3,983.30	4,319.45
	2 Industrial Processes	520.00	852.00	806.00	966.00	1,043.00	1,118.00	1,195.00	1,470.00	1,547.00	1,623.12
	3 Agriculture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4 Land-Use Change & Forestry	3303.00	2596.00	2055.00	1719.00	1790.00	1715.00	1638.00	1617.00	1179.00	911.00
	5 Waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>6,810.90</b>	<b>6,731.10</b>	<b>6,339.95</b>	<b>6,333.75</b>	<b>6,728.11</b>	<b>6,668.33</b>	<b>6,582.38</b>	<b>7,013.06</b>	<b>6,709.30</b>	<b>6,853.57</b>
CH <sub>4</sub>	1 Energy	4.73	4.75	4.92	5.13	5.43	5.34	5.38	5.45	5.50	5.50
	2 Industrial Processes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3 Agriculture	73.78	71.77	69.58	70.12	69.58	66.66	65.32	60.96	57.21	53.70
	4 Land-Use Change & Forestry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5 Waste	24.14	24.24	24.19	24.65	26.69	26.96	30.30	30.66	29.08	35.28
	<b>Total</b>	<b>102.65</b>	<b>100.76</b>	<b>98.69</b>	<b>99.90</b>	<b>101.70</b>	<b>98.96</b>	<b>101.00</b>	<b>97.07</b>	<b>91.79</b>	<b>94.48</b>
N <sub>2</sub> O	1 Energy	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10
	2 Industrial Processes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3 Agriculture	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	4 Land-Use Change & Forestry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5 Waste	0.27	0.27	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.28
	<b>Total</b>	<b>0.36</b>	<b>0.37</b>	<b>0.37</b>	<b>0.37</b>	<b>0.38</b>	<b>0.38</b>	<b>0.38</b>	<b>0.38</b>	<b>0.39</b>	<b>0.39</b>
CO <sub>2</sub> eq.	1 Energy	3,111.93	3,499.67	3,609.11	3,784.34	4,038.02	3,975.37	3,890.28	4,067.45	4,129.86	4,466.04
	2 Industrial Processes	520.00	852.00	806.00	966.00	1,043.00	1,118.00	1,195.00	1,470.00	1,599.00	1,701.12
	3 Agriculture	1552.48	1510.27	1464.28	1475.62	1464.28	1402.96	1374.82	1283.26	1204.51	1130.8
	4 Land-Use Change & Forestry	3303.00	2596.00	2055.00	1719.00	1790.00	1715.00	1638.00	1617.00	1179.00	911.00
	5 Waste	590.64	592.74	591.69	601.35	647.29	652.96	723.1	730.66	697.48	827.68
	<b>Total</b>	<b>9,078.3</b>	<b>8,962.0</b>	<b>8,527.4</b>	<b>8,546.6</b>	<b>8,981.9</b>	<b>8,864.6</b>	<b>8,821.5</b>	<b>9,169.6</b>	<b>8,810.0</b>	<b>9,036.8</b>

%	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CFC
2000	75,02	23,75	4,12	0,00
2005	75,22	23,45		0,00
2009	75,71	22,07	4,12	0,87

Figure 2.6 CO<sub>2</sub> eq. emissions for the years 2000, 2005 and 2009 (%)

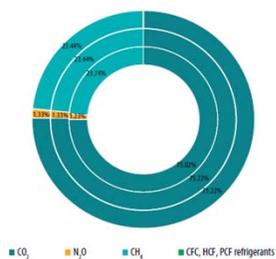


Figure 2.5 CO<sub>2</sub> eq. emissions from all economic sectors for the years 2000, 2005 and 2009 (Gg)

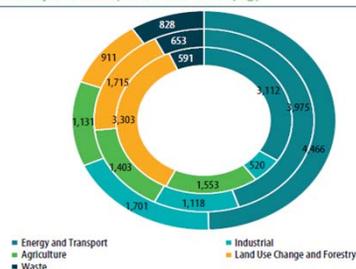


Table 2.4: Anthropogenic indirect greenhouse gas emissions in Albania, (in Gg)

Gases	Sectors	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CO <sub>2</sub>	1 Energy	117.95	118.86	123.32	133.24	152.06	171.17	194.26	222.82	258.53	321.16
	2 Industrial Processes	0.05	0.08	0.08	0.09	0.10	0.11	0.11	0.14	0.15	0.16
	4 Agriculture	1.30	1.26	1.19	1.13	1.03	0.93	0.82	0.68	0.53	0.38
	5 Land-Use Change & Forestry (LUCF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6 Waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total		119.30	120.21	124.59	134.47	153.20	172.21	195.20	223.64	259.21
SO <sub>2</sub>	1 Energy	0.45	0.45	0.47	0.51	0.58	0.65	0.74	0.85	0.98	1.22
	2 Industrial Processes	0.12	0.20	0.19	0.23	0.24	0.26	0.28	0.34	0.36	0.38
	4 Agriculture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5 Land-Use Change & Forestry (LUCF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6 Waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total		0.57	0.65	0.66	0.73	0.82	0.91	1.02	1.19	1.34
NO <sub>x</sub>	1 Energy	17.76	17.90	18.57	20.06	22.90	25.77	29.25	33.55	38.93	48.36
	2 Industrial Processes	0.04	0.06	0.06	0.07	0.08	0.08	0.09	0.11	0.11	0.12
	4 Agriculture	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03	0.02	0.01
	5 Land-Use Change & Forestry (LUCF)	0.17	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6 Waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total		18.02	18.10	18.70	20.18	23.01	25.89	29.37	33.68	39.06
NMVOC	1 Energy	18.57	18.71	19.42	20.98	23.94	26.95	30.58	35.08	40.70	50.56
	2 Industrial Processes	0.37	0.61	0.58	0.69	0.75	0.80	0.85	1.05	1.11	1.16
	4 Agriculture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5 Land-Use Change & Forestry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6 Waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total		18.94	19.32	19.99	21.67	24.69	27.75	31.44	36.13	41.81

Source: IPCC Methodology-Albania, years 2000-2009

Figure 2.7 CO emissions from all economic sectors for the years 2000, 2005 and 2009 (Gg)

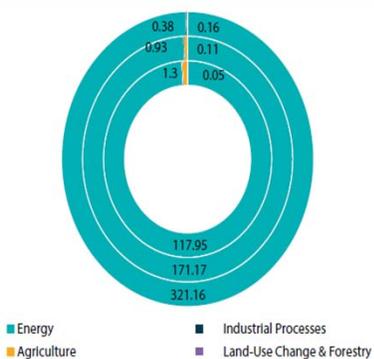
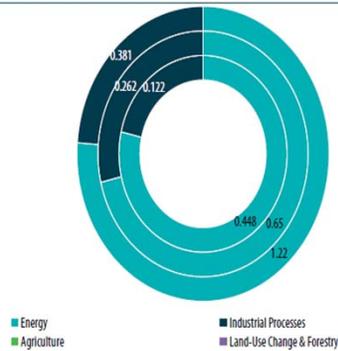


Figure 2.8 SO<sub>2</sub> emissions from all economic sectors for the years 2000, 2005 and 2009 (Gg)



## Previous Vulnerability and Adaptation (V&A) assessments

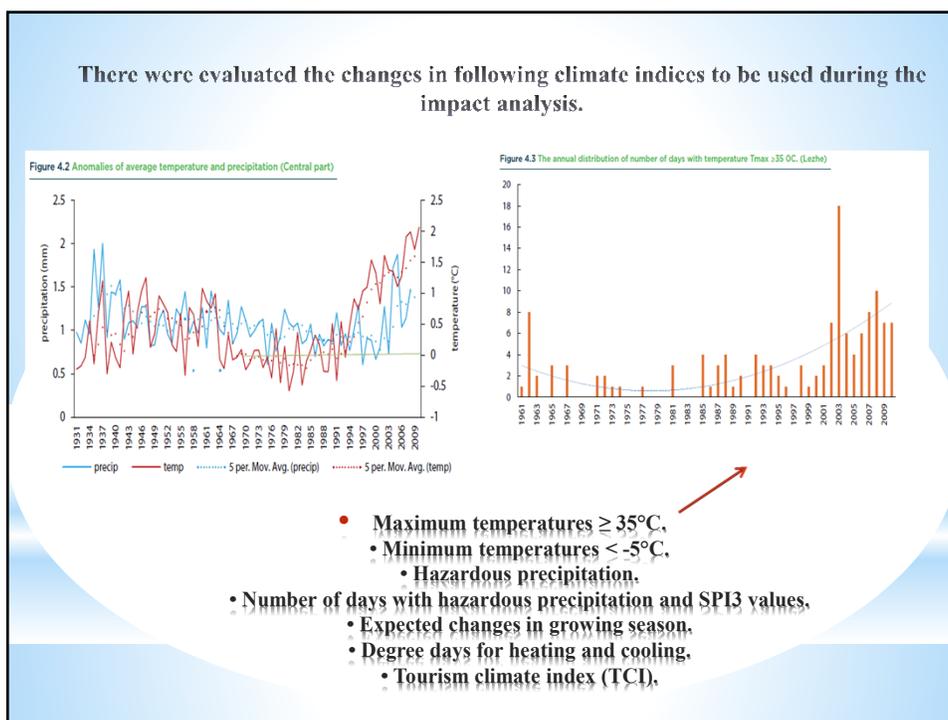
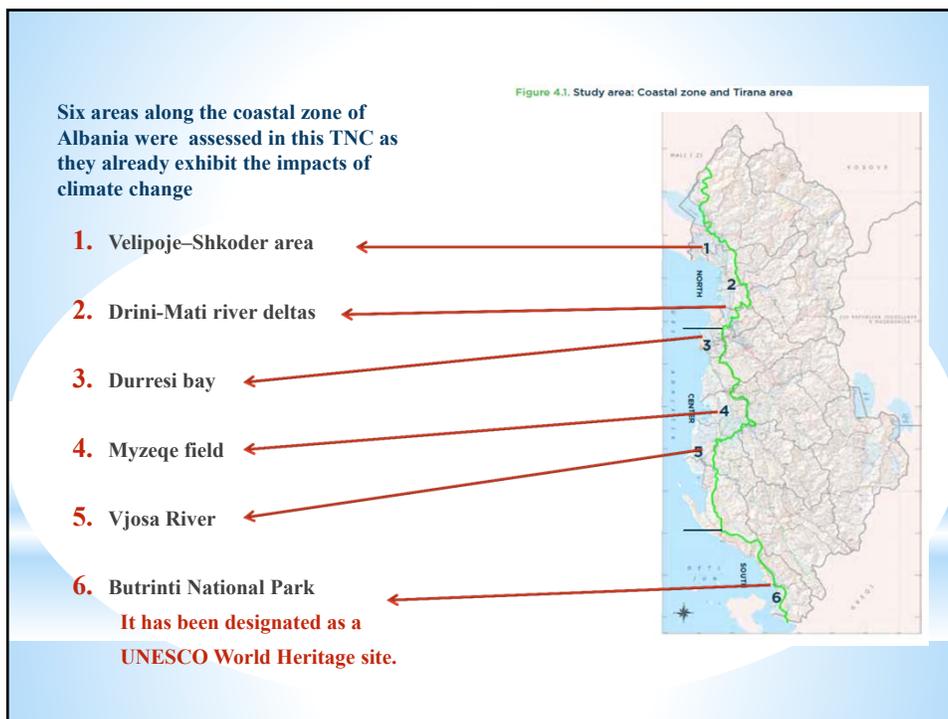
1. Albania has been implementing the Climate Change Convention since the preparation of its Initial National Communication, submitted in 2002.
2. The third National Communication it is focused in all the coastal zone of Albania.

Table 4.1: Previous V&A assessments in Albania

National Communication/Project	Geographic Areas Covered	Focus
Implications of Climate Change for the Albanian Coast (Coastal Areas Management Program, UNEP WFP, 1998)	Albanian Coastal Area	Sectors covered: Water, agriculture, forest, energy, biodiversity, health, population and tourism. Climate modelling: future scenarios developed by University of East Anglia for years: 2025, 2050, 2100. Climate impact analysis: empirical models to assess water resources and forestry. For the other sectors: analogue studies and expert judgement. Adaptation: a set of measures proposed by each sector.
Initial National Communication (INCC), 2002	Entire territory - Albania	Sectors covered: Water, agriculture, forest, energy, biodiversity, health, population and tourism. Climate modelling: MAGICC/SCENAR v2.6 baseline 1961-90; future climate scenarios: 2025, 2050 and 2100. Climate impact analysis: empirical/statistical models developed by the team; empirical analogue studies and expert judgement. Adaptation: a set of measures proposed by each sector.
Second National Communication of Albania to UNFCCC (SNC2), 2009	Drini/Oni/Caradei (area from Kukes to Lezha/Plati).	Sectors covered: Water, agriculture, forest, energy, biodiversity, population and tourism. Climate modelling: MAGICC/SCENAR v4.1, 3RD IPCC, baseline 1961-90; future climate scenarios: 2025, 2050, 2080 and 2100. Modelling the impacts in water sector (SWIRMA), energy (E3AP). Other sectors: empirical statistical models developed by the team; empirical analogue studies and expert judgement. Adaptation: a set of measures proposed by each sector and a list of priority projects on adaptation.
Project "Identification and implementation of adaptation response measures in the Drini-Mati River Delta" (GEF/GA/MNDP, 2008-2010)	Protected areas of Korce-Nain and Butrinti Lagoons, situated along Drini (Lezha) and Mati Rivers	Sectors covered: biodiversity, water, agriculture, forest, population and tourism. Climate modelling: MAGICC/SCENAR v4.1, 3RD IPCC, baseline 1961-90; future climate scenarios: 2025, 2050, 2080 and 2100. Impact analysis: Carried out a range of studies (22 reports). Build adaptive capacities in the SNC2 to ensure resilience of the key ecosystems and local livelihoods to climate change. participatory approach to involve local community in risk assessment and adaptation measures prioritization; mainstreaming of climate change in local development plans. Adaptation: developed prioritization criteria for adaptation measures and a list of 11 PPs on adaptation; policy paper to mainstream adaptation in the Drini-Mati area and beyond.
Albania's Third National Communication to UNFCCC	Entire coastal zone of Albania	Sectors covered: water, agriculture, livestock, forest, energy, biodiversity, tourism & population, health. Climate modelling: MAGICC/SCENAR v4.1, 3RD IPCC, baseline 1961-90; and SirocClim2011, IPCC AR4, baseline 1960-2000; future climate scenarios: 2025/2050, 2050, and 2100. Impact analysis: Different modelling tools recommended by UNFCCC (SWIRMA, WARP, COPNET & DWA, etc.), empirical statistical models developed by the team; empirical analogue studies and expert judgement. Adaptation: a set of priority measures taking into account ICM and preparation of Coastal Adaptation Plan.

## Why a focus on coastal areas?

1. Albania's northern low-lying coastal areas bordering the Adriatic Sea and in particular around the Drini and Mati River Delta is "critically vulnerable" to climate change
2. Most of the Adriatic coastal area of Albania is flat and low-lying
3. The permanent risk of inundation to low-lying coastal areas, due to sea level rise and increased flooding
4. Increased beach and cliff erosion
5. The consequent degradation of coastal ecosystems
6. Saltwater intrusion in freshwater systems



## Precipitation

Figure 4.4 Annual distribution of precipitation (mm), Vlore

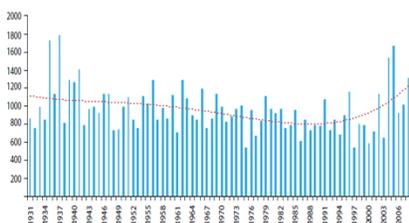
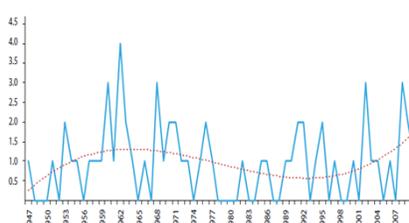
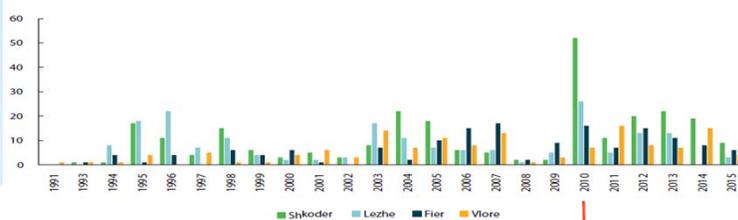


Figure 4.5 Annual number of days with 24h max precipitation (Lezhe)



## Disaster Risk Related to Climate

Figure 4.7 Distribution of number of weather related disasters in different coastal stations



- There is evidence that the rate of disaster events has been increasing during the period of 1993-2013.
- There is a main peak in 2010 in which the losses reaches nearly 0.15 % of the GDP of the country. The average expected losses per year is estimated to be around 370 million of LEK (3.2 million US\$), with a maximum of 4 billion LEK (35.2 million US\$) arising from the Shkodra flood in 2010.



Figure 4.8.1 Annual changes of temperature, average scenario (°C)

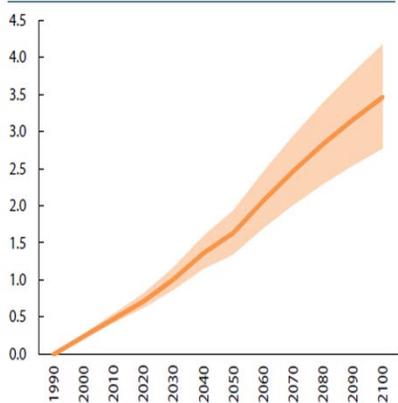
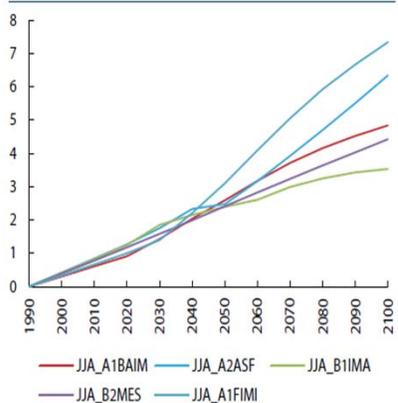


Figure 4.8.2 Summer temperature changes, different scenarios (°C)

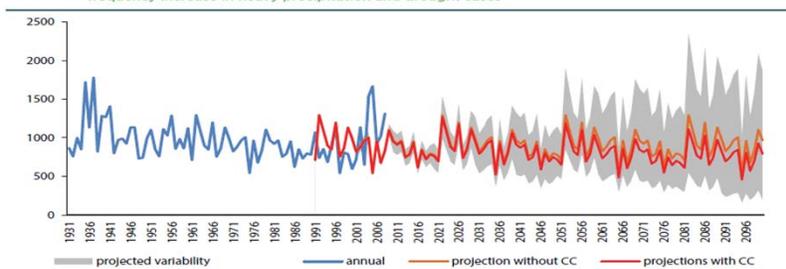


**Climate change scenarios for the Albanian coast (to 2100)**

Table 1.6. Precipitation change projections (%) for different time horizons related to 1990.

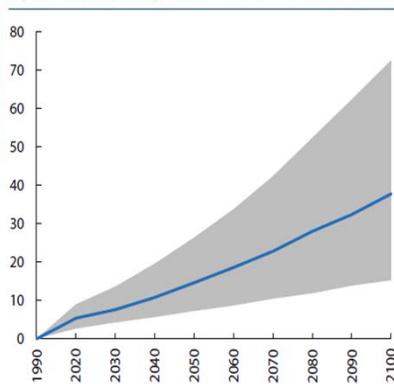
Years	2030	2050	2080	2100
Annual	-3.84 (-35.4 to 27.7)	-8.46 (-56.0 to 47.4)	-14.37 (-78.6 to 81.1)	-18.13 (-89.7 to 94.9)
Winter	-5.96 (-15.9 to 4.0)	-10 (-27.9 to 7.7)	-14.3 (-44.6 to 16.1)	-18.1 (-55.8 to 19.6)
Spring	-2.45 (-11.9 to 7.0)	-7.26 (-25.3 to 10.75)	-14.26 (-45.1 to 16.6)	-17.7 (-55.3 to 19.8)
Summer	-10.4 (-12.8 to -7.9)	-19.7(-24.1 to -15.3)	-41.9 (-49.2 to -34.5)	-50.4 (-59.4 to -41.3)
Autumn	0.5 (-10.1 to 11.1)	-2.5 (-21.3 to 16.3)	-6.9 (-38.1 to 25.2)	-9.5 (-48.1 to 29.1)

Figure 4.12 Annual precipitation projections (mm) without and with climate change (average scenario), central part. The grey field shows the high precipitation variability (5%, 95% quantiles), indicating the likely frequency increase in heavy precipitation and drought cases



## Sea Level Rise

Figure 4.15 Likely changes in annual mean sea level (cm).



Sea level rises of up to an average of 40 cm are expected for the Albanian coast, reaching a maximum of 73 cm by 2100.

Projected sea level rise indicates that most urban areas along Albanian coast will be exposed to higher inundations risks.

- by 2030 Patoku beach is expected to totally disappear while Kune and Seman beaches will only partially remain;
- by 2050 most parts of Kune and Seman beach is expected to disappear;
- by 2080 serious consequences are expected to Vlora beach and in most beaches of the Adriatic sea.



The left photograph shows a wooden structure, possibly a beach pavilion or part of a pier, built on stilts over the water. The right photograph shows a wide, sandy beach area with some vegetation and buildings in the background.

### Socio-economic Vulnerability and Climate Risks

Socio-economic vulnerability is centered on 4 sectors

Tourism	Agriculture	Water	Population
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**Population :** GDP will continue to remain at low levels until 2020.

After 2020 the growth rate will increase to an average of 3%

**Water :** Projections suggest that water needs for both domestic and industrial use are within existing capacity and that there is no need to increase water production but to reduce water losses through infrastructure improvement.

Table 4.11: Key Indicators for each sector

Sector	Indicator	What it is proxy for	Relationship to vulnerability
Agriculture	Agriculture area cultivated with cereals	Labor force, total agricultural production, water demands by the sector, and sector contribution to GDP.	Demand ↑ as population ↑ Sensitivity ↓ as production ↑
Water	Water production and water needs	Water network infrastructure, water supply, population access to water, industry and agriculture sector needs.	Water demand ↑ as population ↑ and economic activity enlarge Sensitivity ↑ as % of water use ↑
Tourism	Number of visitors	Beach quality, waste management, flooding risk.	Sensitivity ↑ as population ↑
Population	Urban Population growth (change) rate	General needs people for infrastructure (e.g., schools, hospitals, housing, roads), resources (e.g., food, water, electricity), and jobs.	Sensitivity ↑ as population ↑

## Tourism Sector

- Tourism is an important sector in the economy providing jobs, incomes and making contributions to Government revenues.
- Currently tourism infrastructure is not at its full capacity, therefore an overall development and increase in the number of tourists is expected to happen in the next decade.
- The prospect of joining the EU will also contribute to this projection, as more foreign visitors from Western Europe are expected to visit the country.
- This will lead to an increasing rate of number of tourist until 2020.
- Thereafter, the tourism will experience a period of stagnation, with a constant growth rate until 2040.
- The long-term projection of Albanian and foreigners tourists during 2010-2040 shows that the rate of growth of foreigners will be slightly higher than the rate of growth for Albanians: 4.2 versus 3.6, majority of tourists' flows arriving in the country will be foreigners.



## Agriculture sector

- The agricultural sector is one of the main drivers of Albanian economy.
- In 2011, Agriculture sector employed 54.6% of the total number of employees and its contribution to the national GDP was 19%.
- Because the circumstances in agricultural sector are favourable for the development in the future, the favourable climate, low cost of labour force, high potential for investments, improving the infrastructure, improvements in the energy and road infrastructure, market demands for agriculture products, etc. makes agriculture one of the most important economic sectors of the country.
- Under climate change scenarios, yields of cereals, and the area under cultivation are expected to increase to the year 2100.



### Current climate change related legislation

- Law no. 10431, dated 9.06.2011 “On environmental protection” as amended;
- Law no. 10440, dated 7.07.2011 “On environmental impact assessment”;
- Law no.10448, dated 14.07.2011 “On environmental permits” as amended
- Law no. 8897, date 16.05.2002 “On protection of air from pollution” as amended;
- Law no.27/2016 “On chemicals management”;
- Law no.111/2012,“On integrated water resources management”;
- Law no.68/2014“On some amendment and changes in the law no. 9587, dated 20.07.2006 “On protection of biodiversity”;
- Law No.162 dated 04.12.2014 “On protection of ambient air quality”;
- Decision of the CoM no.352, dated 29.04.2015 “For the assessment of ambient air quality and requirements for certain pollutants related with it”;
- Decision of the CoM no.1075, dated 23.12.2015 “On measures for the control of Volatile Organic Compound (VOC) emissions resulting from the storage of petrol and its distribution from terminals to service stations”;
- Decision of the CoM no.594, dated 10.09.2014 “On approval of National Strategy on Ambient Air”;

### Legislation on monitoring of climate change related indicators

- Climate change effects are marginally touched by the rules and procedures for development and implementation of the national environment monitoring programme, approved by the CoM decision no.1189, dated 18.11.2009.
- These rules instructs the Ministry of Environment to prepare the national environment monitoring programme through the National Agency of Environment and to cooperate with other ministries according to their areas of activities, local government units and monitoring institutions to collate and compile monitoring results.
- According to these rules, environment indicators related to climate change such as a) air temperature; b) sea level; c) precipitation; and d) level of underground waters are subject to monitoring.
- Other indicators having a pressure on the environment with respect to climate change: a) the annual emissions of CO<sub>2</sub>, NO<sub>x</sub> and CH<sub>4</sub>; and dispersion of emissions of three gases according to different sectors of the economy, including energy, transport, waste management, agriculture and industry.
- ❖ The rules do not properly address the responsibilities for monitoring GHG emissions and the accuracy of the monitoring results.
- ❖ It is not clear how some climate change data/indicators are gathered and what methodologies are to be used by the responsible government authorities that report such data.

## National Agency of Environment (NAE)

- This Agency was established based on the new law on environment protection, which became effective in February 2013.
  - The NEA has a specific Sector dedicated to :
    - Pollutant Release and Transfer Register (PRTR) under the UNECE Protocol on Pollutant Release and Transfer Registers ratified by the Albanian Parliament with law no. 9548, dated 01.06.2006,
    - The 1979 Geneva Convention on Long-range Transboundary Air Pollution (CLRTAP) emissions inventory,
    - The GHG emissions inventory.
  - NEA is expected to collaborate with international environment organizations complying with their respective reporting obligations, the respective Regional Environment Agencies,
- There are a number of other governmental organizations that could have a significant role in the implementation of environmental policy :
- Ministry of Energy and Industry
  - Ministry of Agriculture, Rural Development and Water Administration
  - Ministry of Infrastructure and Transport
  - Ministry of Urban Development and Tourism

THANK YOU FOR YOUR  
ATTENTION