Overview: Climate Change in Albania and Kosovo

Both Albania and Kosovo are shaped by several conflicts, reaching from democracy and statehood issues to stability and economic development, and nowadays additionally facing the challenges of climate change and its impacts.

Facts: Albania

- Capital city: Tirana
- Surface area: 28,748 km^2
- Borders: Montenegro, Territory of Kosovo, former Yugoslav Republic of Macedonia, Greece
- Population: ca. 3 million
- Since 1990 rise in urban population, 60 per cent of the population expected to live in urban areas by 2025

Further information

- Ageing population
- Urbanization

Economy

- Modern open-market economy
- Main natural resources: petroleum, natural gas, coal, bauxite, chromate, copper, iron ore, nickel, salt and timber
- Energy sector: hydropower is important
- GDP: US$ 8,000 per year; rising GDP in the 1995-2009 period (see Fig. 1)
    - 23.5 per cent of the GDP are contributed by industry
    - 20.1 per cent of the GDP are contributed by agriculture
    - 56.4 per cent of the GDP are contributed by services
- Unemployment rate: 13.7 per cent (12.5 per cent of the people below poverty line)

Climate

- Lies in the humid sub-tropical zone (Northern Hemisphere)
- Belongs to the Mediterranean climatic zone (characterized by mild temperatures; cool and wet winters; hot and dry summers)

Facts: Kosovo

- Capital city: Pristina
- Unilaterally declared independent state
- Surface area: 10,887 km^2
- Borders: Serbia, former Yugoslav Republic of Macedonia, Albania, Montenegro
- Population: 1,8 million

Further information

- Subsistence farming
- Receives substantial international donor support, but economy remains rather weak and unable to sustain itself

Economy

- Market-based economy
- Main natural resources: nickel, lead, zinc, magnesium, lignite, kaolin, chrome, bauxite
- GDP: US$ 2,500 per capita; rising GDP in the 1995-2009 period (see Fig. 1)
    - Majority lives from subsistence farming
- Unemployment rate: 45 per cent (30 per cent of the people live below the poverty line)

Climate

- Belongs to both the Mediterranean climatic zone and the European continental climatic zone

A region's capacity to respond to the impacts of climate change is highly dependent on a state's political stability and governance. This stability is not yet completely reached in both Albania and Kosovo aggravating the states' ability to cope with the pressures evoked by climate change. Further, demographic trends such as population ageing, decline in fertility rates and rapid and increasing urbanization, reduce Albania's and Kosovo's adaptive capacity.

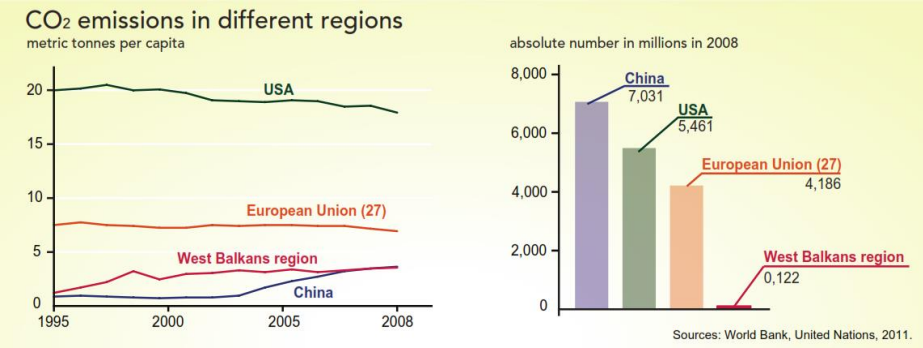

Figure 1. CO_2 emissions in different regions. 1995 to 2008. Derived from Environment and Security Initiative & Zoi Environment Network (2012).

Predicted climate change impacts in Albania and Kosovo

- General warming trend (proportional to the expected increase in global mean temperatures), heat waves
- Decrease in precipitation (varying according to terrain, sea proximity and elevation), but increasing intensity and frequency of precipitation extremes (e.g. floods, heavy rain events)
- More frequent droughts and forest fires
- Sea level rise and coastal erosion

→ Main impacts of climate change in agriculture, tourism and energy sectors, human health, biodiversity

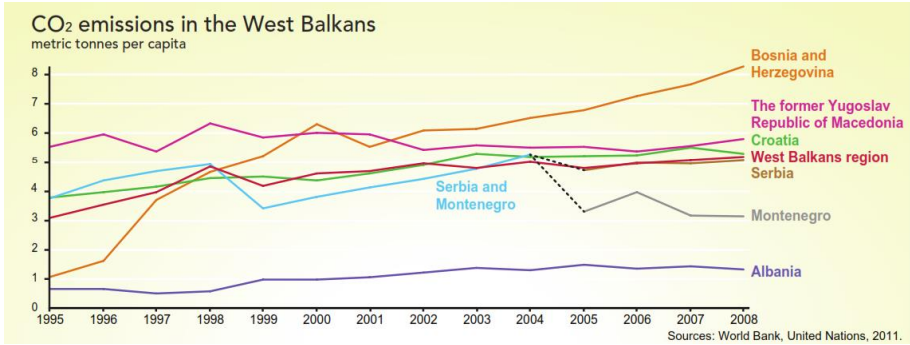

Figure 2. CO_2 emissions in the West Balkans. 1995-2008. Derived from Environment and Security Initiative & Zoi Environment Network (2012).

Not only Albania and Kosovo, but all West Balkan states are already experiencing the impacts of climate change, although their contribution to climate change –the CO_2-emissions– is much lower compared to highly developed countries such as the European Union or the United States.

Albania's contribution to climate change

Over the last years, Albania's greenhouse gas emissions increased in all sectors except for the sectors of land use change and forestry, where the emissions declined considerably.

Albania's mitigation strategies

- Energy sector: power plants with clean energy sources; efficiency increase
- Agriculture: improved management of manure and grazing systems; crop rotations
- Waste: new landfills with methane recovery; waste incinerators
- Land use change and forestry: sustainable forestry plan, improved forestry management practices, rehabilitation of damaged forests

Kosovo's contribution to climate change

- Total greenhouse gas emissions reached 9.5 Mt CO_2 eq. in 2008 and increased by 11 % to 10.5 Mt CO_2 eq. in 2009
- In comparison to other European countries Kosovo has relatively low greenhouse gas emissions per capita (5.7 t CO_2 eq. compared to 9.93 t CO_2 eq. average in Europe)

Kosovo's mitigation strategies

- Overall goal to slow down the increase of GHG emissions
- Increasing the energy efficiency in all sectors
- Improving the development of renewable energy sources
- Strengthening the sustainable use of natural resources

Vulnerability

If states such as Albania and Kosovo will be able to handle and take action against climate change depends on the states' vulnerability. Vulnerability includes the factors:

- Exposure
  - Exposure index measures climate change's strength in the future in comparison to the current climate variability

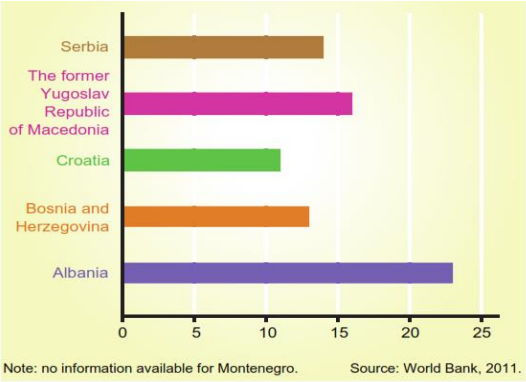

Figure 3. Exposure Index. Derived from Environment and Security Initiative & Zoi Environment Network (2012).

- Sensitivity
  - Sensitivity index is based on indicators such as the availability of renewable water resources, the extent of air pollution, the quality of infrastructure and others, that are likely to increase the impacts of climate change

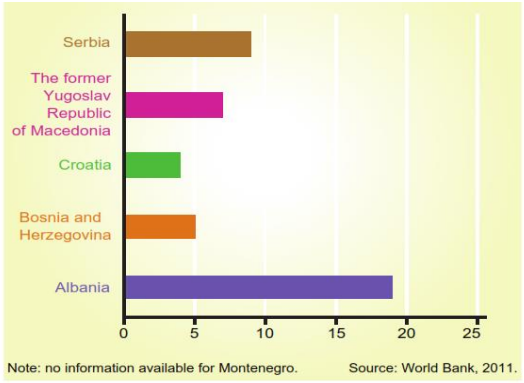

Figure 4. Sensitivity Index. Derived from Environment and Security Initiative & Zoi Environment Network (2012).

- Adaptive capacity
  - The adaptive capacity determines a state's capacity to respond to the impacts of climate change by high resistance and/ or recovery

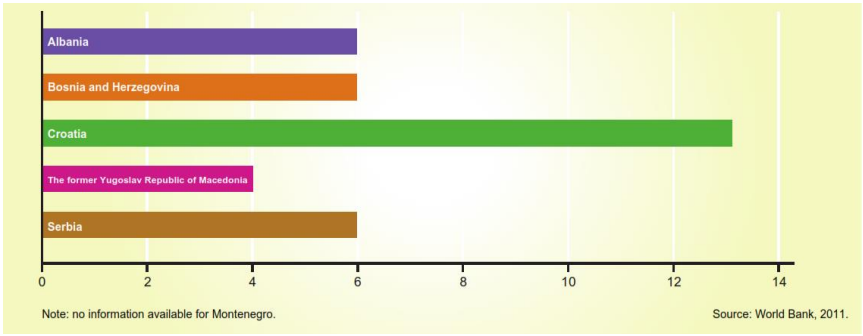

Figure 6. Adaptive Capacity Index. Derived from Environment and Security Initiative & Zoi Environment Network (2012).

The higher the scores are, the higher the overall vulnerability (respectively higher exposure, sensitivity and capacity to adapt) is. In the West Balkan region, Albania is the country the most vulnerable to climate change.

Derived from and further reading:

Environment and Security Initiative & Zoi Environment Network (2012): Climate Change in the West Balkans. Online: http://www.unep.at/documents_unep/ENVSEC/Climate_Change/Climate-change-west-balkans.pdf (19.12.2015).

Environment and Security Initiative, United Nations Development Program, Venice International University, Siena University & Zoi Environment Network (Eds.) (n.d.). Climate Change. Adaptation in South Eastern Europe. A Background Report. Online: http://www.unep.at/documents_unep/ENVSEC/Climate_Change/CCSEE-Final.pdf (19.12.2015).

The Ministry of Environment and Spatial Planning (Eds.) (2014): Climate Change Framework Strategy for Kosovo. Kosovo.