WEST BALKAN
ENVIRONMENTAL
CORE SET OF INDICATORS

2012

European Environment Agency

This is a **Zoi Environment Network** publication produced in close cooperation with the **European Environment Agency** and cooperating partners.

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For the purpose of this publication the name of Kosovo is used to refer to the territory established by the United Nations Security Council Resolution 1244/99.

Always remember that…

'…The EEA aims to support sustainable development and to help achieve significant and measurable improvement in Europe's environment, through the provision of timely, targeted, relevant and reliable information to policymaking agents and the public.'

Mission statement from rear of European Environment Agency business cards

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FOREWORD

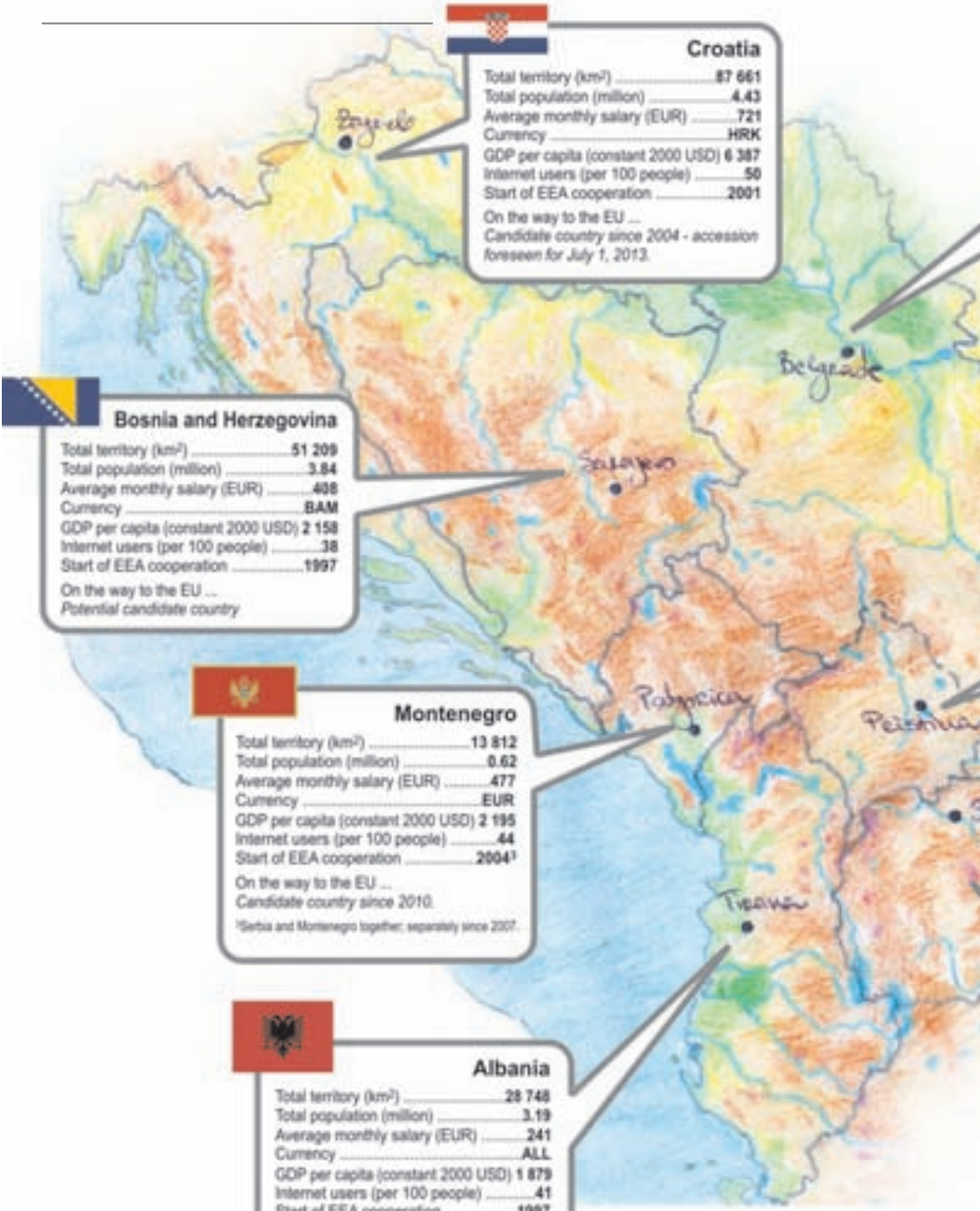
by Gordon McInnes and Otto Simonett

The noble task of collecting data and indicators to show the state of and trends in the environment of a country, city or region is not commonly regarded as very 'sexy': there are probably only very few children dreaming of becoming environmental information handlers. But then, diving deeper into the matter, one may be excited, in particular when working in a frontier region of Europe.

For instance, the decline in the share of renewable energy in primary energy consumption throughout the region during the last 10 to 15 years or the still very low percentage of population connected to wastewater treatment (WWT) are alarming, and should cause sleepless nights for responsible politicians and administrators, as well as for citizens. By presenting the bare facts, dry though they may be, we may be able to evoke change. Thus the mundane tasks of collecting data and indicators may ultimately prove to be rewarding to a wide range of users.

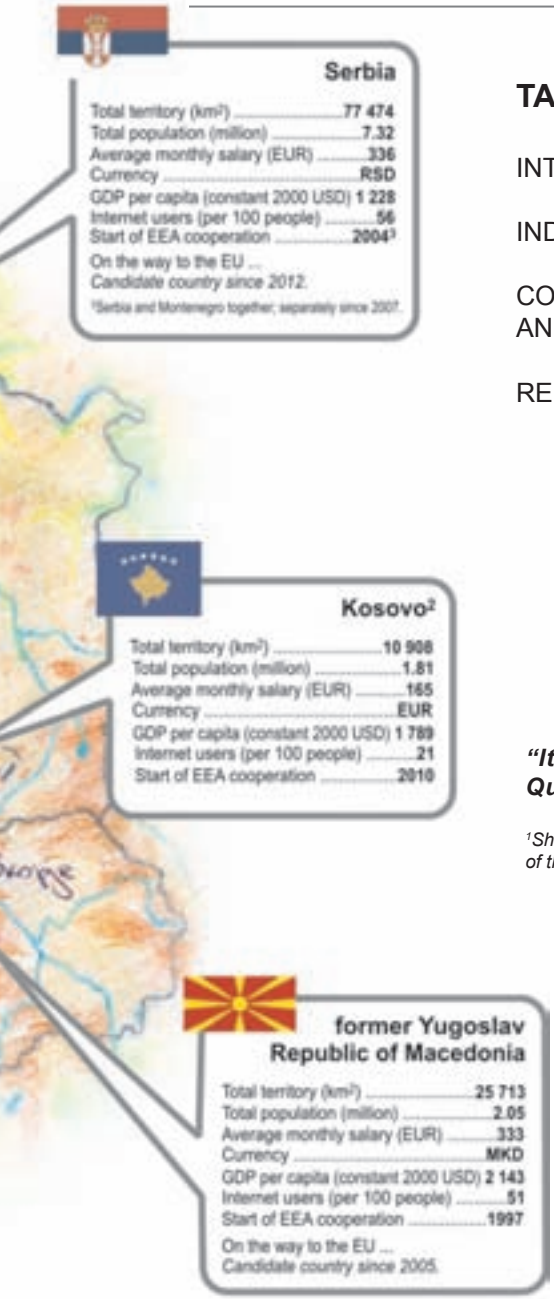
Behind this brief pocketbook there is an impressive process of change in the Western Balkans: On a regular basis, environmental data are being collected and compiled by the authorities as well as by civil society and the private sector. Information is being passed on to those who want to know what the environmental situation is, so as to be able to make comparisons against targets and thresholds and take action. More than 100 professionals from the region have contributed to this unique compilation of data and indicators, thus helping build the indispensable foundations of democracy in a region, which is step by step becoming an integrated part of Europe.

“Please state the reason of your visit”; “Tourism.”
Author: Marko Somborac
Published in: Blic: http://www.blic.rs/Strip/1130/Marko-Somborac



Note: All data presented here correspond to the year 2009.

[2] under UN Security Council Resolution 1244 (1999)



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"It gives you the SENSE[1] of knowledge."
Quote by Dežan Le Kik

[1]Shared European National State of the Environment (EEA)

Sources: Institute of Statistics in Albania; Agency for Statistics of Bosnia and Herzegovina; Croatian Bureau of Statistics; State Statistical Office in the former Yugoslav Republic of Macedonia; Statistical Office of Kosovo[2]; Statistical Office of Montenegro; Statistical Office of the Republic of Serbia; World Bank Database; World Development Indicators, World Bank; Internet World Stats; DG Enlargement - European Commission, 2011.

INTRODUCTION

There is no easy way to introduce indicator publication; simple at the surface, complex and fragile at the core — that's how indicators may be described. An environmental indicator can be compared with a key that opens the 'lock' of closer understanding through measurement and clear presentation.

Environmental indicators in the European Union (EU) are usually organised based on the European Environment Agency's (EEA's) well-proven assessment system:

Driving forces – Pressures – State – Impact – Responses
or simply the **DPSIR framework.**

It 'describes the state of the environment, its impact on human beings, ecosystems and materials, the pressures on the environment, the driving forces and the responses steering that system'[1].

EEA indicators, among many others, have been chosen and defined in relation to EU policy documents with the purpose of following progress in European policies. The EEA has prepared a limited number of core indicators — numbering 37, these make up the Core Set of Indicators to measure progress in priority policy areas and facilitate country benchmarking. The set is also used as a key element for the Shared Environmental Information System (SEIS).

The data collection and indicator evaluation process represents a seemingly endless world of numbers, graphs, maps and charts that the data handlers behind them must navigate. Just like a local market with its delicious items, variety of colours and supply networks, people entrusted with indicator work should be able to "cook up" multidimensional indicators using well established data and information flows provided by a more personalized version of the European Environment Information and Observation Network (Eionet).

What is your colour?

Raw versus cooked and delivered to the multi-dish Swedish table

Actually, we should start by determining what the priority theme or sector might be. Regardless of whether it is grey air pollution, orange climate change, violet energy or blue water, themes and sectors are predetermined by national or international priorities. This is the easy part. The difficult part is to look for, to look at and to look through the data.

You may also wonder what the difference is between raw data and an indicator — as a matter of fact, the difference is usually blurry; while raw data are presented as pure numbers, an indicator 'reveals, gives evidence, and its significance extends beyond what is actually measured to a larger phenomenon of interest'[2].

Physical-chemical characteristics of an indicator

After you have chosen one or more colours and provided related raw material for cooking, you should be able to prepare a very good indicator.

Source: BALKAN CARTON-GALLERY
(http://www.donika.com/cartoon.html)

1 EEA, 2011. Environmental Terminology and Discovery Service (ETDS).
2 EEA, 2005. EEA core set of indicators – Guide.

The good indicator[3]:

- is relevant to an issue;
- can be expressed as 'below' or 'above' a target;
- is comparable internationally;
- is based on available or cost-efficient data;
- is easy to communicate and understand.

Luckily, we already have the EEA's 37 indicators that cover 10 different themes and sectors, clarifying EU priorities, compatible with other countries or even regions, and policy relevance. But in order to give a meaning to all your (and many other people's) work, you will have to complete the following five steps.

What goes around comes around…

Five practical steps to build an environmental indicator:

Step I
Chose a policy priority
Chose a list of indicators
Use recognised methodology and data set definitions
Simultaneously identify corresponding data sets and data flows at national level

Step II
Organise data in logical order
Assure that units are correct
Perform the calculation
Check the calculation
Create a graph

Step III
Perform a brief critical check for any unexplained variations (sudden drops or sharp increases for one or more years)
Compare data with other countries/regions
Conduct data verification process

Step IV
Analyse current national practices (key assessment)
Analyse current national legislation (policy context)
Look for any indication on future trends (e.g. scenarios or legislation documents in drafting)

Step V
Communicate your results (to other institutions — regardless of reporting obligations)
Publish your results (e.g. state of environment report)
Compare performance with policy targets
Update and monitor performance over time.

After party

You might feel hung-over (typical), relieved (not so typical), dizzy (rare), more present at home (your children might start talking to you again), or even happy that your report, assessment or performance is out ... but keep some energy for the years to come when you will repeat the process. OK, maybe not exactly from the beginning — you will have the data-supply-chain open, you will have your Excel sheet prepared and you will have the key assessment and policy context drafted, and above all, you will have previous experience 'under your belt'. Next time, have a nice, relaxed coffee with your data-handler, collect the data, add them to the Excel sheet, see if they fit with other numbers, check the calculation, add one time series to your graph, and search for latest news on the topic in terms of new practices and planned legislation. You might even be surprised that things are moving fast (or not moving at all). If one or more pieces of data or information looks odd, take one step back and consult the original source.

And good luck! Remember you are not alone. There are more than 100 people involved in the work on the West Balkans indicators.

3 GRIDA/Arendal, 1998. Cookbook for State of the Environment Reporting on the Internet.

STATISTICS FROM THE WEST BALKAN PROCESS

- EEA cooperation with West Balkan countries started as early as 1997 in Albania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia and as late as 2010 in Kosovo*, fitting in between all other West Balkan countries with the perspective of EU integration.

- The IPA project is a successor to PHARE, CARDS and the EuropeAid Programmes to support countries' activities and improve their performance.

> **PHARE** (Poland and Hungary: Assistance for Reconstructing their Economies Programme) was created in 1989 as one of the pre-accession instruments to assist applicant countries preparing to join the EU; it expanded to include the West Balkan countries until 2000, when it was replaced by…
>
> **CARDS** (Community Assistance for Reconstruction, Development and Stabilisation) was created in 2000 as one of the main financial instrument of the EU's Stabilisation and Association Process for the West Balkans, accounting for EUR 5.13 billion until 2006, when it was replaced by…
>
> **IPA** (Instrument for Pre-Accession Assistance) which covers both candidate and potential candidate countries.

- Overall performance of the West Balkan countries improved in terms of fulfilling reporting obligations towards the EEA; in 2009/2010, performances of the countries were between 6 % and 78 %. A year later, this figure jumped to between 44 % and 92 %, with Croatia taking 11th place among the 39 Eionet countries coordinated by EEA.

- The ultimate EEA goal is to fully include West Balkan countries in the regular assessment reports, to develop a regular indicator reporting system (in particular, the EEA Core Set of Indicators) and to assist capacity development and networking.

> One of the many environmental information systems that a Google search will produce is the **SEIS**: promoted by the European Commission in 2008 'to improve the collection, exchange and use of environmental data and information across Europe', it is currently developed with different country groupings — EEA, West Balkans, eastern neighbours and Russia, southern neighbours and central Asia.

Did you know?

The West Balkan indicators process (from 2004 and still ongoing) includes: 7 years, 6 projects, 5 regional workshops, and 4 sets of country visits and has resulted in a jump from 0 to 25 in the numbers of Core Set of Indicators available from the region.

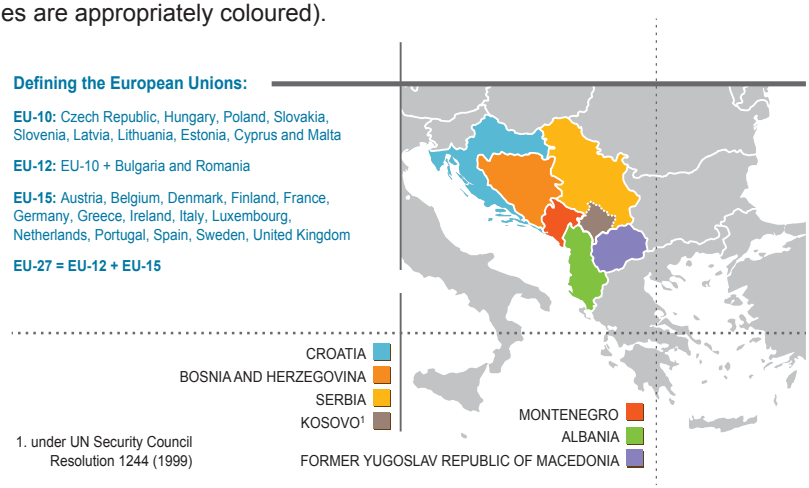
HOW TO USE THIS PUBLICATION

In order to obtain a comprehensive overview and understanding of the content of this publication, the following key elements have been included to guide the reader:

- **Every theme/sector is colour coded:** colours have been attributed in a logical manner; for example the agriculture sector and biodiversity theme are light- and dark-green-coded, the climate change theme is orange-coded, while the water theme is blue-coded.

- Since all seven partners have separate data flows toward the EEA, different colour codes are applied to **each country** throughout the publication, thereby providing a simple and clear overview of data available (see example of map below).

- In the most of **indicator double-page spreads**, you will find a map of the **West Balkan countries**; here you should be able to distinguish, at a quick glance, which countries are included in the presented indicator and which are not (included countries are appropriately coloured).



- Paragraphs to the left explain the **purpose** of each indicator, analyse the **trend** and offer a short guide to **policy implementation** at EU and regional level. At the end, you will find the question 'Did you know?' and will maybe find the answer revealing. Where necessary, definitions of some indicator-specific terms are also included.

- To help you visualise the current situation or changes over years, maps and graphs have been designed covering, where appropriate, **comparison** at national (by country), regional (West Balkan region), European and even at global level.

REUTERS / Hazir Reka

Trees on the Sharr mountains, located southeast of Kosovo*, are seen during autumn. October 24, 2010.

INDICATORS

Agriculture

Area under organic farming

Biodiversity

Protected areas

Climate change

Consumption of ozone-depleting substances

Energy

Final energy consumption by sector
Total primary energy intensity
Primary energy consumption by fuel
Renewable primary energy consumption

Transport

Passenger transport demand
Freight transport demand

Waste

Municipal waste generation

Water

Use of freshwater resources
Urban wastewater treatment

Area under organic farming

Purpose

To identify the trend towards more environmentally sustainable practices in the farming system.

Trend

The share of organic farming in the total West Balkan agricultural area is very low, but it is increasing. In 2009 it was around 0.3 %; the figure in the European Union 10 at the end of the 1990s was 0.5 %. Albania had the most organic farms, almost 2 %, and Croatia was next with 0.6 %. Bosnia and Herzegovina and Serbia had the fewest. National policies on organic farming are weak. But almost everywhere (except in Bosnia and Herzegovina) organic farming is increasing.

Policy implementation

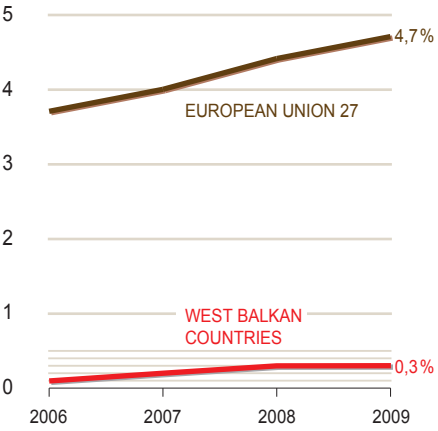
The EU recognizes that organic farming contributes to a high level of biodiversity and the preservation of species and natural habitats. In 2004, the EU Commission published a 'European Action Plan for Organic Food and Farming' to promote the practice, though without setting specific targets for Member States. Albania, Croatia and the former Yugoslav Republic of Macedonia aim to increase their share of organic farming areas, with Albania aiming for 5 % by 2013, the former Yugoslav Republic of Macedonia at least 5 % by 2011, and Croatia at least 10 % (including pastures and forests) by 2010.

Did you know?

Switching from conventional to organic production is neither easy nor quick — on average, it takes five years to complete the switch.

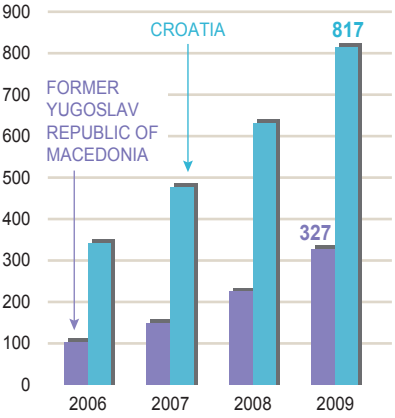
Comparative trends in organic farming

Share of utilized agricultural area



Sources: Eurostat, EEA, 2011.

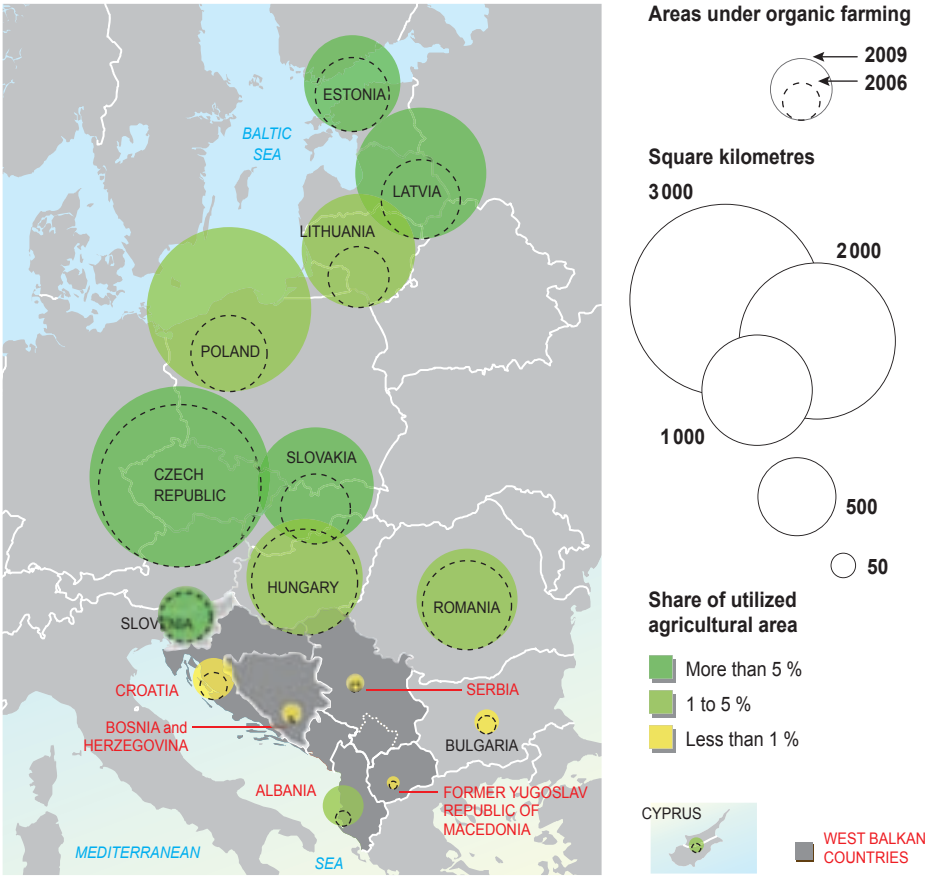
Number of organic farms



Sources: Croatian Bureau of Statistics, Ministry of Agriculture, Fisheries and Rural Development in Croatia; State Statistical Office, Ministry of Agriculture, Forestry and Water Economy in the former Yugoslav Republic of Macedonia, 2011.

Organic farming in selected countries of the European Union 10 and the Balkans

Share of agricultural area and evolution



Sources: Ministry of Agriculture, Food and Consumer Production, Organic Agriculture Association, BioAdria Association, Review "Monitoring" in Albania; Agency for Statistics of Bosnia and Herzegovina; Croatia Bureau of Statistics, Ministry of Agriculture, Fisheries and Rural Development in Croatia; State Statistical Office, Ministry of Agriculture, Forestry and Water Economy in the former Yugoslav Republic of Macedonia; Controlling Organization of Organic Production, Ministry of Agriculture, Forestry and Water Management, Statistical Office of the Republic of Serbia; Eurostat, 2011.

Protected areas

Purpose

To measure the level of conservation and/or restoration of biodiversity components.

Trend

In the West Balkan region, the total surface area under national protection has risen since the 1980s: in 2009 it was more than 20 000 km^2, 7 % of the region's area. The level varies, from 13 % in Albania to more than 1 % in Bosnia and Herzegovina. Albania, Kosovo* and the former Yugoslav Republic of Macedonia have integrated the International Union for Conservation of Nature (IUCN) categorisation into their national legislation.

Policy implementation

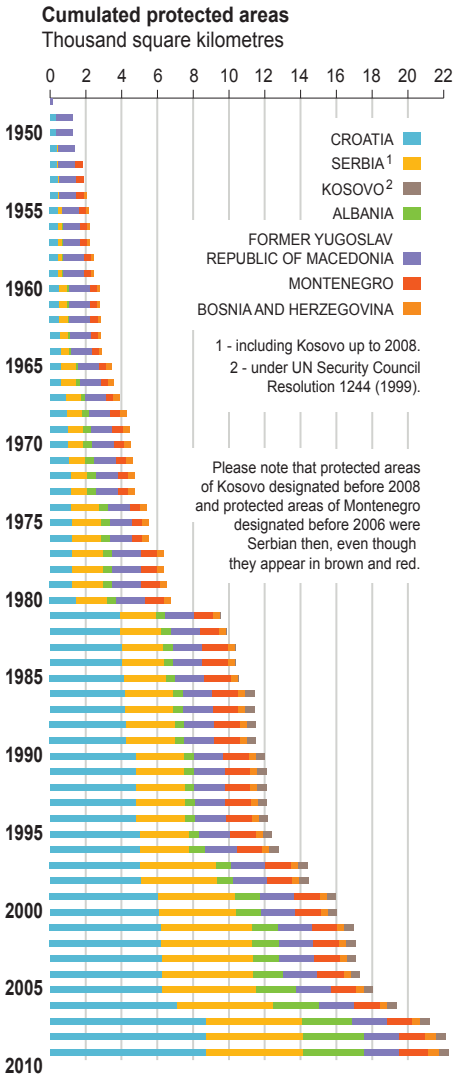
The Birds Directive (Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds) and the Habitats Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora) provide the core of EU legislation on nature conservation: they call for species and habitats conservation and the designation of protected areas. The countries of the West Balkans are committed to protect nature through a series of pan-European and international conventions (especially the Convention on Biological Diversity (1992), and the Ramsar[1] (1971), Helsinki (1974) and Barcelona[2] (1976) conventions). Most call for the designation of sites so as to conserve species or ecosystems of special concern. The most relevant regional framework is the Convention on Biological Diversity (1992): every country except Kosovo* is a party. Nature protection is based on national legislation, which has evolved rapidly in recent years.

Did you know?

Across 39 European countries, the area of nationally designated protected areas had increased by 2008 to around 1 million km^2, or 1.5 times size of France.

West Balkans protected areas

A preservation timeline



Sources: Common Database on Designated Areas, European Environment Agency; Registry of protected natural values, Ministry of Culture in Croatia; Kosovo Environment Protection Agency, Statistical Office in Kosovo under UNSCR 1244/99; Institute for the Nature Protection, Statistical Office in Montenegro, 2011.

1 Ramsar Convention (1971) is the Convention on Wetlands.
2 Barcelona Convention (1976) is the Convention for the Protection of the Mediterranean Sea Against Pollution.

West Balkans protected areas

Please note:
The same site can be protected under different status.
Overlaps have been removed and areas rounded for the proportional square sizes calculation (opposite) but not for the national percentage calculation below.
Some areas represented below are not recognized internationally.

Designated sites

2 - under UN Security Council Resolution 1244 (1999).

Sources: Common Database on Designated Areas, EEA, 2011;
World Database on Protected Areas, UNEP-WCMC, IUCN, 2011.

Consumption of ozone-depleting substances

Purpose

To establish whether ozone-depleting substances are being phased out on time.

Trend

Countries across the world have agreed to phase out the production and consumption of substances which deplete the ozone layer — whose role is to protect all living things against harmful ultraviolet Sun radiation. The total consumption of ozone-depleting substances in the West Balkan countries decreased by almost 97 % between 1995 and 2009, in accordance with the internationally agreed timetable. The substances are not produced in the region.

Policy implementation

The Vienna Convention (1985), the associated Montreal Protocol on Substances that Deplete the Ozone Layer (1987) and later agreements have the objective of protecting the ozone layer and controlling and phasing out chlorofluorocarbons (CFCs), halons and other ozone-depleting substances. All the West Balkan countries[1] have ratified both the convention and the protocol. Following the amendments to the Montreal protocol, the EU adopted even more ambitious controls with the goal to phase-out CFCs production and consumption from January 1995. This occurred long before West Balkan countries ratified the protocol and initiated country programmes to phase out ozone-depleting substances and established National Ozone Units within appropriate ministries.

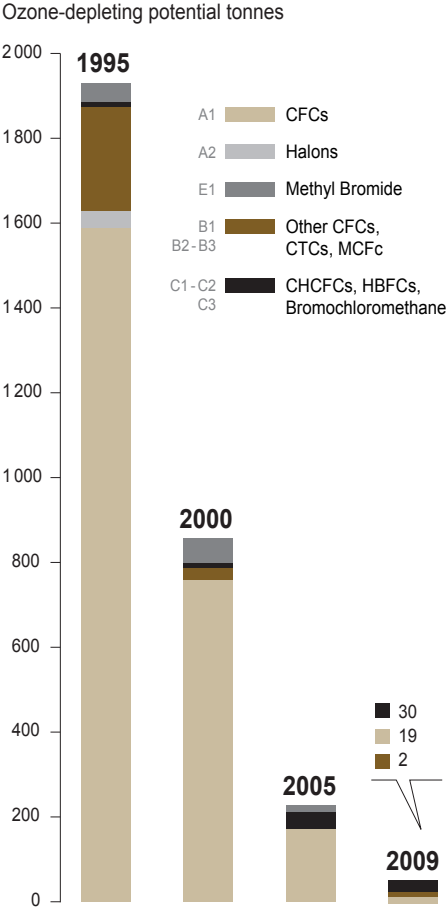
Did you know?

The ozone hole over Antarctica grew in 2011 to 26 million km^2, about 89 times larger than the West Balkan region, or 6 times bigger than the EU.

1 Except Kosovo*

West Balkan region trends

Consumption of ozone-depleting substances



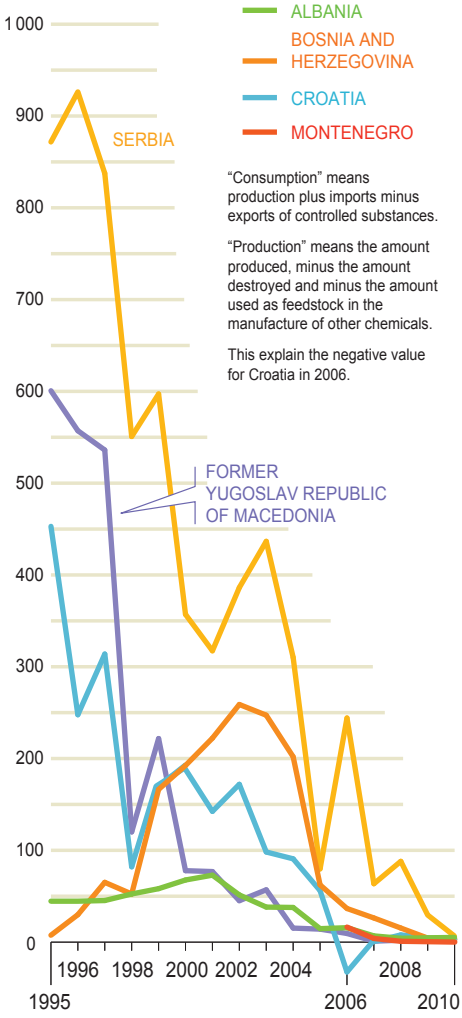
CFC - Chlorofluorocarbon; CTC - Carbontetrachloride; MCF - Methylchloroform; HCFC - Hydrochlorofluorocarbon; HBFC - Hydrobromofluorocarbon

Note: Data for Montenegro are available since 2004.
Source: UNEP Ozone Secretariat

West Balkan region trends

Consumption of ozone-depleting substances

Ozone-depleting potential tonnes



"Consumption" means production plus imports minus exports of controlled substances.

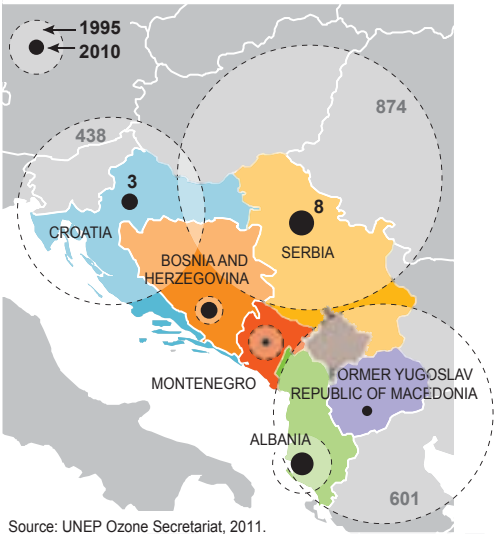
"Production" means the amount produced, minus the amount destroyed and minus the amount used as feedstock in the manufacture of other chemicals.

This explain the negative value for Croatia in 2006.

Source: UNEP Ozone Secretariat, 2011.

1995-2010 evolution

Consumption of ozone-depleting substances

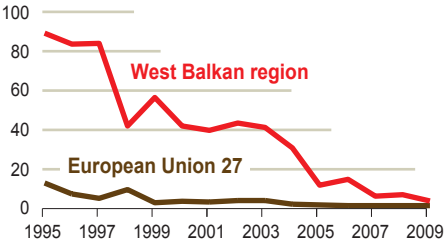


Source: UNEP Ozone Secretariat, 2011.

European Union trend

Decline in consumption of ozone-depleting substances, 1995-2009

Kilogramme per thousand people



Source: UNEP Ozone Secretariat, 2011.

Final energy consumption by sector

Purpose

To monitor progress in reducing energy consumption in end-user sectors through the implementation of energy efficiency and energy conservation policies.

Trend

Final energy consumption in the West Balkan countries rose by 47 % from 1995 to 2008. The drop of 9 % in 1999 has been attributed to North Atlantic Treaty Organization (NATO) air strikes that affected industry and power generation in Serbia, the country with the highest energy consumption in the region, accounting for 40 % of the total. Industry was the fastest-growing sector, followed by transport. In 2008, the industry sector consumed 35 % of final energy while transport, household and service sectors used 28 %, 27 % and 8 % respectively, with agriculture using only 2 %.

Policy implementation

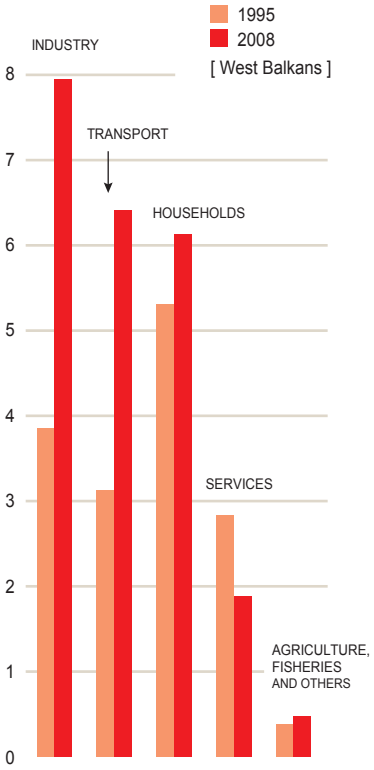
Policy frameworks at regional level include the *acquis communautaire*, the Kyoto Protocol (1997), the Energy Charter Treaty (1991) and the Energy Community Treaty (2005). All the region's countries are EU candidate countries or potential candidate countries, but not all are parties to the Kyoto Protocol or the UN Climate Change Convention. All are contracting parties of the Energy Community Treaty, which creates both the legal and the economic framework on energy issues. Under this treaty, the countries have signed up to a common regulatory frameworks linked to EU energy and environmental standards.

Did you know?

Only one-third of the energy from burning coal reaches the consumer as electricity.

Energy consumption shift

Final energy consumption by sector
Million tonnes of oil equivalent



Source: International Energy Agency, 2010.

Final energy consumption includes all energy delivered to the final consumer's door (in the industry, transport, households and other sectors) for all energy uses. It excludes deliveries for transformation and/or own use of energy-producing industries, as well as network looses.

Energy consumption by sector

Share of each sector in total final energy consumption in 2008

European Union 27

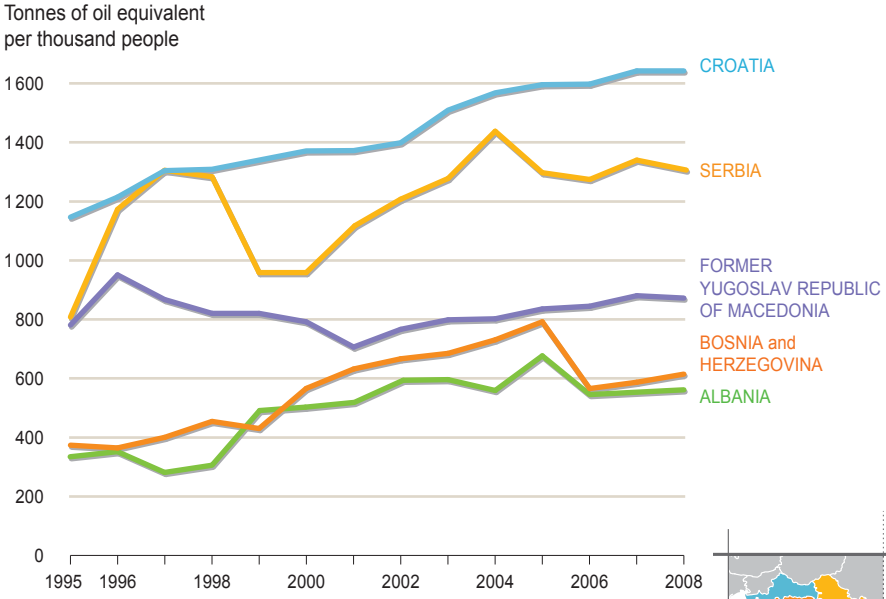
Sources: Eurostat, EEA, 2011.

West Balkans

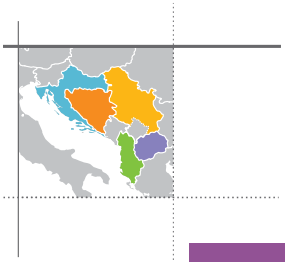
Source: International Energy Agency, 2010.

West Balkans trends

Final energy consumption per capita



Sources: International Energy Agency, 2010; Institute of Statistics in Albania;
Agency for Statistics of Bosnia and Herzegovina,
Croatian Bureau of Statistics; State Statistical Office in the former Yugoslav Republic of Macedonia;
Statistical Office of the Republic of Serbia; World Bank, 2011.



Total primary energy intensity

Purpose

To establish whether the countries are decoupling energy consumption from economic growth.

Trend

Total energy consumption in the West Balkan region grew on average by 1.95 % annually from 1995 to 2008, while gross domestic product (GDP) in constant prices increased at an annual average of 3.17 %. Total energy intensity therefore fell at an average 2.19 % annually. Further research is needed to understand whether this reduction is linked to improved energy efficiency, to structural changes within economic sectors or to other factors. The decrease in energy intensity fluctuated over the review period.

Policy implementation

All the West Balkan countries are either candidate countries or potential candidate countries for EU membership and so must integrate and implement EU legislation; this is also an obligation under the Energy Community Treaty, to which all are parties. The *acquis communautaire* calls for increasing energy efficiency, establishing a common energy market and reducing the environmental impact of energy production and use. Key instruments are the Kyoto Protocol (Kosovo* is not a party) and the Energy Community Treaty. Countries are making uneven progress on energy legislation.

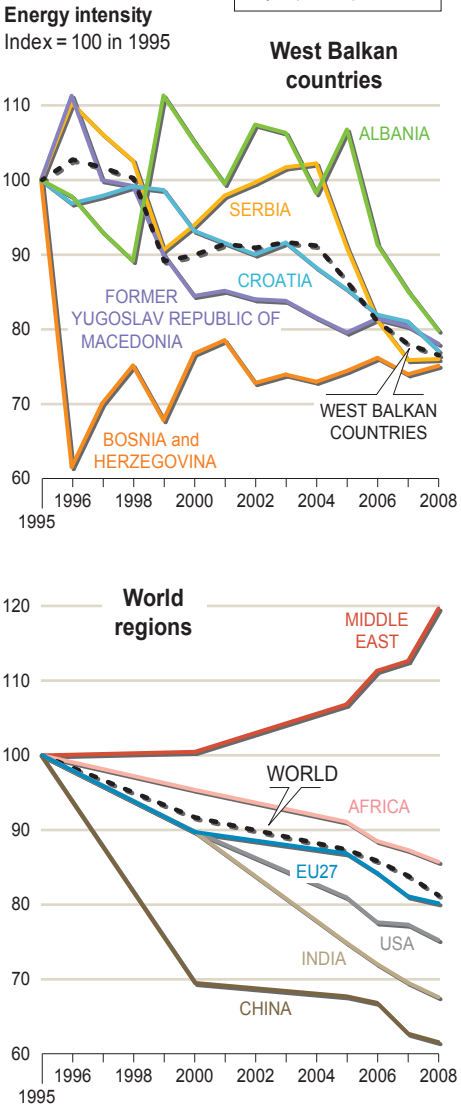
Did you know?

When you turn on an incandescent light bulb, only 10 % of the electricity used is turned into light. The other 90 % is wasted as heat.

Energy efficiency trends

A global decrease

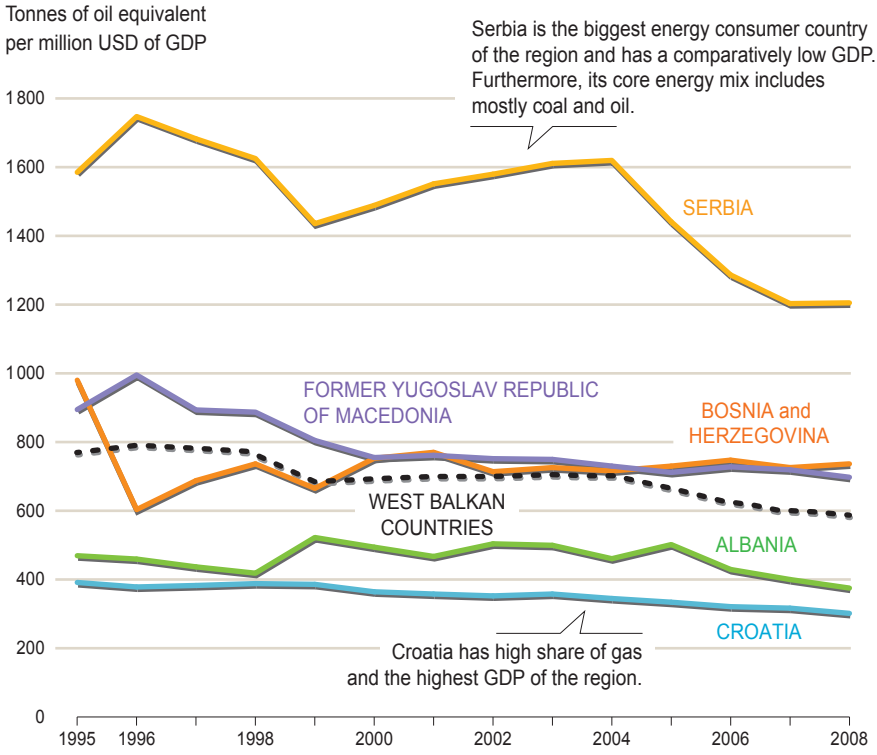
Please note indexed values only help to compare *trends*.



Sources: International Energy Agency, 2010; World Bank, 2010.

West Balkans energy intensity

Comparative levels

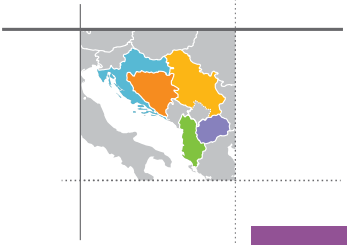


Source: International Energy Agency, 2010.

Energy intensity can be affected by, among others, standard of living, climate, energy efficiency of buildings, efficiency of production processes, energy supply and transportation patterns.

High levels of energy intensity indicate a high cost of converting energy into GDP.

Energy intensity = ratio between inland consumption of energy and GDP. It measures the energy consumption of an economy and its overall energy efficiency.



Primary energy consumption by fuel

Purpose

To define the energy mix trends in gross inland energy consumption (GIEC) in the region.

Trend

The share of fossil fuels (coal, lignite, oil and natural gas) in GIEC of the West Balkan countries increased from 84 % in 1995 to 87 % in 2008. In absolute terms, fossil fuel consumption increased by 42 %, while renewables declined from 15 % to 11 %. The largest increase among fossil fuels was seen in oil consumption (almost 2.6 % a year), followed by gas (2.1 %). Compared to the EU-27 and the world as a whole, the West Balkans use a high share of coal and lignite. Total GIEC rose by 38 %. It declined in 1999, when NATO air strikes affected industry and power generation, and between 2004 and 2006, perhaps because of the droughts that cut hydropower.

Policy implementation

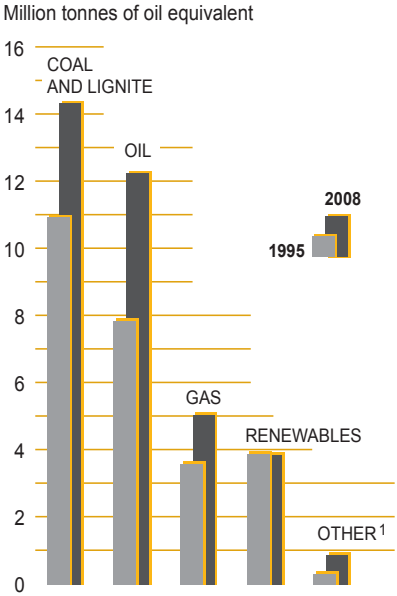
A central element of the EU's energy requirements, which concern the West Balkan countries as actual or potential membership candidate countries, are the EU's '20-20-20' climate and energy targets, which call for increasing the share of renewables in overall energy consumption to 20 % by 2020. The most relevant international frameworks are the Kyoto Protocol, the Energy Charter Treaty and the Energy Community Treaty.

Did you know?

The largest tanker oil spill occurred in Prince William Sound, Alaska, on 24 March 1989. With 40 000 tonnes of spilled crude oil, it is considered to be one of the most devastating marine environmental disasters caused by humans.

Primary energy consumption by fuel

West Balkan region trend



1 - Industrial waste and net imports of electricity.
Source: International Energy Agency, 2010.

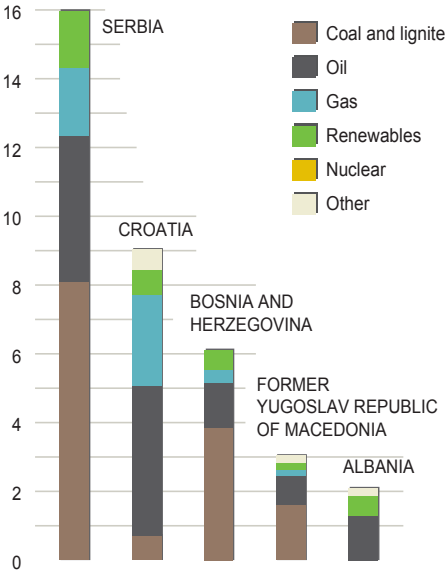
West Balkan region	Annual average change (%)	
	1995-2008	2007-2008
Coal and lignite	+1.71	+2.53
Oil	+2.59	-1.82
Gas	+2.10	-0.61
Renewables	-0.06	+2.70
Other	+4.86	-4.04
Total	**+1.95 %**	**+0.48 %**

Primary energy is an energy form found in nature that has not been subjected to any conversion or transformation process. It is energy contained in raw fuels, and other forms of energy received as input to a system. It can be either non-renewable or renewable.
Total primary energy consumption or GIEC represents the quantity of energy necessary to satisfy consumption of a considered country.

2008 fuel mix

West Balkan countries

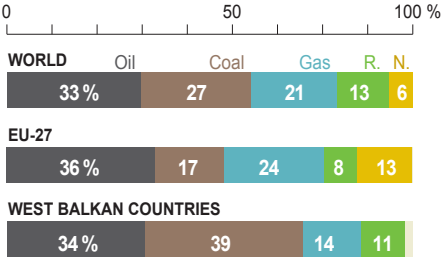
Million tonnes of oil equivalent



Comparative fuel mix

Global, European and Balkan levels

Fuel shares
Percentage of primary energy consumption

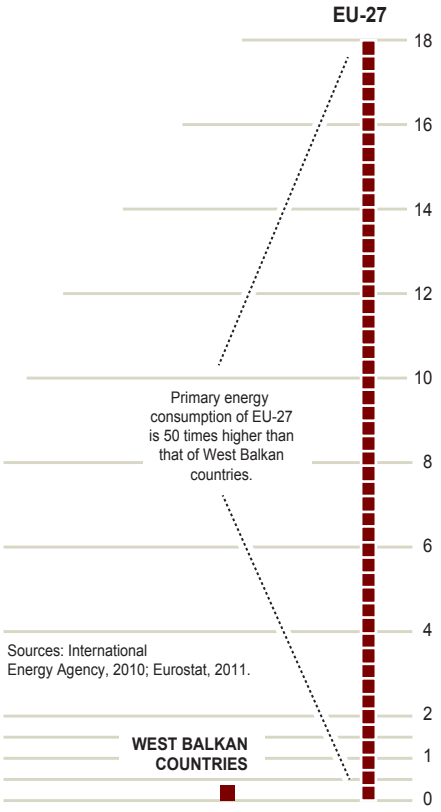


1 - Industrial waste and net imports of electricity.
Source: International Energy Agency, 2010.

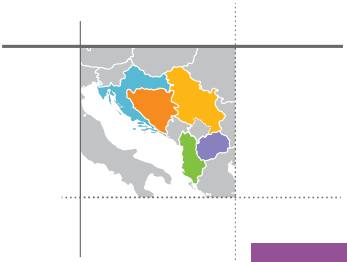
Comparison with the European Union

Primary energy consumption in 2008

Thousand million tonnes of oil equivalent



Sources: International Energy Agency, 2010; Eurostat, 2011.



Renewable primary energy consumption

Purpose

To ascertain how fast the share of renewable energy in total GIEC is increasing in the region.

Trend

The contribution of renewable energy to GIEC in the West Balkan countries fell from 15 % in 1995 to 11 % in 2008 — still higher than the EU-27's reported 9 % in 2009. The drop may be attributable to the increase in total primary energy consumption of 38 % in this period while production of the two main renewable sources, hydropower and biomass, did not grow significantly in these years. These two (plus waste to energy), accounted for more than 99 % of the region's renewables; other sources, like wind, solar and geothermal energy are barely used in West Balkan countries. The downward trend, coupled with lack of relevant policies or of implementation of existing policies, will stall greenhouse gas emission reductions.

Policy implementation

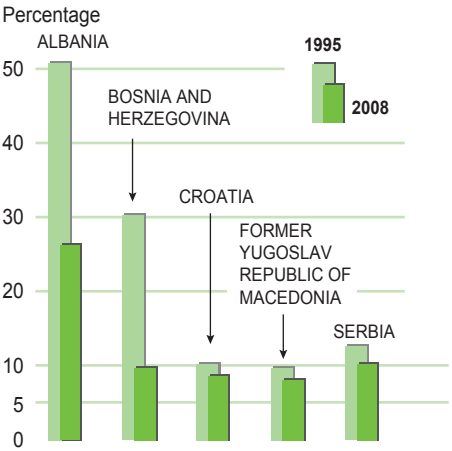
The EU's '20-20-20' targets call for increasing the share of renewables to 20 % of energy consumption. Countries in the region are making uneven progress in adopting EU energy legislation.

Did you know?

Renewable energy sources have been in use since ancient times. In 200 BC, people in China and the Middle East used windmills to pump water and grind grain. Also, the Romans were among the first to use geothermal energy to heat houses.

Share of renewable energy in primary energy consumption

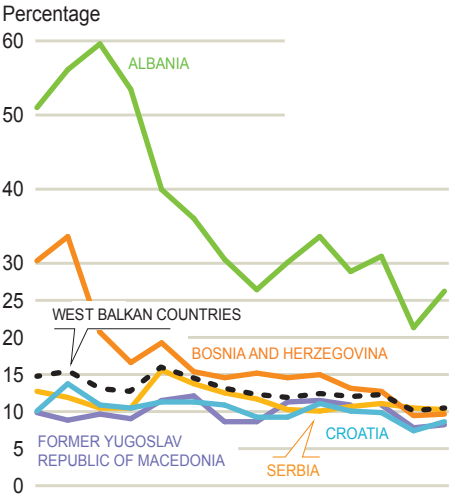
West Balkan countries



Source: International Energy Agency, 2010.

Change in renewable energy share in primary energy consumption

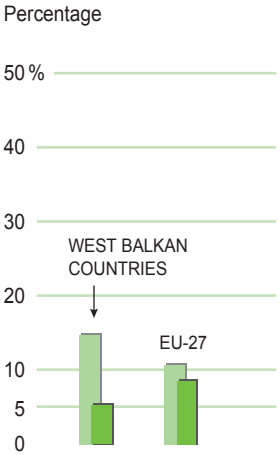
West Balkan countries



Source: International Energy Agency, 2010.

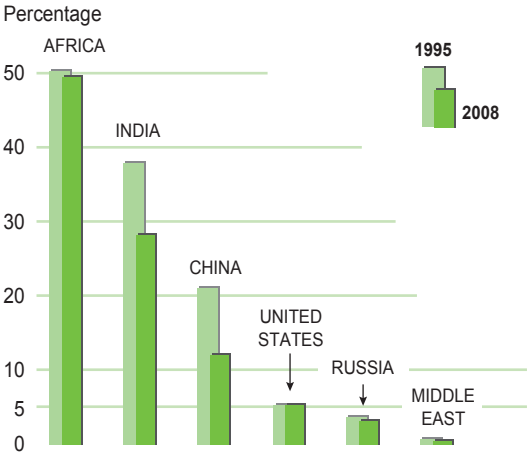
Share of renewable energy in primary energy consumption

Regional level



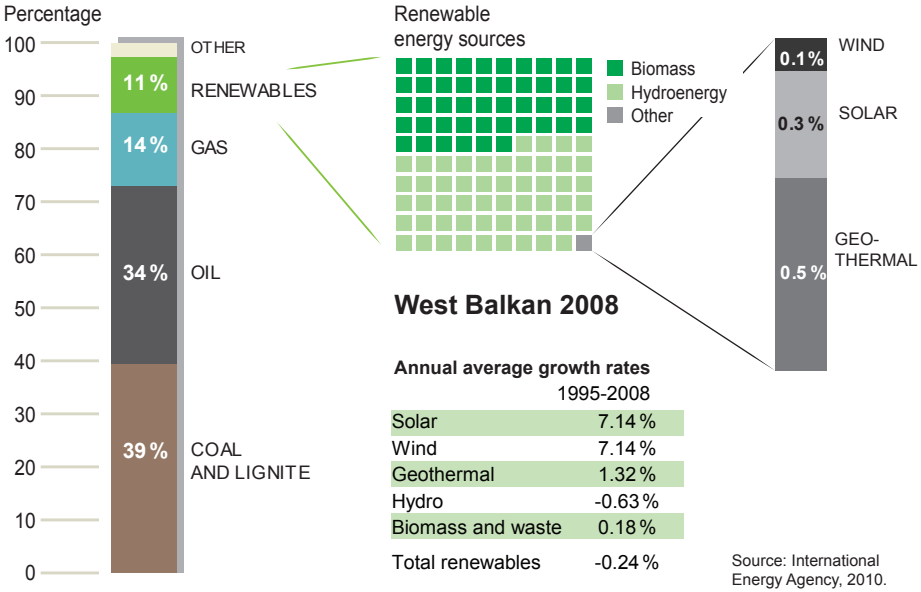
Sources: International Energy Agency, 2010; Eurostat, 2011.

Global level



Source: Eurostat, 2011.

Energy consumption by fuel



West Balkan 2008

Annual average growth rates

	1995-2008
Solar	7.14 %
Wind	7.14 %
Geothermal	1.32 %
Hydro	-0.63 %
Biomass and waste	0.18 %
Total renewables	-0.24 %

Source: International Energy Agency, 2010.

Passenger transport demand

Purpose

To determine whether passenger transport demand is being decoupled from economic growth.

Trend

Passenger transport demand in the West Balkan region increased steadily between 2001 and 2009, but much more slowly than growth in GDP. The region's improved economic performance has thus led to added pressure on the environment. Although road transport remained the dominant mode, air transport achieved the highest growth. Sudden economic restructuring, the economic crisis and political turmoil in some countries of the region may have contributed to the trend, along with other local circumstances such as increased fuel prices.

Policy implementation

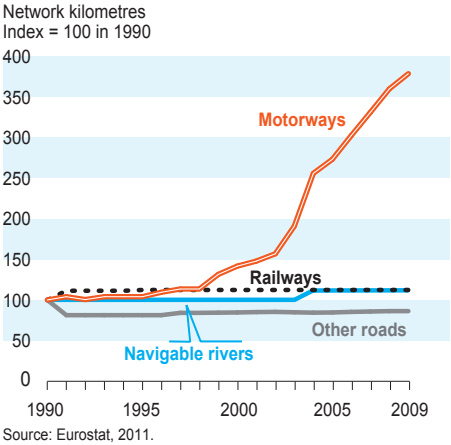
The *acquis communautaire* in the area of transport defines motor vehicle emission standards. The European Commission's most recent evaluation of the West Balkan countries seeking EU membership, in 2010, reports that further efforts and improvements are necessary in most of the countries with regards to the adoption and implementation of EU transport legislation (except for Croatia and the former Yugoslav Republic of Macedonia, which demonstrated substantial progress).

At EU level, the objective of decoupling transport demand from GDP growth was first defined in the Transport and Environment Integration Strategy adopted in Helsinki in 1999. The Commission's 2011 White Paper Roadmap to a Single European Transport Area - Towards a competitive and resource efficient transport system, calls for a shift to low-carbon transport systems and a 60 % drop in the sector's greenhouse gas emissions by 2050.

Did you know?

In 1970 European citizens travelled an average distance of 17 kilometres per day; today this figure has reached 35 kilometres per day.

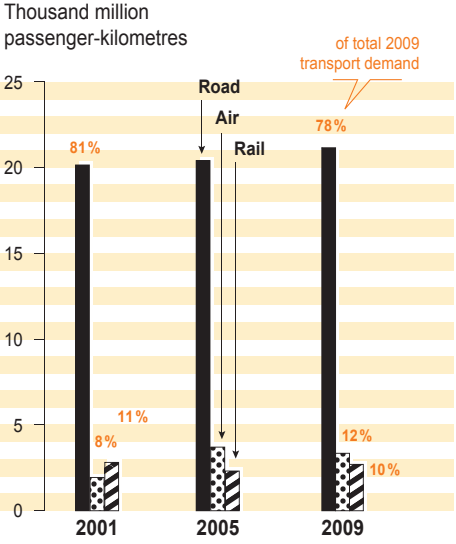
Croatian network evolution



Source: Eurostat, 2011.

Passenger transport modes

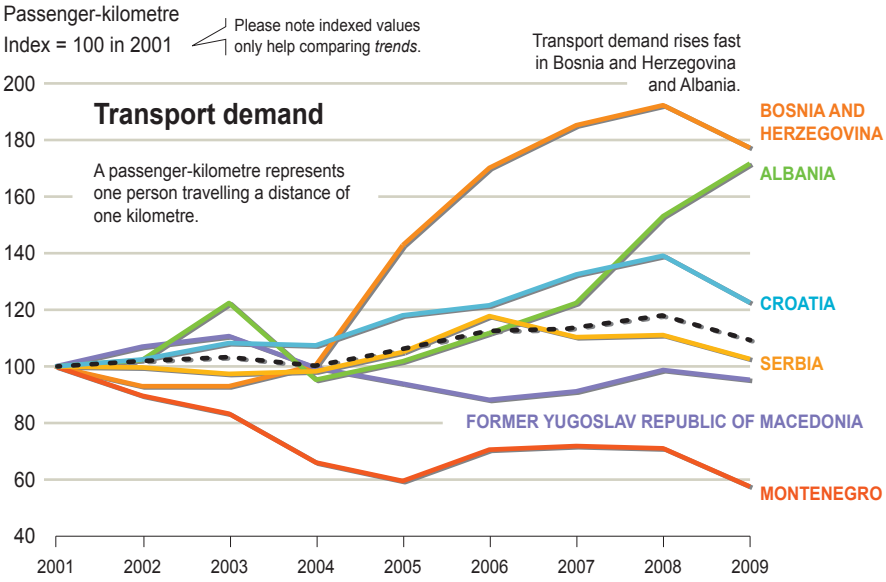
in West Balkan countries

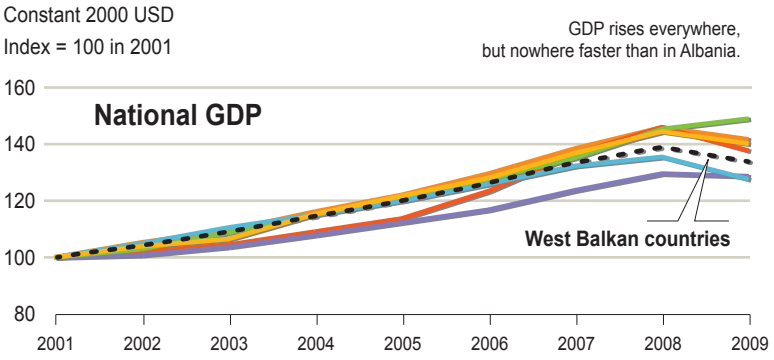


Sources: Institute of Statistics, Ministry of Public Works and Transport in Albania; Agency for Statistics of Bosnia and Herzegovina; Croatian Bureau of Statistics; State Statistical Office in the former Yugoslav Republic of Macedonia; Statistical Office of Montenegro; Statistical Office of the Republic of Serbia, 2011.

Passenger transport demand versus national wealth

A decoupling?





Sources: Institute of Statistics, Ministry of Public Works and Transport in Albania; Agency for Statistics of Bosnia and Herzegovina; Croatian Bureau of Statistics; State Statistical Office in the former Yugoslav Republic of Macedonia; Statistical Office of Montenegro; Statistical Office of the Republic of Serbia, 2011; World Development Indicators, World Bank, 2011.

Freight transport demand

Purpose

To assess whether freight transport demand is becoming decoupled from economic growth.

Trend

Freight transport demand almost doubled between 2001 and 2006 in the West Balkan region, making it increasingly difficult to limit the environmental impacts of the sector. In this period, the growth in freight demand consistently exceeded GDP growth. Between 2007 and 2009, statistics show a declining trend of 7 % annually. The data may reflect changes in the transport sector caused by the economic crisis which began in 2008, as well as local circumstances such as increased fuel prices.

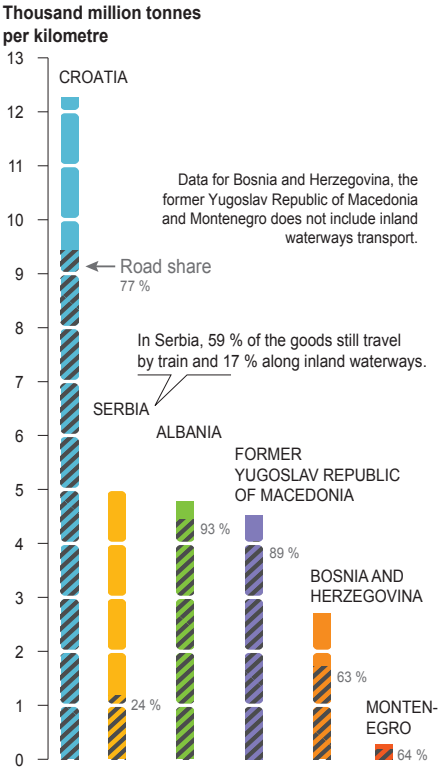
Policy implementation

Shifting freight transport from the road to water and the railways was first formulated as an important strategic element in the Sustainable Development Strategy adopted by the European Council in Gothenburg in June 2001. In the same year, the White Paper on the Common Transport Policy "European Transport Policy for 2010: Time to Decide", proposed a number of measures aimed at achieving a shift in transport modes and a decoupling of GDP from the transport sector. The Commission's 2011 White Paper on Transport calls for a shift to low-carbon transport systems until 2050, and a 60 % drop in the sector's greenhouse gas emissions. One of the goals in achieving a resource-efficient transport system is to shift 30 % of road freight over 300 kilometres to other modes of transport, such as rail or marine shipping by 2030, and to increase it to more than 50 % by 2050. To meet this goal, appropriate infrastructure will need to be developed.

Did you know?

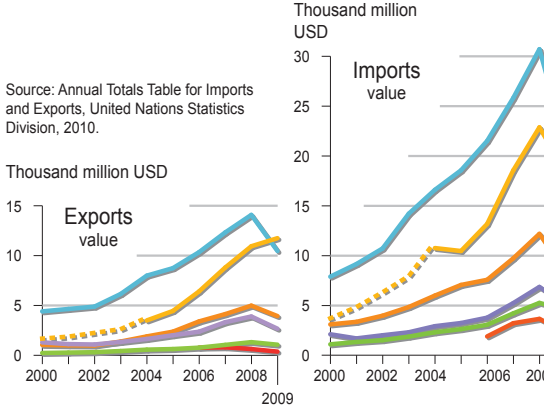
The international shipping industry is responsible for the carriage of around 90% of world trade.

Inland freight transport demand 2009



Sources: OECD/International Transport Forum (ITF), Institute of Statistics and Ministry of Public Works and Transport in Albania; Agency for Statistics of Bosnia and Herzegovina; Croatian Bureau of Statistics; State Statistical Office in the former Yugoslav Republic of Macedonia; Statistical Office of Montenegro; Statistical Office of the Republic of Serbia, 2011.

Source: Annual Totals Table for Imports and Exports, United Nations Statistics Division, 2010.



West Balkan major freight corridors

Sources: REBIS, Regional Balkans Transport Infrastructure Study.
A report for the European Commission, 2003; ViaMichelin, 2011.

Municipal waste generation

Purpose

To evaluate how efficiently natural resources are being used in the societies.

Trend

Municipal waste generation in the West Balkan region has increased by almost 53 % since 2003, to reach 340 kg per capita in 2009 — higher than at least one EU Member State. Waste generation has closely followed the region's upward trend in GDP, which is attributed to the rapid economic growth which accompanied free markets and the return of stability. Poor waste management is often a threat to public health and the environment. However, it appears that the quality of waste statistics has also improved in all countries since 2003 and recent increase may be partly due to increased accuracy.

Policy implementation

New legislation to manage municipal solid waste is in place in most West Balkan countries and was developed in line with EU directives, notably the Waste Framework Directive (Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives), but it is often poorly enforced and implemented. EU legislation calls for the preparation of waste management strategies and waste prevention programmes. Waste reduction targets exist only in Croatia and the former Yugoslav Republic of Macedonia.

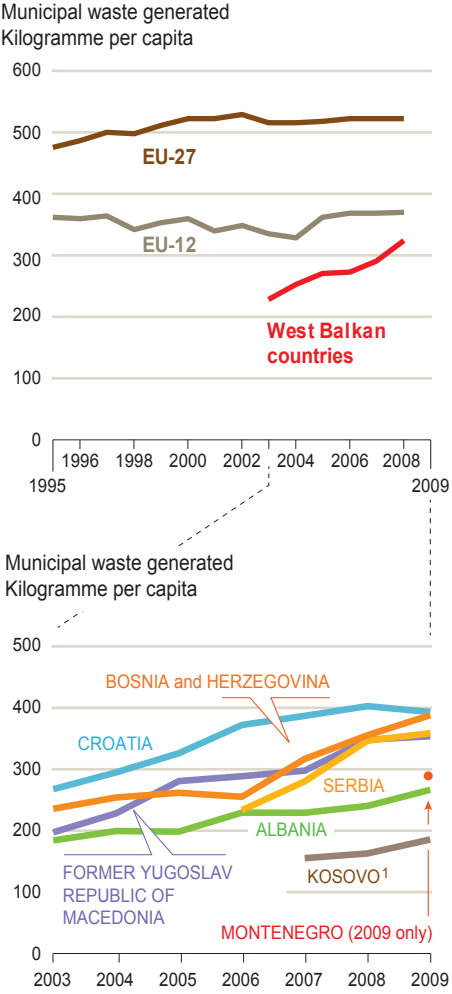
Did you know?

An average municipal landfill site can produce up to 150 m³ of leachate[1] a day, equal to the amount of fresh water that an average household consumes in a year.

1 Leachate is liquid that has seeped through solid waste in a landfill.

Waste generation

Comparative trends

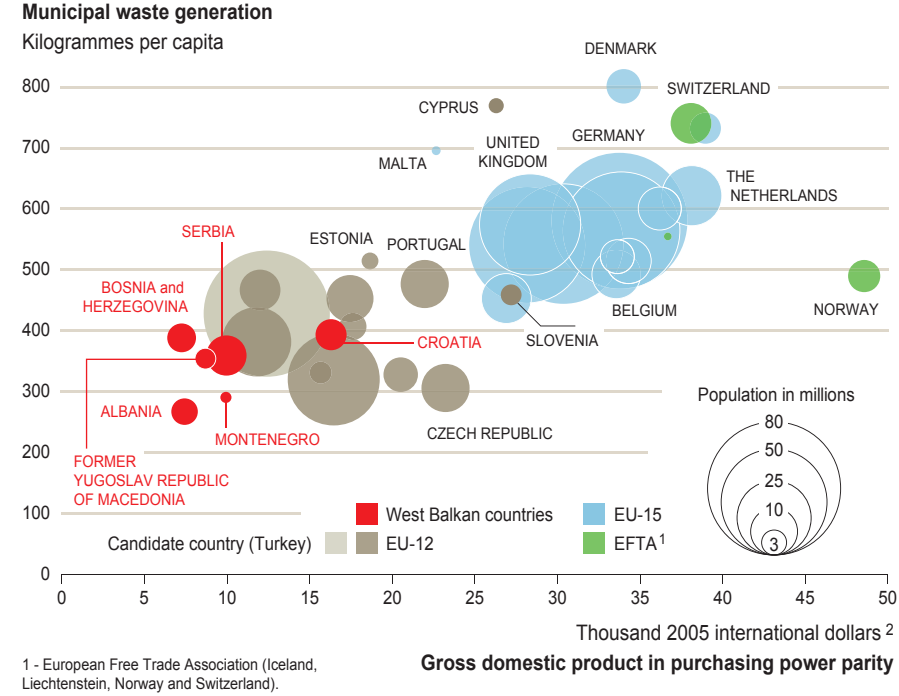


1. under UN Security Council Resolution 1244 (1999)

Sources: EEA, 2010; Ministry of Public Work and Transport, Ministry of Environment, Forests and Water Administration in Albania; Agency for Statistics of Bosnia and Herzegovina; Croatian Environment Agency, Ministry of Environment and Physical Planning in the former Yugoslav Republic of Macedonia; Statistical Office of Kosovo[1]; Environment Protection Agency of Montenegro; Serbian Environmental Protection Agency; World Bank, 2011.

Correlation between waste generation and income

Selected European countries

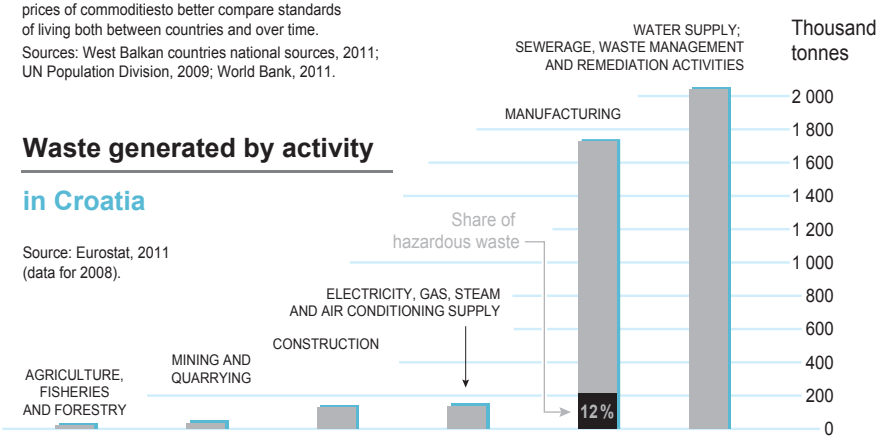


1 - European Free Trade Association (Iceland, Liechtenstein, Norway and Switzerland).
2 - The international dollar takes into account the purchasing power parities of currencies and the average prices of commoditiesto better compare standards of living both between countries and over time.

Sources: West Balkan countries national sources, 2011; UN Population Division, 2009; World Bank, 2011.

Waste generated by activity

in Croatia



Source: Eurostat, 2011 (data for 2008).

Use of freshwater resources

Purpose

To describe the pressure on freshwater resources over time focusing mainly on the sustainability of abstraction by different sectors.

Trend

In 2009, more than 55 % of total freshwater abstracted in the West Balkan countries was used for cooling processes in electricity production, around 27 % for public water supply, almost 12 % by the manufacturing industry and 6 % for irrigation. Between 2004 and 2008, abstraction for public water supply was fairly stable, while the manufacturing industry decreased its share. Agriculture varied its share between 2002 and 2009. The Water Exploitation Index (WEI) in the former Yugoslav Republic of Macedonia reached the highest value in 2004, very close to the warning threshold of 20 %, marking this year as the water-stressed year of the country.

Policy implementation

The most important relevant EU legislation is the Water Framework Directive, which requires countries to promote sustainable use through long-term protection of available resources and to ensure a balance between groundwater abstraction and recharge. The directive's overall goal is to achieve good surface water and groundwater ecological status in all water bodies. The regional development of new legislation is still in progress.

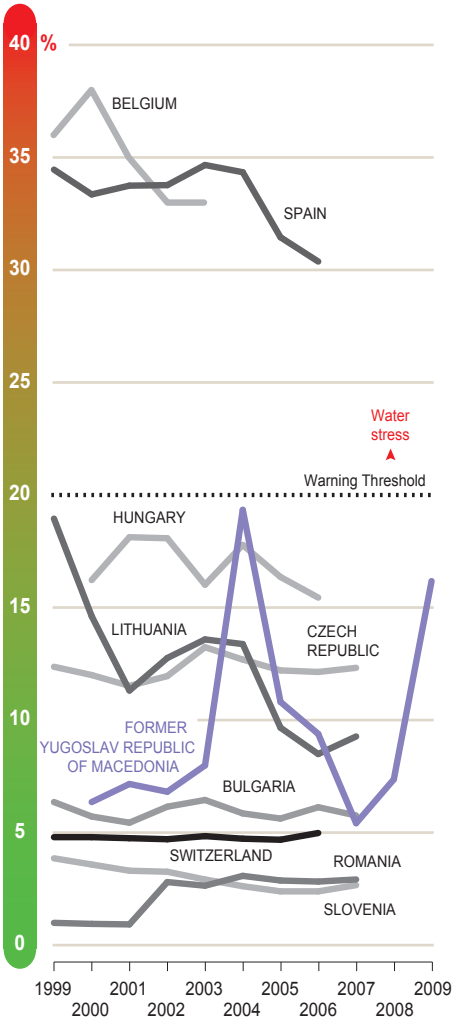
Did you know?

One cup of coffee requires 140 litres of water (taking into account the entire life cycle). If everyone in the world drank a cup of coffee each morning it would 'cost' about 120 billion m^3 of water a year (equivalent to more than 45 million Olympic-sized swimming pools).

Water exploitation index

Selected European countries

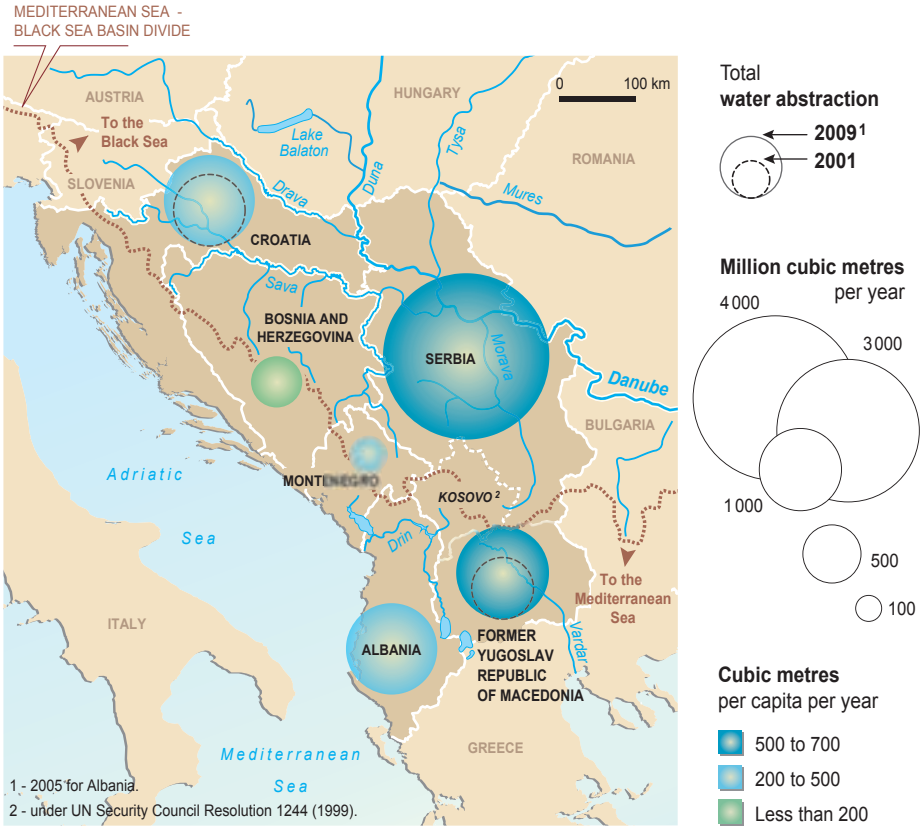
Water abstraction
as a percentage of available
long-term freshwater resources



Sources: Eurostat, 2009; EEA, 2010; State Statistical Office and Water Economy Administration, Public Enterprises for Water Supply and Sewage System in the former Yugoslav Republic of Macedonia, 2011; Raskin et al. 1997.

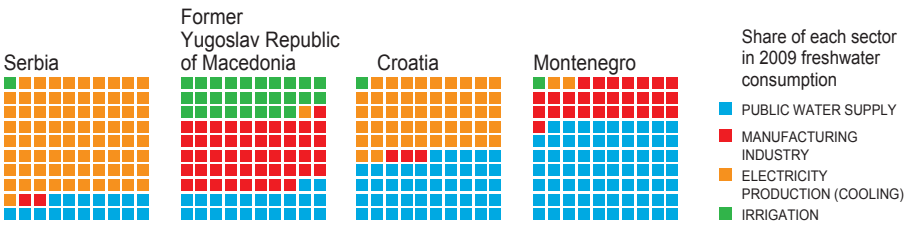
Water abstraction in the West Balkan countries

Water removed from any freshwater source for irrigation, manufacturing industry, electricity production (cooling) and public water supply



Sources: Agency for Statistics of Bosnia and Herzegovina; Croatian Bureau of Statistics; State Statistical Office in the former Yugoslav Republic of Macedonia; Statistical Office of Montenegro; Statistical Office of the Republic of Serbia, 2011; AQUASTAT, Land and Water Division, UN Food and Agriculture Organization, 2010; Eurostat, 2010.

Sectoral use of freshwater



Sources: National Statistical Offices of each country (see above), 2011.

Urban wastewater treatment

Purpose

To establish how effective existing policies are in reducing loading discharges of nutrients and organic matter.

Trend

Wastewater treatment (WWT) in the West Balkan region has been improving slowly since 2001. The percentage of the population connected to WWT rose above 12 % in 2008, but both the level of treatment and the extent of progress vary greatly between countries. The figure is very low compared with more than 80 % of the population connected in northern and southern EEA countries. It is probably the small number of WWT plants in operation that account for the low level of connections.

Policy implementation

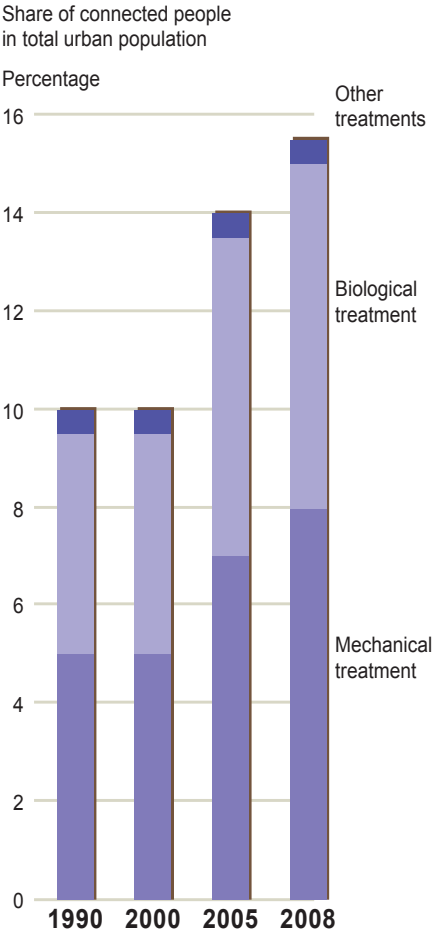
The West Balkan countries are working to align their national legislation with the EU Urban Waste Water Directive (Council Directive 91/271/EEC of 21 May 1991 concerning urban wastewater treatment). This aims to protect the environment from the adverse effects of urban wastewater discharges, which can cause deterioration of surface water and groundwater quality. The directive requires all urban areas with more than 2 000 persons to have sewerage and WWT plants, and prescribes the level of treatment required before discharge. Its full implementation in the EU-15 countries was required for 2005, but in 10 new Member States, the deadline has been extended to between 2008 and 2015.

Did you know?

The average person spends three years of their life on the toilet.

Urban wastewater by treatment

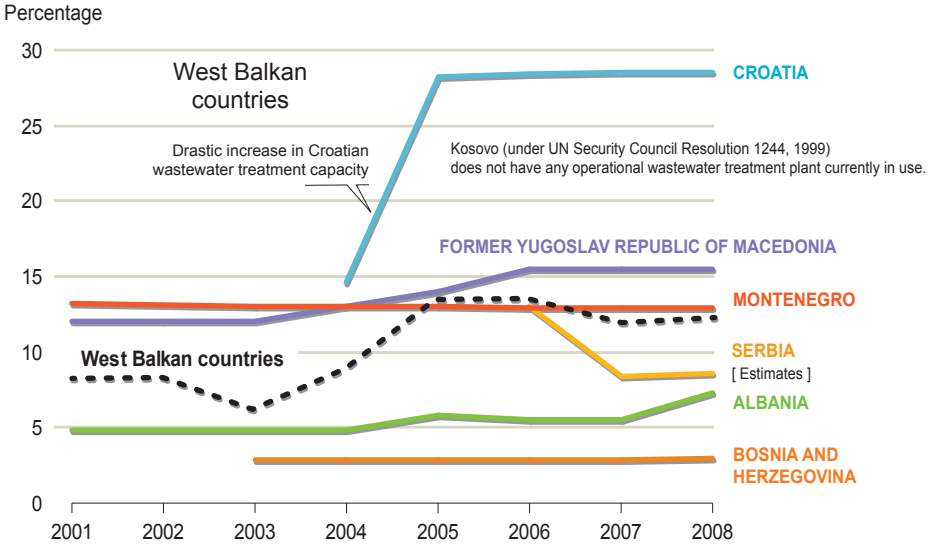
in the former Yugoslav Republic of Macedonia

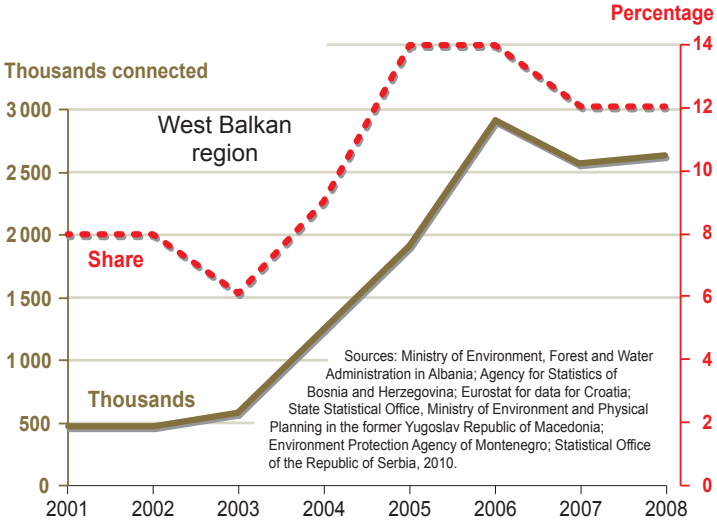


Source: Ministry of Environment and Physical Planning, State Statistical Office in the former Yugoslav Republic of Macedonia, 2011.

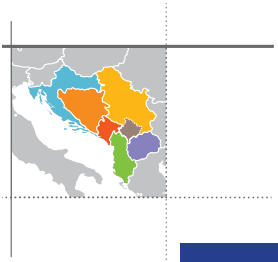
Population connected to wastewater treatment

Share of connected people in total urban population





Sources: Ministry of Environment, Forest and Water Administration in Albania; Agency for Statistics of Bosnia and Herzegovina; Eurostat for data for Croatia; State Statistical Office, Ministry of Environment and Physical Planning in the former Yugoslav Republic of Macedonia; Environment Protection Agency of Montenegro; Statistical Office of the Republic of Serbia, 2010.



Nemanja Siljic

Honey exhibition (Tašmajdan Park (Belgrade, Serbia), 30 September 2010). Nowadays, honey exhibitions can be seen in Belgrade very often, in different locations. Unlike other industries, the small business of beekeeping burgeoned in the past years of crisis. Due to the closure of factories, many unemployed people turned to honey production, finding this work cost-effective.

REUTERS - Ognen Teofilovski

Bride Vanja Ristovska, wearing a veil, rides a horse to meet the groom. Both are dressed in folk costumes in this traditional wedding ceremony in the village of Galicnik, some 150 km (93 miles) west of the former Yugoslav Republic of Macedonia's capital Skopje, 12 July 2009. The Galicnik wedding, a three-day traditional wedding celebration held each Petrovden or St Peter's Day, involves traditional customs, costumes, rituals and dances that have been passed down over the centuries.

CONTRIBUTING ORGANISATIONS AND EXPERTS

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Institute of Transport Studies
Shkelqim Gjevori
Ministry of Agriculture, Food and Consumer Protection
Tatjana Dishnica
Ministry of Economy, Trade and Energy
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