

Chapter 13.

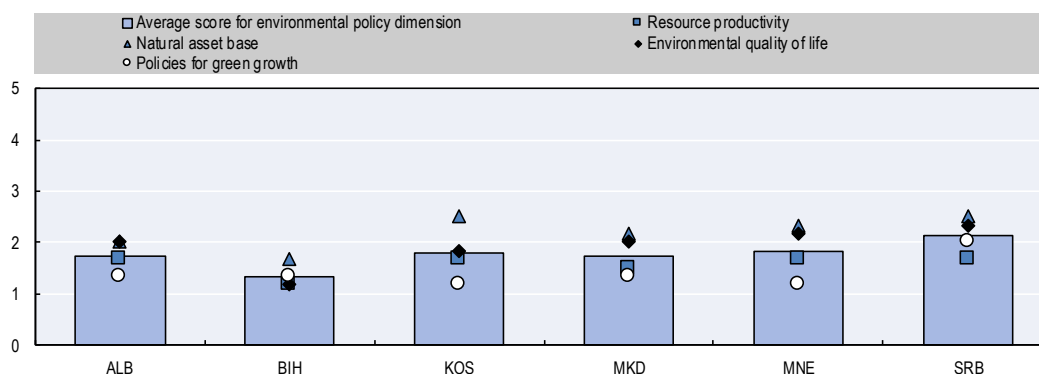
Environmental policy in South East Europe

This chapter on environmental policy assesses the quality of legal and policy frameworks and the extent of their implementation in six South East Europe (SEE) economies. It uses four sub-dimensions based on the OECD Green Growth measurement framework to assess progress towards environmentally sustainable development within the socio-economic context of the SEE economies. The first sub-dimension, resource productivity, describes the efficiency with which economic activities use natural resources. The second sub-dimension, natural asset base, examines the accessibility and ability of natural stocks to provide environmental inputs for development, and highlights potential risks to growth from a declining natural asset base. The third sub-dimension, environmental quality of life, assesses the interactions of environmental conditions and risks to people's quality of life and well-being. The final sub-dimension, policies for green growth, gauges whether policies foster green business opportunities while addressing concerns on income distribution. The chapter includes suggestions for enhancing the policies in each of these sub-dimensions to strengthen green growth, which in turn would foster the competitiveness of these economies.

Main findings

Long-term economic competitiveness and social development depends on fostering growth while safeguarding natural assets which provide vital resources and environmental services. Despite some progress in South East Europe (SEE), none of the six SEE economies assessed in this chapter – Albania, Bosnia and Herzegovina, the Former Yugoslav Republic of Macedonia, Kosovo,* Montenegro, and Serbia – have yet put in place a sufficiently coherent policy framework to grow and boost competitiveness in an environmentally sustainable way. While all six SEE economies have started preparing policy frameworks for green growth, none have fully completed them. This is reflected in their average dimension and sub-dimension scores, most of which are lower than 2 (Figure 13.1). The most advanced sub-dimension across the six SEE economies is the natural asset base where limited policy frameworks are mostly in place for managing land, biodiversity, forestry and water. The six SEE economies are dependent on the European Union (EU) and other donor support for policy development and infrastructure. Policy frameworks are most advanced in Serbia, as indicated by it being the only economy to score over 2 on average. Bosnia and Herzegovina's scores lag behind its SEE regional peers due to its complex constitutional arrangements and organisational structure.¹

Figure 13.1. **Environmental policy: Dimension and sub-dimension average scores**



Note: See the methodology chapter for information on the *Competitiveness Outlook* assessment and scoring process.

StatLink  <http://dx.doi.org/10.1787/888933705993>

Comparison with the 2016 assessment

Over the past two years, progress has been made in some areas of environmental policy in the six SEE economies. They have adopted strategies dedicated to climate change mitigation, although measures for climate change adaptation lag behind. The assessed SEE economies, except Kosovo, are signatories to the United Nations Framework Convention on Climate Change's Paris Agreement, and Albania, Bosnia and Herzegovina, and Serbia are parties to it. The SEE economies have made progress in reaching advanced levels of alignment with the EU's water and floods directives. Water supply and sanitation policy frameworks are largely in place, but infrastructure

* This designation is without prejudice to positions on status, and is in line with United Nations Security Council Resolution 1244/99 and the Advisory Opinion of the International Court of Justice on Kosovo's declaration of independence.

development continues to rely on donor support. However, there has been limited progress in establishing and implementing river basin management strategies. Air pollution remains high and is a serious threat to public health, especially in urban areas.

Achievements

All six SEE economies are starting to enact environmental legal and policy frameworks. Overarching environmental strategies and legislation on core environmental topics are in place. Strategies to adopt environmental legislation aligned with the EU *acquis* have also been developed.

Overall, the populations in the six SEE economies have good connections to improved water supply and sanitation facilities. Albania and Montenegro have made considerable progress in expanding access to improved sanitation facilities in the last decade and Kosovo has increased access to the public water supply with support from donors and the EU. However, access to public wastewater treatment facilities in urban areas remains below the OECD average.

The six SEE economies have adopted legislation and developed a general policy vision for land-use management, but policies differ in their coverage of local and regional spatial plans, as well as the level of the capacity and financial resources secured to support policy implementation.

Remaining challenges and key recommendations

- **Integrate environmental considerations and international commitments into the main economic and sectoral policies.** The implementation of the Sustainable Development Goals and selected multilateral environmental agreements (MEAs) should be enhanced by integrating them into the relevant sectoral policies and legal frameworks – for example, addressing flooding and drought in agriculture in line with the United Nations (UN) Convention to Combat Desertification.
- **Accelerate the transition to a low-carbon and circular economy.** The current energy mix is highly dependent on fossil fuels, resulting in high carbon dioxide (CO₂) emissions and poor outdoor air quality. Hence, energy policy frameworks need to be fully aligned with climate change objectives, and policies supporting energy efficiency and renewable energy sources with high potential, such as wind and solar photovoltaics (PV), need to be implemented. Measures to reduce illegal dumping, minimise landfill waste, expand recycling programmes and execute extended producer responsibility schemes should be fully defined and implemented.
- **Increase the use of economic instruments to incorporate environmental costs and benefits into budgets.** The tax burden should be shifted away from labour towards environmentally harmful consumption and production patterns. Although the polluter pays principle is legislated, it is not effectively applied. User fees (e.g. for water and waste) should be fully collected and should be higher to promote efficient resource use or deter pollution. Widespread environmentally harmful subsidies, especially in the energy sector (e.g. subsidised coal and transport fuels), should be phased out.
- **Define clear roles and responsibilities in the institutional frameworks for environmentally sustainable development** to strengthen policy implementation, enforcement and compliance. Water and land use are two areas of particular concern given the number of vertical and sectoral actors.

- **Improve framework conditions for green investment and innovation.** Measures which provide incentives for businesses to adopt greener technologies – e.g. to use materials and energy more efficiently – should be put in place and promoted effectively. Innovation systems, and research and development should increase their focus on the environment.
- **Strengthen natural asset management.** Although limited policy frameworks for the management of land, biodiversity, forestry and water (including some river basin management strategies) are generally in place, they are not implemented adequately due to a lack of capacity at local levels and insufficient budgets. Uncoordinated, uncontrolled use of water and land increases the risk of losing valuable river ecosystems.
- **Institutionalise the collection of key environmental statistics, and policy monitoring and evaluation activities.** Despite increasing numbers of environmental quality monitoring stations, data are not systematically collected or published. Accordingly, timely and accurate data should be collected to enable the government to design and monitor progress in implementing environmental policies and to better inform the public, decision makers and the authorities on environmental conditions and issues.

Context

Economic competitiveness and social development in the long term depend on a country's ability to decouple growth from natural resource use, to abate pollution and to enhance the quality of physical and human capital. Green investment and innovation are key to underpin sustained growth and give rise to new economic opportunities. Current business models need to adapt to account for climate change, resource bottlenecks, air and water pollution, and irreversible biodiversity loss. Indicators that raise awareness, measure progress, and identify opportunities and risks are critical in a country's path towards green growth (OECD, 2017a).

The assessment framework of this chapter is based on existing OECD approaches to monitoring the environmental aspects of socio-economic development. The OECD Green Growth Strategy outlines four main steps: align economic and environmental objectives; implement policy frameworks to price pollution and promote efficient resource use; address green growth's social implications; and implement mechanisms to evaluate and monitor progress (OECD, 2011a, 2015a). The OECD green growth indicators assess progress towards four main objectives: increasing the environmental and resource productivity of the economy; maintaining the natural asset base; improving the environmental dimension of quality of life; and strengthening economic opportunities and policy responses (OECD, 2017a). OECD member and non-member countries, as well as international organisations such as those participating in the Green Growth Knowledge Platform (the Global Green Growth Institute, UN Environment and the World Bank), have found OECD green growth indicators useful in supporting their transition towards a low-carbon, resource-efficient economy (OECD, 2015a).

Policies that affect the environment are typically cross-cutting. Several governmental organisations may be responsible for different parts of any environmental issue. Policy design and implementation therefore need to be well integrated in key economic and sectoral policies – both vertically (international, national, sub-national) and horizontally (inter-sectoral) across line ministries, including energy, transport, agriculture and health

(OECD, 2015a, 2015b). Environmental considerations should be reflected in economic and sectoral policies, and vice versa. In addition to government co-ordination, environmental policy frameworks must be equipped with tools that allow them to address the environmental implications of economic activities across all sectors. Therefore, this chapter is related to all other dimensions in the *Competitiveness Outlook*. However, it has particular links to the following chapters:

- **Chapter 4. Tax policy** can provide incentives for adopting resource-efficient technologies and discouraging environmentally harmful practices.
- **Chapter 12. Energy policy** and the structure of a country's energy mix can have major environmental costs due to CO₂ emissions and outdoor air pollution. The success of climate change mitigation strategies depends on how well energy strategies are aligned with them. In addition to outdoor air pollution, energy generation can have other serious environmental impacts as is the case with hydropower.
- **Chapters 14 and 15. Agriculture and tourism** are key sectors of the SEE economies that depend on high-quality natural assets (e.g. water, land and biodiversity) and are particularly vulnerable to the negative effects of pollution – for instance outdoor air pollution can reduce crop yields, and litter can deter tourists. In turn, these sectors themselves use natural resources and can be sources of local and transboundary pollution; their activities must therefore be regulated to reduce any negative environmental impacts.

Environmental policy assessment framework

The environment dimension in the *2018 Competitiveness Outlook* examines the extent to which the six SEE economies have established effective policies to facilitate greener growth. Without seeking to be exhaustive, it considers four broad sub-dimensions:

1. Resource productivity: are natural resources used efficiently to gain a cost-competitive edge? Do policies aim to reduce the carbon- and energy-intensity of the economy? How well are circular economy principles integrated into policies? Does municipal waste management include recycling programmes?
2. Natural asset base: are natural assets being conserved and managed effectively in order to sustain long-term competitiveness and growth? Do policies safeguard water, land, forestry and biodiversity resources?
3. Environmental quality of life: what is the environmental impact of economic development on people's well-being? Does the environment maintain a healthy and productive workforce? What kind of access do the public have to environmental services and amenities like improved water supply and sanitation? Are they exposed to pollution and industrial risks?
4. Policies for green growth: do policies provide sufficient incentives to create green business opportunities while addressing concerns on income distribution? Do they facilitate the transition to green growth (e.g. markets for environmental products and services) and remove barriers to that transition (e.g. environmentally harmful subsidies)?

Figure 13.2 shows how the sub-dimensions and their constituent indicators make up the environmental policy assessment framework. Each sub-dimension is assessed through quantitative and qualitative indicators. The OECD collected the qualitative and quantitative data for this dimension with the support of the SEE governments and their statistical offices. Quantitative indicators are based on national or international statistics. Qualitative

indicators have been scored in ascending order on a scale of 0 to 5, and are summarised in Annex 13.A1.² For more details on the methodology underpinning this assessment please refer to the methodology chapter.

Figure 13.2. **Environmental policy assessment framework**

Environmental policy dimension			
Outcome indicator <ul style="list-style-type: none"> Economic structure – gross value added of agriculture, industry and services 			
Sub-dimension 1 Resource productivity	Sub-dimension 2 Natural asset base	Sub-dimension 3 Environmental quality of life	Sub-dimension 4 Policies for green growth
Qualitative indicators <ol style="list-style-type: none"> Circular economy framework Climate change adaptation and mitigation framework Municipal solid waste management framework 	Qualitative indicators <ol style="list-style-type: none"> Water management framework Biodiversity and forest management framework Land-use management framework 	Qualitative indicators <ol style="list-style-type: none"> Air quality framework Water supply and sanitation system Industrial waste management framework 	Qualitative indicators <ol style="list-style-type: none"> Environmental policy framework Environmental taxes, subsidies, charges and fees International co-operation framework
Quantitative indicators <ol style="list-style-type: none"> Carbon productivity Carbon emissions Planned coal-fired thermal power plant capacity Material productivity Waste treatment Per capita municipal waste generation Share of population with access to municipal solid waste collection services 	Quantitative indicators <ol style="list-style-type: none"> Freshwater resources and abstractions Wildlife resources Share of protected terrestrial and marine areas Forest area Land use 	Quantitative indicators <ol style="list-style-type: none"> Mean population exposure to PM_{2.5} Air pollutant emissions per capita Share of population with access to improved water sources and sanitation facilities, and connected to a sewage system and wastewater treatment Contaminated sites 	Quantitative indicators <ol style="list-style-type: none"> Revenue from environmental tax ISO 14001 sustainability standards uptake

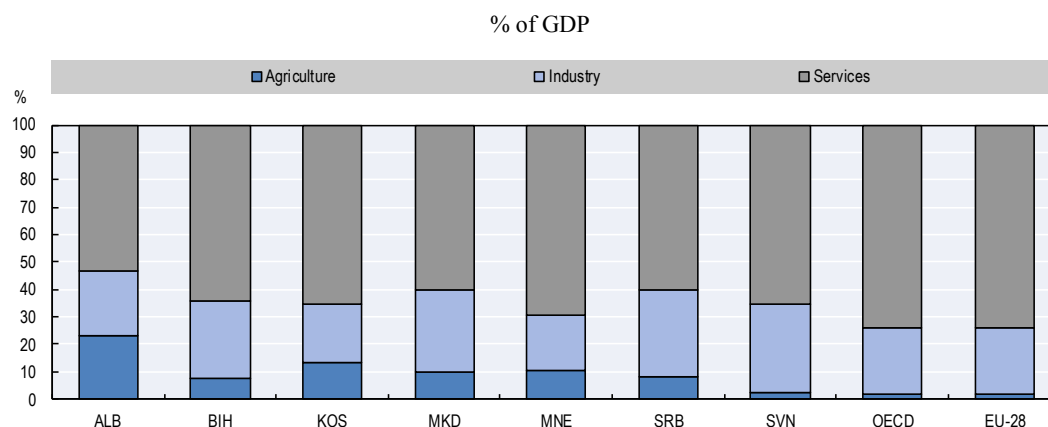
Environmental performance in SEE economies

The links between the economy and environment are abundant and complex. The six economies lack data measuring economic productivity adjusted to take into account natural resource use and pollution, such as environmentally adjusted multifactor productivity growth. Instead, the composition of value added between economic sectors sets the broader context for looking at green growth, as economic sectors use natural capital and pollute in different ways. The industry sector includes energy, mining and construction – as such, it is the most resource-intensive economic sector. The agriculture sector uses significant amounts of land and water, and agricultural inputs may be a source of pollution. The service sector is the least resource intensive.

Services contribute the greatest share of value added in the six SEE economies, with an average of about 62% of gross domestic product (GDP) (Figure 13.3). However, this share is smaller than in the OECD and EU, where services contribute about 74% on average in each region. On average, industry contributes about 25% to value added in the six SEE economies, as in OECD and EU countries. The share of agriculture in the six

SEE economies makes up 12% on average and ranges from 8% in Bosnia and Herzegovina to 23% in Albania. This is significantly larger than OECD and EU averages, which are each at about 1.5%.

Figure 13.3. **Composition of value added by economic sector (2016)**



Note: SVN – Slovenia.

Source: World Bank (2017), *World Development Indicators* (database), <http://data.worldbank.org/data-catalog/world-development-indicators>.

StatLink  <http://dx.doi.org/10.1787/888933706012>

Resource productivity

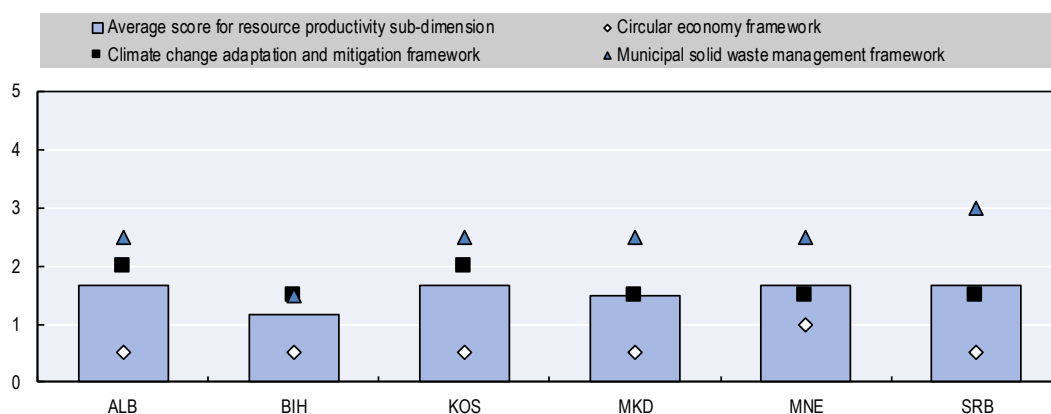
An economy that uses fewer resources to produce more output reaps both economic and environmental benefits, by reducing input costs, and generating less waste and lower greenhouse gas emissions (OECD, 2017b). As such, increasing how productively carbon and materials are used in an economy is critical in supporting this objective. Three qualitative indicators assess the existence and degree of implementation of frameworks which support resource productivity: 1) climate change adaptation and mitigation; 2) circular economy; and 3) municipal solid waste management.

The six SEE economies are at a similar performance level in the resource productivity sub-dimension, though Bosnia and Herzegovina has the greatest room for improvement. On average, the six economies score 1.6 overall, indicating that policy frameworks are under development but still to be adopted (Figure 13.4). This suggests that they have considerable potential for using their available natural resources more productively. Municipal solid waste management is the most advanced area with five economies scoring above 2, indicating that policy frameworks are in place and implementation has begun. However, circular economy initiatives are just beginning, with the assessed economies scoring no higher than 1. The economies have developed climate change mitigation strategies, but their energy mixes do not align yet with their mitigation goals.

Climate change mitigation objectives are defined but not reflected in energy mixes

Climate change is a serious challenge that poses major risks to economies, societies and the environment (OECD, 2017b). Adaptation measures address climate risks such as flooding and decreased agricultural yields, while mitigation activities aim to limit the level or rate of climate change by reducing resource inputs and emissions.

Figure 13.4. Resource productivity: Sub-dimension average scores and indicator scores



Note: See the methodology chapter for information on the *Competitiveness Outlook* assessment and scoring process.

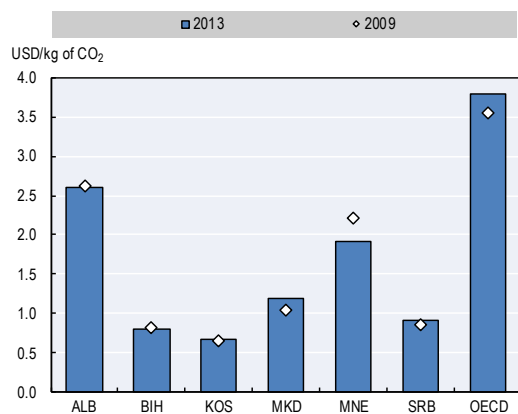
StatLink <http://dx.doi.org/10.1787/888933706031>

Carbon productivity (economic output per unit of CO₂ emitted) has not seen significant improvement in any of the six SEE economies over the last few years. Albania and Montenegro have the highest carbon productivity levels due to their reliance on hydro-generated electricity (over 50% in 2014), but they still fall short of the OECD average (Figure 13.5). Even in these relatively carbon-productive economies, however, CO₂ emissions grew faster than GDP between 2009 and 2013. Other economies, notably the Former Yugoslav Republic of Macedonia and Serbia, have lower levels of CO₂ productivity but have reduced their CO₂ emissions as their GDP has grown.

Electricity generation and heat production account for the majority of CO₂ emissions in the assessed economies—ranging from 67.1% in the Former Yugoslav Republic of Macedonia to 75% in Kosovo (Figure 13.6). The exception is Albania, where electricity and heating contribute only 2.9% of total emissions because almost 100% of its electricity generation is hydropower. Albania's CO₂ emissions come mainly from transport, which at 60% represents the largest share among the six economies (the others range between 13.7% in Bosnia and Herzegovina and 23.4% in Montenegro).

Apart from Kosovo, the assessed economies are all signatories to the UN Framework Convention on Climate Change and its Paris Agreement. Albania, Bosnia and Herzegovina, and Serbia have also ratified the Paris Agreement and therefore are parties to it. As requested by the Paris Agreement, the five economies have submitted their Nationally Determined Contributions, which outline their post-2020 climate actions. They focus on resource and energy efficiency gains as well as increased renewable energy use. Kosovo's draft climate change strategy includes similar objectives.

Climate change mitigation strategies are at various stages across the six economies, while climate adaptation measures are less developed. Bosnia and Herzegovina has adopted a climate change strategy which encompasses both mitigation and adaptation; Albania and Kosovo expect their draft strategies and action plans to be adopted by the end of 2017, and Serbia's in 2018. The Former Yugoslav Republic of Macedonia's National Communication on Climate Change includes an action plan for climate change mitigation, potential mitigation measures in sectors and potential adaptation measures. Montenegro has adopted a climate change mitigation strategy and expects to adopt its draft climate change adaptation strategy in 2018. However, concrete initiatives are at an early stage of implementation across the six economies.

Figure 13.5. Production-based CO₂ productivity (2009 and 2013)

Note: Production-based CO₂ productivity reflects the economic value generated (in terms of real GDP) per unit of CO₂ emitted. Production-based emissions refer to gross direct CO₂ emissions from fossil-fuel combustion, emitted within the territory.

Source: World Bank (2017), *World Development Indicators* (database), <http://data.worldbank.org/data-catalog/world-development-indicators>.

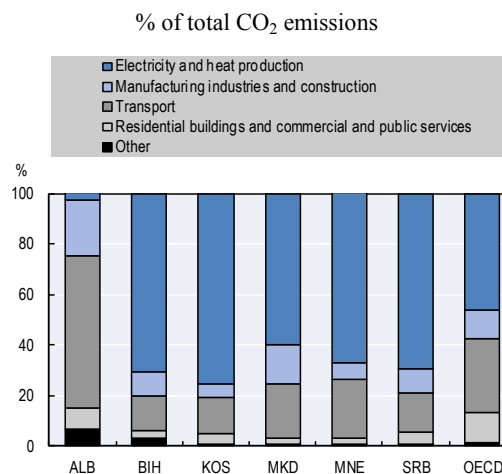
StatLink  <http://dx.doi.org/10.1787/888933706050>

A key challenge across all the assessed economies is that energy strategies are not fully aligned with climate change mitigation goals. Even where the strategies are well aligned, implementation is generally weak. In particular, plans to increase electricity generation capacity with large-scale coal-fired thermal plants contradict climate objectives (see Chapter 12, Energy policy). Over 7 gigawatts (GW) of coal-fired thermal power plant capacity has been announced, pre-permitted or permitted across the six SEE economies, predominantly in Bosnia and Herzegovina (3.5 GW) and Serbia (2.9 GW), but also in Kosovo (0.5 GW), the Former Yugoslav Republic of Macedonia (0.425 GW) and Montenegro (0.254 GW) (Endcoal, 2017).

Most of the existing renewable energy produced in the region comes from large hydropower plants. However, there is great untapped potential for renewable energy in all the economies, especially in solar PV and wind. This, combined with the dramatic fall in these technologies' generation costs, makes them a viable alternative. There is also a need to increase energy efficiency (see Chapter 12, Energy policy).

The circular economy is emerging as a concept

While there is no single accepted definition of a circular economy, it is generally understood as reduced demand for certain natural resources and the materials that are derived from them. The resources usually emphasised are minerals (both metallic and non-metallic), fossil fuels, and various biotic resources such as forestry, fish and other biomass. Relatively little attention tends to be given to other resources, such as land or water. In certain conditions, a circular economy approach can have a variety of benefits – lower production costs, increased competitiveness, reduced dependency on commodity

Figure 13.6. CO₂ emissions by sector (2014)

Source: World Bank (2017), *World Development Indicators* (database), <http://data.worldbank.org/data-catalog/world-development-indicators>.

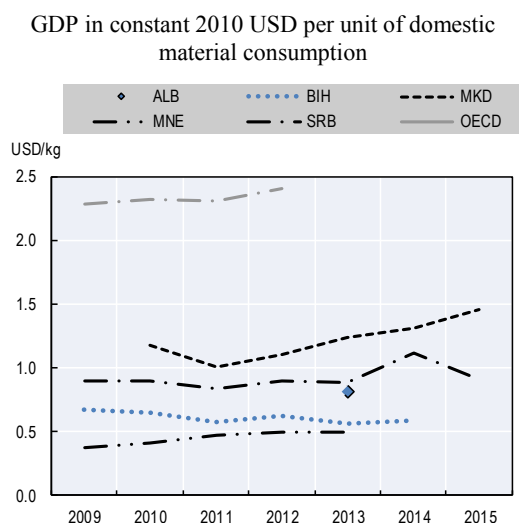
StatLink  <http://dx.doi.org/10.1787/888933706069>

imports and fewer negative environmental impacts. There are three key approaches to promoting resource efficiency: 1) extended producer responsibility systems; 2) green public procurement; and 3) business partnerships along the value chain (Box 13.1). The EU's circular economy initiative and resulting amendments to its waste-related directives strengthen the case for the six economies to develop a circular economy framework as part of their EU accession process.

The six SEE economies have markedly lower levels of material productivity (economic output per unit of domestic material consumption) than the OECD average, with only modest improvements over the past five years (Figure 13.7). Improvements in many European countries took place after 2008, following the financial crisis and the decreased industrial output and demand for materials, particularly in construction (OECD, 2017a).

Recycling rates in all six economies are very low, although Albania, and to a much lesser extent Montenegro and Serbia recover some waste through recycling (Figure 13.8). However, the 22% of solid waste recycled in Albania is lower than the EU average of 35% and far short of its own 2020 target of 55%. In Albania, recycling firms have allegedly complained that the lack of recyclable materials meant that recycling was not economically viable, leading to controversial legislative changes in 2016 that lifted a 2013 ban on the import of waste, providing the waste was to be recycled, not landfilled or incinerated. By contrast, EU countries landfill almost 50% of their waste; the remainder is reintroduced into the economy as energy through incineration, materials for backfilling and recycled materials.

Figure 13.7. **Material productivity (2009-15)**

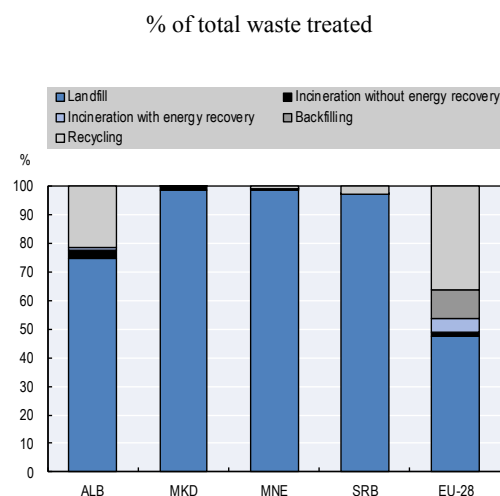


Note: Material productivity is defined as the monetary value (in terms of real GDP) generated per unit of materials used (in terms of domestic material consumption) for non-energy materials. Data for Kosovo not available. All available data are included.

Source: World Bank (2017), *World Development Indicators* (database), <http://data.worldbank.org/data-catalog/world-development-indicators>.

StatLink  <http://dx.doi.org/10.1787/888933706088>

Figure 13.8. **Waste treatment by type (2014)**



Note: Data for Bosnia and Herzegovina, and Kosovo not available.

Source: Eurostat (2017a), “Treatment of waste by waste category, hazardousness and waste operations”, <http://ec.europa.eu/eurostat/data/database>.

StatLink  <http://dx.doi.org/10.1787/888933706107>

The six SEE economies have made progress in transposing the EU directives that underpin key circular economy principles to a high degree: waste (2008/98/EC), landfill (1999/31/EC), waste electronic equipment (2012/19/EU) and end-of-life vehicles (2000/53/EC). Most of the assessed economies refer to circular economy principles in their waste strategies; most are also currently drafting waste strategies which plan to include measures to develop the circular economy, particularly for waste diversion through recycling and energy recovery through incineration. Some of the assessed economies have already started running initial awareness-raising activities and waste recycling programmes. Montenegro has included a circular economy objective in its National Sustainable Development Strategy for 2030, but has not yet implemented any action plans or concrete initiatives. Montenegro's law on public procurement also includes environmental protection and energy efficiency criteria.

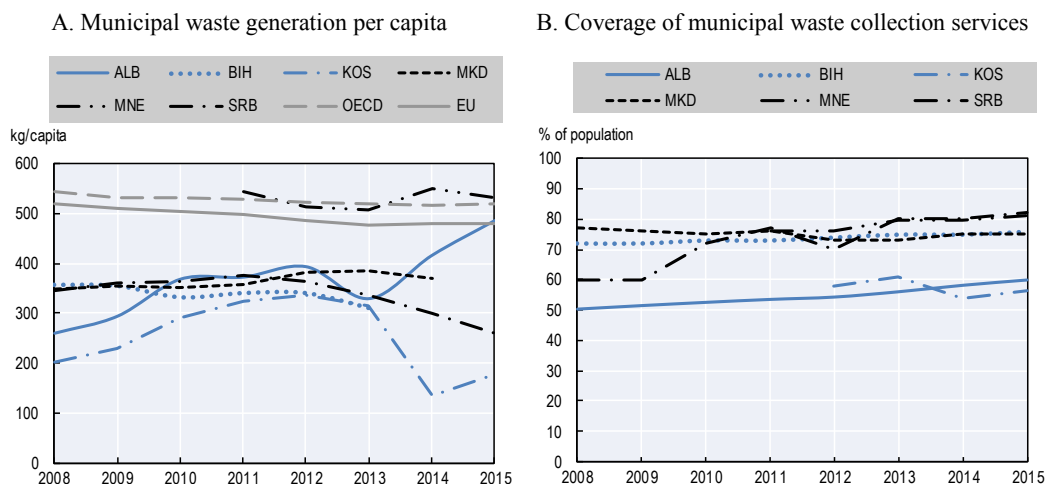
Strategies for managing municipal solid waste are in place but need sustainable funding

Effective management of municipal solid waste minimises risks to public health and the environment. Key components of municipal waste management include adequate collection service coverage and suitable cost, as well as appropriate treatment – including the separate collection and recycling of waste, discussed above as they are also key components of a circular economy.

In all six economies except Montenegro, waste generation per capita has been below the OECD average, although recent increases in Albania's waste generation rates indicate that it is approaching OECD levels (Figure 13.9.A). Serbia, on the other hand, has recently reduced its waste generation rates. The continued prevalence of unregulated burning and illegal dumping of waste in the region poses problems to the environment and public health through groundwater, soil and air pollution; it also prevents statistical offices from capturing waste generation rates accurately. In recent years, Bosnia and Herzegovina, the Former Yugoslav Republic of Macedonia, Montenegro and Serbia have all provided at least 75% of their populations with solid waste collection services. While this represents the majority of their populations, it still falls short of universal coverage and levels in most OECD countries. For example, their regional neighbour Slovenia has achieved full coverage since 2011 (OECD, 2017c). However, most recent increases in service coverage in the assessed SEE economies have been modest – with the exception of Serbia, which has seen more progress, and the Former Yugoslav Republic of Macedonia, which has seen a decline (Figure 13.9.B). Coverage of waste collection services is less universal in Albania and Kosovo.

All six SEE economies have strategies in place that define responsibilities and objectives for municipal solid waste management. With the exception of Bosnia and Herzegovina, where the current policy framework on waste management is less developed and focuses primarily on landfilling, the other five economies have adopted waste policy frameworks with clearly defined and measurable objectives and have started to implement them. Serbia's implementation is quite advanced thanks to its sufficient institutional capacity and good co-ordination with responsible local authorities.

Across the six SEE economies, waste disposal tariffs remain too low to cover the costs of municipal waste collection, let alone the costs of infrastructure construction or maintenance. Therefore, projects to construct new municipal solid waste collection and treatment infrastructure are mostly funded by international financial institutions, particularly by the EU Instrument for Pre-Accession Assistance, rather than by domestic investment. In Serbia, by contrast, the private sector has funded recent waste management infrastructure projects.

Figure 13.9. **Municipal waste generation and coverage of collection services (2008-15)**

Note: Municipal waste generation data for Montenegro unavailable before 2011, for Bosnia and Herzegovina after 2013, and the Former Yugoslav Republic of Macedonia after 2014. Waste management companies in Kosovo's Gjilan municipality did not provide data in 2014. Access to municipal waste collection services unavailable for Kosovo before 2012 and in Montenegro before 2011.

Source: ASK (2017), "Municipal waste", *Environment Database*, <http://ask.rks-gov.net>; BHAS (2016), "Competitiveness in South East Europe: A Policy Outlook 2018: Environmental Policy Questionnaire", Responses to the OECD received from BHAS; Eurostat (2017b), "Municipal waste by waste operations", <http://ec.europa.eu/eurostat/data/database>; INSTAT (2017), "Urban and inert solid waste", www.instat.gov.al; OECD (2017d), "Municipal waste", *OECD Environment Statistics* (database), <http://dx.doi.org/10.1787/data-00601-en>; MakStat (2016), "Municipal waste", www.stat.gov.mk; MONSTAT (2016), "Municipal waste", www.monstat.org; SEPA (2016), "Competitiveness in South East Europe: A Policy Outlook 2018: Environmental Policy Questionnaire", Responses to the OECD received from SEPA; World Bank (2017), *World Development Indicators* (database), <http://data.worldbank.org/data-catalog/world-development-indicators>.

StatLink  <http://dx.doi.org/10.1787/888933706126>

The way forward for resource productivity

The six SEE economies need to implement climate change mitigation objectives in the energy sector to reduce reliance on fossil-fuel sources in the energy mix. In particular, they all need to fully align their energy strategies with climate change objectives, consistently revising them with the long-term goal of decarbonisation in mind. Where policies are already aligned, implementation needs to be strengthened. The economies also need to consider the total economic, environmental and social costs of a carbon-intensive pathway when assessing their plans to expand electricity generation capacity via large-scale coal-fired thermal power plants. The full environmental, social and economic impact of planned hydropower also needs to be considered. The six SEE economies could explore ways to take advantage of the great technical potential of renewable energy, particularly wind and solar PV, coupled with newly affordable technology.

The six SEE economies should develop and adopt climate change adaptation policies. They could draw on the OECD's *Climate Change Risks and Adaptation: Linking Policy and Economics* (OECD, 2015c) to consider an iterative process for understanding, planning for and managing climate risks such as flooding. This process involves identifying risks, characterising risks, choosing and exploring policy responses, and feedback and learning.

The six SEE economies should strengthen legal and policy frameworks for a circular economy. They should continue to work towards fully adopting legislation and regulation that support circular economy principles, such as the EU directives on packaging waste (1994/62/EC) and waste batteries and accumulators (2006/66/EC). They should also adopt and implement coherent sectoral strategies with circular economy principles and measures – for example, Montenegro’s national development strategy includes the circular economy as a key objective. They should raise more awareness of circular economy principles, develop recycling programmes and establish markets for secondary materials to help decrease landfill volumes, increase resource productivity and create business opportunities. Finally, all six SEE economies should enhance their approaches to addressing resource efficiency along product life cycles, for example through extended producer responsibility schemes, green public procurement, and partnerships between businesses working along value chains in which one company’s waste becomes another’s material input (Box 13.1).

Box 13.1. Good practice: OECD policy guidance on resource efficiency

The OECD *Policy Guidance on Resource Efficiency* (OECD, 2016a) discusses the key trends and identifies the main principles that should be used to develop resource efficiency policies. It offers policy guidance in four main areas: 1) choosing and designing policy instruments; 2) combining instruments in an effective policy mix; 3) integrating resource efficiency into cross-cutting and sectoral policies; and 4) strengthening data and analysis to support policy development and evaluation.

The guidance recommends that policy mixes address each of the main stages of a product’s life cycle and that interactions between different instruments be examined to identify synergies and avoid overlaps. It describes examples of policy instruments targeting different stages of the product life cycle and discusses their strengths and weaknesses.

The policy guidance highlights three key approaches to address resource efficiency along product life cycles:

1. Extended producer responsibility (EPR) involves producers taking responsibility for collecting, sorting and treating end-of-life products, following the polluter pays principle. Effective EPR systems operate according to good governance principles. Opportunities to integrate informal workers into formal waste management systems can reduce the socio-economic risks associated with waste picking.
2. Green public procurement seeks to establish resource efficiency criteria for public purchases which can stimulate innovation and increase demand for green products. To that end, efficiency criteria should be integrated into all stages of the public procurement process: tender specification, selection and implementation.
3. Partnerships involving businesses working along value chains are useful when an actor cannot achieve resource efficiency objectives on their own. Business co-operation can help develop more innovative approaches – for example one company’s waste can become another’s material input.

The policy guidance calls for an economy-wide approach to resource efficiency. It recommends incorporating principles into national sustainable development strategies and seeking synergies with other policy areas, such as climate change and transport. It also calls for innovation to create the green technology needed to develop new resource-efficient business models. Finally, it advises strengthening data collection on material flows and economic analysis of resource efficiency to further support the development and evaluation of policies in this area.

Source: OECD (2016a), *Policy Guidance on Resource Efficiency*, <http://dx.doi.org/10.1787/9789264257344-en>; OECD (2016b), *Extended Producer Responsibility: Updated Guidance for Efficient Waste Management*, <http://dx.doi.org/10.1787/9789264256385-en>; OECD (2015d), *Going Green: Best Practices for Sustainable Procurement*, www.oecd.org/gov/ethics/Going_Green_Best_Practices_for_Sustainable_Procurement.pdf.

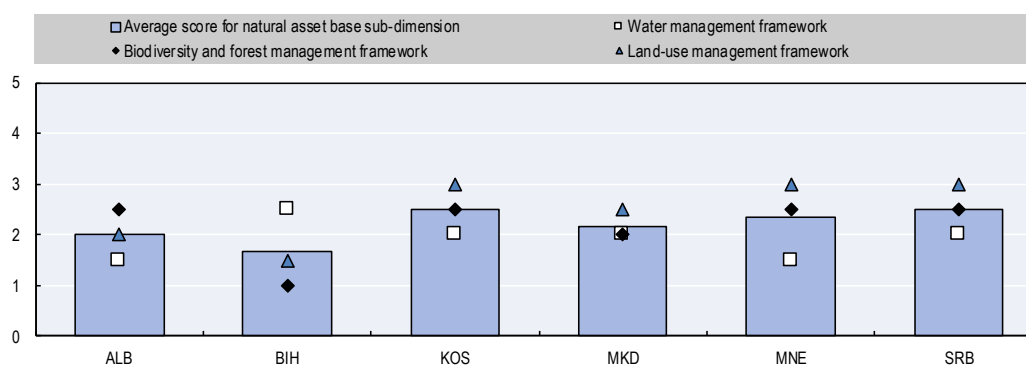
The economies should only consider options for municipal waste management infrastructure that are environmentally sound and cost effective. The waste treatment method and infrastructure capacity should match projected levels of waste. The cost needs to take into account the whole life cycle of the project – including projected levels of waste and associated operational costs such as maintenance. Fee collection rates and the fees themselves for waste collection should be gradually increased to cover the cost of the service and infrastructure. An independent regulatory authority, if managed by experts, could have the technical competence to set appropriate prices.

Natural asset base

South East Europe is geographically diverse, with fertile plains, mountainous regions and a significant portion of the Adriatic coast. Its natural resources are unevenly distributed, including its fresh water, forests and fish. The region's widely varied habitats also host rich biological diversity. These combined assets form the foundation for economic activity and human welfare, and policies should favour activities that use them sustainably over those that deplete or degrade them, to ensure that their benefits are available for future generations. Three qualitative indicators assess the presence and implementation of management frameworks for: 1) water; 2) land use; and 3) biodiversity and forests.

On average, the six SEE economies score 2.2 on the natural asset base sub-dimension, signifying that policy frameworks are mostly adopted (Figure 13.10). Across these economies, land use, forestry and biodiversity policies are the most advanced, and implementation is beginning. Water management strategies and legislation are largely in place, but implementation is lagging behind. Bosnia and Herzegovina is the exception – water management policies have begun to be implemented, although institutional complexity still hinders the adoption of coherent land-use, biodiversity and forestry policies and legislation.

Figure 13.10. **Natural asset base: Sub-dimension average scores and indicator scores**



Note: See the methodology chapter for information on the *Competitiveness Outlook* assessment and scoring process.

StatLink  <http://dx.doi.org/10.1787/888933706145>

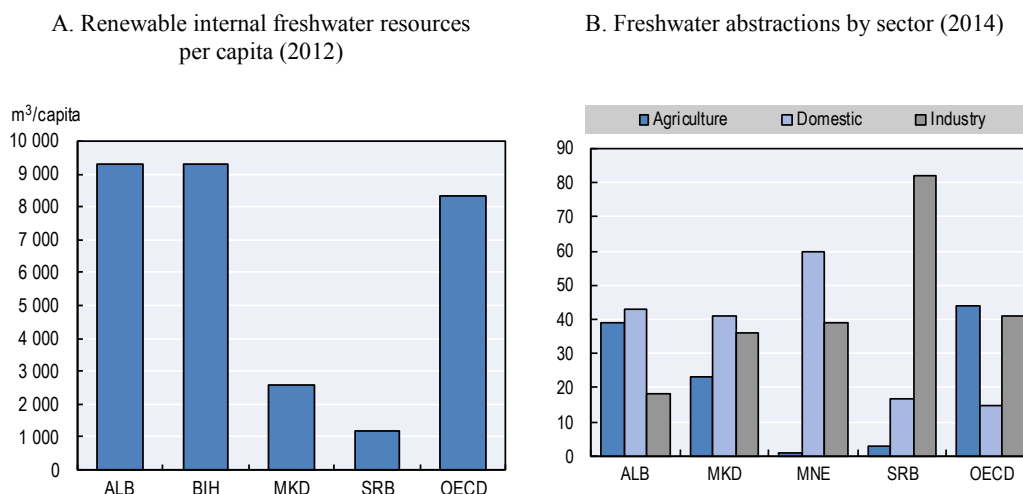
Freshwater resources management requires greater co-ordination

South East Europe is home to rich, diverse and interconnected transboundary freshwater resources, from the karstic regions of the Dinaric Alps and the Adriatic coast to the Danube, Drin and Vardar river basins and the ancient lakes of Ohrid, Prespa and Skadar. These resources not only support human life and irreplaceable biodiversity, but also drive economic activity and contribute to the competitiveness of the SEE economies.

Water resources are distributed unevenly throughout the region, with economies like Albania and Bosnia and Herzegovina harbouring far larger per-capita quantities of renewable internal freshwater resources than the Former Yugoslav Republic of Macedonia and Serbia (Figure 13.11.A). There is considerable diversity in how water is used among the assessed economies. In contrast to most OECD countries, where agriculture uses the largest share of water resources, in Albania, the Former Yugoslav Republic of Macedonia and Montenegro households account for the largest share (Figure 13.11.B). In Serbia, the industrial sector accounts for more than 80% of total freshwater abstractions, with cooling for electricity production making up 75% of all water used (Eurostat, 2017c).

Water stress levels vary greatly among the assessed economies. At high levels, it can put economies at risk of low river flows, water shortages, desertification and reduced food production. Of the assessed economies with available data, Serbia has the greatest risk of high water stress with its lowest per-capita water resources and the highest per-capita water abstractions, although the latter remains below the OECD average.

Figure 13.11. **Freshwater availability and use**



Note: Freshwater resources data for Kosovo and Montenegro unavailable. Freshwater abstractions data for Bosnia and Herzegovina and Kosovo unavailable.

Source: World Bank (2017), *World Development Indicators* (database), <http://data.worldbank.org/data-catalog/world-development-indicators>.

StatLink  <http://dx.doi.org/10.1787/888933706164>

The river basin approach to water management aligns administrative and hydrological boundaries to improve water policy implementation, in line with the EU Water Framework Directive (2000/60/EC). Progress has been made in all six SEE economies towards laying the groundwork for integrated water resource management and river basin management plans by adopting legislation and strategies. Donors have driven the international co-ordination of transboundary river basins – such as the Sava River basin which crosses Bosnia and Herzegovina, Croatia, Montenegro, Serbia and Slovenia; and the Drin River basin shared by Albania, the Former Yugoslav Republic of Macedonia, Kosovo and Montenegro. However, transboundary co-ordination efforts are hampered by poor domestic co-ordination among water-related government institutions, exacerbated by

an unclear division of roles and responsibilities. Bosnia and Herzegovina, despite lacking a national strategic framework for water resources, has established functioning entity-level frameworks and agencies dedicated to managing river catchments. The Former Yugoslav Republic of Macedonia, Kosovo and Serbia have adopted water management strategies that are well aligned with the EU's water and floods directives. Albania and Montenegro have made progress in developing water policy frameworks, but insufficient inter-ministerial co-ordination has slowed the process.

The large-scale floods of 2014 underline the importance of effective water management in the region. The most affected economies, such as Bosnia and Herzegovina, and Serbia, have redoubled their efforts to improve flood prevention measures. However, Bosnia and Herzegovina has not begun to implement these measures yet and it is unclear when it will.

Biodiversity protection needs to advance further

South East Europe's richly varied geography is mirrored in the diversity of its flora and fauna. Although some species are immediately recognisable as valuable resources for economic activity, such as the hardwood and softwood trees for the timber industry or certain fish species for commercial fisheries, others are of value in less easily quantifiable ways – as vital components in ensuring the quality and survival of their ecosystem.

A strong policy framework for biodiversity conservation and sustainable use should limit the pressures of human activity. Key pressures on biodiversity include changes in land use, overexploitation of natural resources, pollution, climate change and invasive alien species (Karousakis et al., 2012). In OECD countries these pressures are growing, as is the number of endangered animal and plant species. It is difficult to precisely assess the effect of human pressures on biodiversity overall in the six SEE economies due to insufficient data, but some of the available data show that, as in OECD countries, the number of threatened species is increasing. Current data show fish, molluscs and other invertebrates together make up more than 65% of the number of threatened species in each of the assessed economies apart from Kosovo for which no data is available (IUCN, 2017).

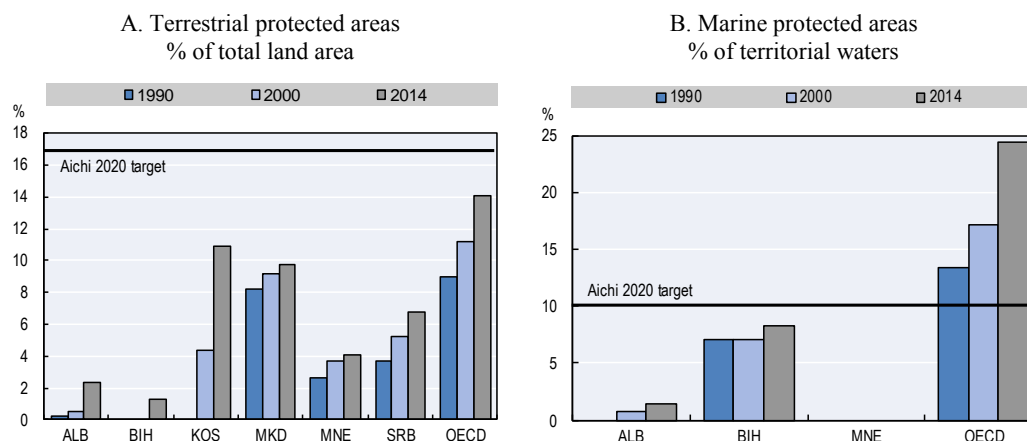
All the assessed SEE economies have adopted policy frameworks for biodiversity conservation apart from the Former Republic of Macedonia which has a draft. The implementation of the Former Yugoslav Republic of Macedonia's first biodiversity strategy was hampered by insufficient financial resources and institutional capacity, as well as poor co-ordination among the relevant bodies. The same combination of issues affects policy implementation in the other five economies, particularly in Bosnia and Herzegovina, where efforts to co-ordinate entity-level policy making and consistent, nationwide implementation have not been enough to overcome the complexity of their institutional set-up.

All the assessed economies except Kosovo are parties to the Convention on Biological Diversity, which includes 20 headline Aichi Biodiversity Targets (UN Environment, n.d.). Aichi Target 11 states: "by 2020, at least 17% of terrestrial and inland water, and 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes." All six SEE economies have made some progress towards these targets, but most have been slow to designate new areas and have been considerably outpaced by

progress across the OECD (Figure 13.12.A). With over 10% of land area designated as protected, Kosovo and the Former Yugoslav Republic of Macedonia are leaders among the six SEE economies. Kosovo made considerable progress between 2000 and 2014, increasing its share of protected land from about 4% to 11%, while in the Former Yugoslav Republic of Macedonia, progress has been more gradual. Bosnia and Herzegovina had only protected a negligible share of its territory by 2000; despite a jump to 1.4% by 2014 it is not on course to achieve the Aichi target. Albania's share, although slightly higher, makes it similarly unlikely that it will reach 17% by 2020.

The three economies with marine territorial waters have been slow to establish marine protected areas (Figure 13.12.B). Montenegro, whose coastline and marine areas are increasingly under pressure from rapid developments in coastal tourism, is the only one of the three without any designated marine protected areas. Bosnia and Herzegovina's limited territorial waters should make it relatively easy to reach the Aichi goal of 10% by 2020. Albania, with its longer coastline, has more of a challenge, exacerbated by its slow progress in designating marine protected areas – it had barely reached 1.5% by 2014.

Figure 13.12. **Terrestrial and marine protected areas (1990, 2000 and 2014)**



Note: Kosovo data for terrestrial protected areas not available for 1990. The Former Yugoslav Republic of Macedonia, Kosovo and Serbia have no marine territorial waters.

Source: World Bank (2017), *World Development Indicators* (database), <http://data.worldbank.org/data-catalog/world-development-indicators>; MESP and AMMK (2015), *State of Environment in Kosovo 2015*, www.ammk-rks.net/repository/docs/Englisht-final.pdf.

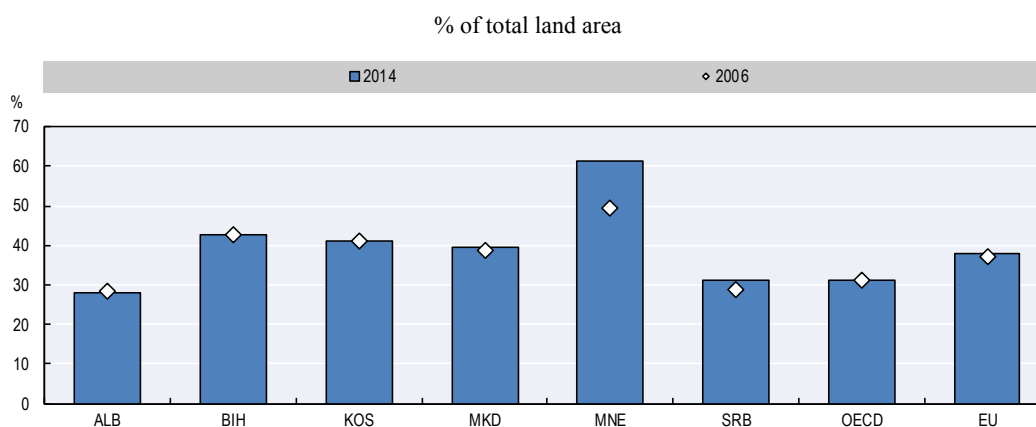
StatLink  <http://dx.doi.org/10.1787/888933706183>

Forestry protection laws need to be more strongly enforced

Forests not only provide timber and other forest products, but also valuable ecosystem services. Healthy forests support irreplaceable reservoirs of biodiversity, act as carbon sinks and play an important role in regulating water, soil and air quality (OECD, 2017a). In flood-prone South East Europe, forests contribute to water management and, in particular, bolster flood resilience by absorbing excess rainwater in times of greater precipitation (EEA, 2015). Unlike some OECD countries, the six SEE economies are relatively rich in forests; they cover a larger share of territory than the OECD average in all assessed economies except for Albania and, to a lesser degree, Serbia.

With the exception of Albania, the share of land area covered by forests has remained constant or has moderately increased (Figure 13.13). Albania experienced rapid deforestation throughout the 1990s (forest area dropped from 7 900 to 7 700 km² between 1990 and 2000) followed by a period of recovery up until 2005 (rising to over 7 800 km²); however, recent years have seen steady decreases. The current level of 7 750 km² is close to the low point at the end of the 1990s. Information from qualitative surveys shows that there is growing concern about deforestation across the six SEE economies. Threats to forests include illegal logging, unregulated real estate projects and illegal tree felling for firewood, especially in the winter (SEE SEP, 2016).

Figure 13.13. Forest area (2006 and 2014)



Note: Data for Kosovo unavailable before 2007.

Source: ASK (2016), “Competitiveness in South East Europe: A Policy Outlook 2018: Environmental Policy Questionnaire”, Responses to the OECD received from ASK; FAO (2017), *FAOSTAT* (database), <http://faostat.fao.org>.

StatLink  <http://dx.doi.org/10.1787/888933706202>

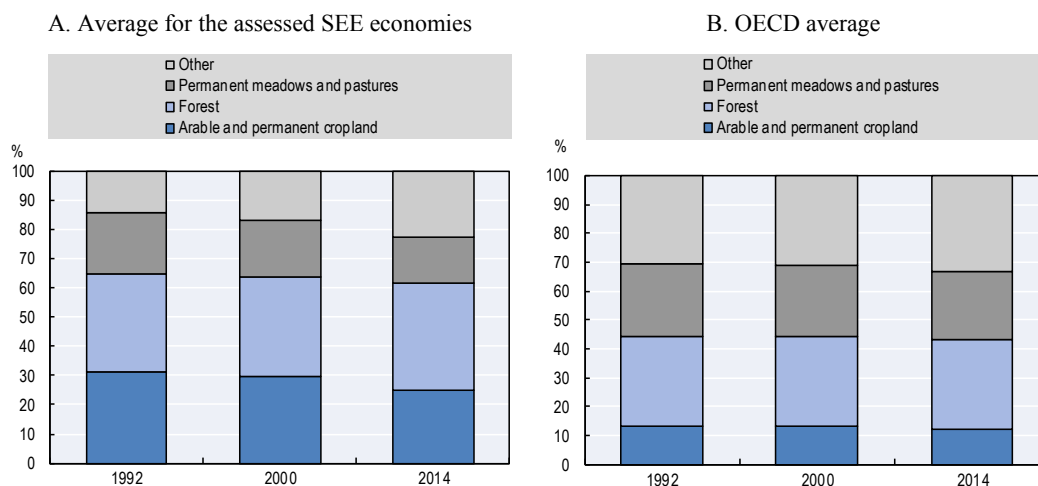
Albania, Kosovo, Montenegro and Serbia have adopted policy frameworks for forest management. The Former Yugoslav Republic of Macedonia is revising policies to align them with EU principles. Bosnia and Herzegovina’s forestry framework lacks a strategic policy document at the state level, and the entity of the Federation of Bosnia and Herzegovina does not have a dedicated law for forests. To address this, in 2015 Albania adopted a ten-year moratorium on the commercial exploitation of forests, which began in 2016. Even when legal and policy frameworks are in place, local forest management capacity and enforcement are insufficient.

National and sub-national levels of land-use strategies are mostly in place

Land-use management shapes the spatial distribution of people, economic activity and environmental assets, with significant impacts on economic competitiveness, citizen well-being and environmental sustainability. The six SEE economies have the challenge of balancing, on the one hand, the pressure to convert land for urban development, agriculture, logging and mineral extraction, and on the other hand, the far-reaching consequences of land-use change for the environment. The heightened risks of soil degradation and desertification in the region – driven by various factors including unsustainable resource exploitation and development practices, and climatic factors – have warranted its inclusion in an annex dedicated to implementing the United Nations Convention to Combat Desertification in Central and Eastern Europe (UNCCD, 1994).

In addition to the above-average share of land covered by forests, agricultural land (especially arable and permanent cropland) accounts for a larger share of the territory in the assessed SEE economies than it does in OECD economies (Figure 13.14). Their share of agricultural land has, however, decreased in recent years. This trend is particularly marked in Montenegro, whose share of arable land had all but disappeared in 2014 (Figure 13.15). Kosovo’s comparatively high population density puts greater pressure on available land and soil resources.

Figure 13.14. Land use (1992, 2000 and 2014)

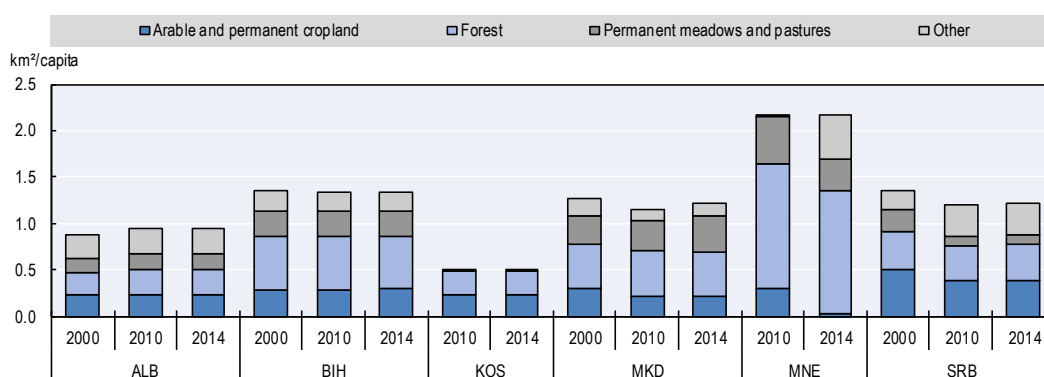


Note: Data reported as “Serbia and Montenegro” for 2000 and 1992. Data for Kosovo unavailable.

Source: FAO (2017), *FAOSTAT* (database), <http://faostat.fao.org>.

StatLink  <http://dx.doi.org/10.1787/888933706221>

Figure 13.15. Per capita land use (2000, 2010 and 2014)



Note: Data reported as “Serbia and Montenegro” for 2000 and 1992. Data for Kosovo in 2000 unavailable. Arable and permanent cropland data for Kosovo reflect utilised agricultural area.

Source: ASK (2016), “Competitiveness in South East Europe: A Policy Outlook 2018: Environmental Policy Questionnaire”, Responses to the OECD received from ASK; FAO (2017), *FAOSTAT* (database), <http://faostat.fao.org>.

StatLink  <http://dx.doi.org/10.1787/888933706240>

Most of the six economies have begun implementing land-use policies and addressing the challenge of illegal construction. All six have adopted basic legislation and outlined a general policy vision for land-use management, but they differ in the extent to which local and regional spatial plans are developed and aligned, as well as in the capacity and financial resources to support policy implementation. Kosovo, Montenegro and Serbia have designed and implemented functional land-use and spatial planning systems with accompanying local and/or regional plans. The Former Yugoslav Republic of Macedonia has also established a legal framework for land-use management and a national spatial plan; its local and regional plans cover a significant part of its territory. Albania is complementing its general policy framework with legally mandated spatial plans and capacity-building measures in municipal and regional structures. Albania has banned illegal buildings following stronger enforcement and the introduction of an electronic application process for permits. Bosnia and Herzegovina has adopted spatial plan legislation in both entities, but insufficient municipal funds and capacity have hindered them from developing and implementing local plans. Although inter-entity co-operation remains a concern in Bosnia and Herzegovina for spatial planning, some effective inter-entity and entity-state co-ordination has taken place, such as for planning highway networks.

The way forward for the natural asset base

All six SEE economies **need to make more efforts to implement existing water management strategies effectively**. To be effective, these strategies need to be complemented with integrated river basin management plans, taking into account the water resources' natural characteristics, including for transboundary river basins. This also means clearly defining the roles of government bodies, as well as co-ordination mechanisms among relevant government (in many cases, the ministries of agriculture and environment) and local implementing bodies. The OECD *Council Recommendation on Water* (2016c) and its forthcoming tool box can provide useful guidance for water sector reforms in the six SEE economies. France's decentralised and participatory approach to water management and financing is an example of how this can look in practice (Box 13.2).

To **strengthen forest management**, governments need to dedicate more resources to the relevant local authorities for capacity building and to strengthen forest law enforcement. They should strengthen efforts to combat illegal logging by punishing illegal behaviour and increasing the benefits of sustainable forest management, as well as reducing rewards for illegal logging by differentiating between legally and illegally sourced wood and closing markets. See *The Economics of Illegal Logging and Associated Trade* (Contreras-Hermosilla, Doornbosch and Lodge, 2007) for more detail. Further policy options to address deforestation are described in *Initial Review of Policies and Incentives to Reduce GHG Emissions from Deforestation* (Karousakis, 2006). Bosnia and Herzegovina needs to develop a coherent state-level forest management strategy, through greater co-ordination between the entity-level bodies in charge of existing strategies. The Federation of Bosnia and Herzegovina needs to adopt a dedicated law for forest protection.

The six SEE economies need to step up their efforts to meet the Aichi Biodiversity Target for protected areas. Terrestrial protected areas are particularly lacking in Albania, Bosnia and Herzegovina, and Montenegro. Serbia, the Former Yugoslav Republic of Macedonia and even Kosovo are unlikely to meet the 2020 target at current rates. As human pressures increase, Albania and Montenegro need to establish marine protected areas. Beyond protected areas, these economies should consider economic

instruments for biodiversity conservation and sustainable use such as biodiversity-relevant taxes, biodiversity offsets and payments for ecosystem services. The Recommendation of the Council on the Use of Economic Instruments in Promoting the Conservation and Sustainable Use of Biodiversity (OECD, 2004) provides useful guidance in this regard.

More resources for capacity building at the local level are needed to develop and implement aligned and well-designed regional and local spatial plans. Better local capacity for processing and enforcing permits will also help combat the ongoing problem of illegal construction. Despite considerable progress in spatial planning and land-use management in the six SEE economies, unregulated and illegal building activity continues to put pressure on land resources. Montenegro and Serbia should continue to develop their register of buildings without permits and continue their legalisation procedures for these buildings.

Box 13.2. Good practice: Water management in France

French water policy is based on using environmental taxation to finance measures to manage water resources in a decentralised, participatory system. The system includes six water agencies that implement national and EU policies at the local level for seven catchment basins, under the Ministry of Sustainable Development.

Water financing and pricing is based on two principles. First, the “water pays for water” principle means the water sector should not receive subsidies from government budgets, but subsidies from within the water sector are acceptable. Local spending on investment and operating costs must be covered by collecting user fees in the public sector (for drinking water and sanitation) and the private sector (for industrial activities and agriculture). Second, the “polluter pays” and “user pays” principle extends the first principle to recover the cost of pollution.

A variety of taxes target water abstraction and pollution to internalise the environmental costs of various activities. The tax rate can be higher than the standard rate when the water resource is in a geographical zone subject to increased environmental pressures or is more sensitive to a particular negative externality. These geographical zones are defined at the municipal level.

Each water agency has its own basin committee, comprising elected representatives of sub-national government, water users and state representatives. Having these diverse stakeholders in a decision-making body facilitates consultation between different sectors and makes taxes easier to accept, as users understand they are making an investment in their own water infrastructure. Furthermore, basin committee representation including the different user categories and the representative appointment process is regularly reviewed and adjusted to strike the right balance in the range of actors.

The basin committees regularly review and update the subjects and rates of taxation to reflect new priorities as new sources of pollution emerge. Contributions from different users are updated based on analyses of user contributions, benefits and the degradation of aquatic environments, to keep the system more equitable.

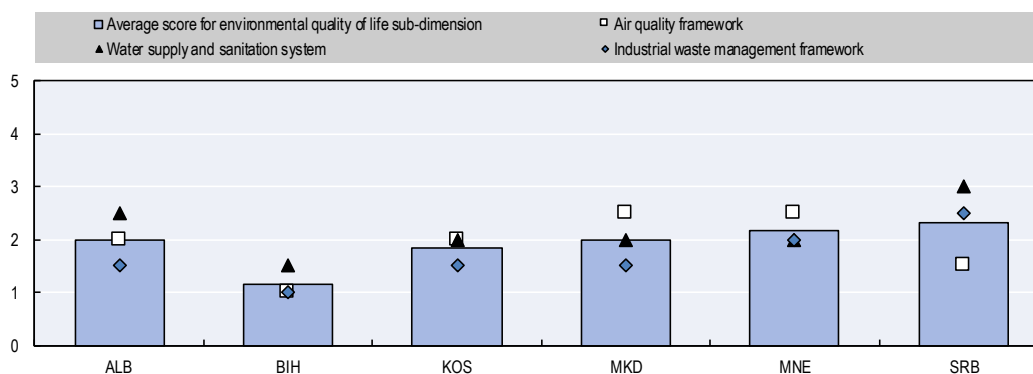
Source: OECD (2015e), “Financing water quality management and investment in infrastructure: Water policy in France: A decentralised and participatory system”, www.oecd.org/environment/resources/France-case-study-financing-water-quality-and-investment-diffuse-pollution.pdf.

Environmental quality of life

Environmental services such as clean water, sanitation and green space; and environmental risks such as natural disasters and air pollution; directly affect people's quality of life and well-being. Air pollution is a significant environmental health risk resulting in premature deaths and respiratory diseases which can reduce labour productivity. It can also result in reduced crop yields (OECD, 2016d). Similarly, while high-quality water supply and sanitation services strengthen public health by reducing health risks, the absence of such services increases health costs and decreases labour productivity. Finally, poorly managed industrial waste can result in contaminated land, with serious health and environmental ramifications. Three qualitative indicators assess the existence and degree of implementation of frameworks for 1) air quality; 2) water supply and sanitation; and 3) industrial waste management.

On average, the six SEE economies score 1.9 for this sub-dimension, indicating that these three policy frameworks are mostly adopted (Figure 13.16). On average, frameworks for air quality and water supply and sanitation are in place, while frameworks for industrial waste management lag behind. Serbia has made the most progress in implementing both its water supply and sanitation framework and its industrial waste management framework. Meanwhile, Bosnia and Herzegovina has some room to catch up to its peers in each area.

Figure 13.16. Environmental quality of life: Sub-dimension average score and indicator scores



Note: See the methodology chapter for information on the *Competitiveness Outlook* assessment and scoring process.

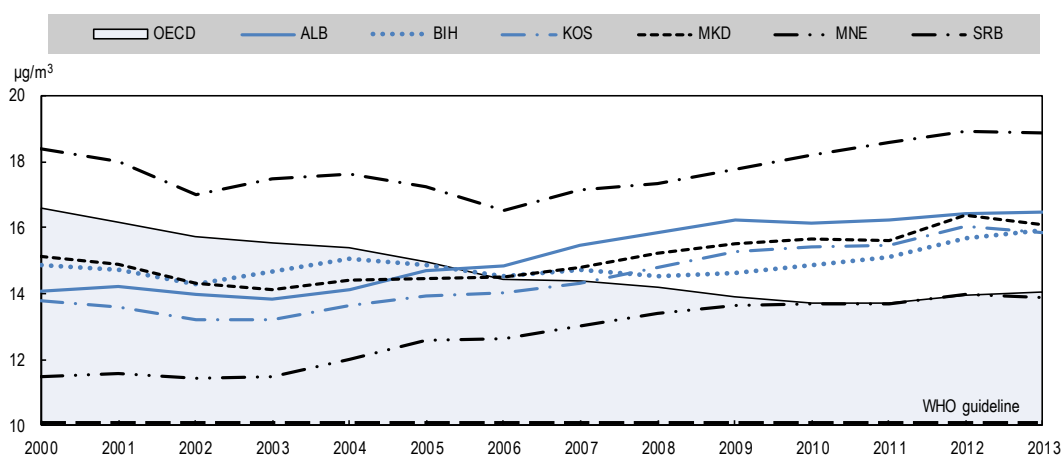
StatLink  <http://dx.doi.org/10.1787/888933706259>

Action is needed to address high levels of air pollution

Air pollution increases mortality and morbidity rates through greater incidence of pulmonary disease. A sicker population spends more time receiving care in hospitals, which leads to higher healthcare expenditures, lost working days, decreased quality of life and lower life expectancy. Air pollution – through high concentrations of ground-level ozone (O₃) and fine particulate matter (PM_{2.5}) – also reduces crop yields. Non-OECD, non-EU European economies including South East Europe were found to be among the most susceptible to changes in crop yields caused by air pollution, especially wheat, with a model predicting up to a 20% decrease in yields by 2060 (OECD, 2016d). Given that agriculture accounts for a considerably larger portion of the economy than in the OECD, these economies could be particularly vulnerable to the negative effects of air pollution.

The exposure of each assessed SEE economy's population to PM_{2.5} has steadily increased over the past decade, while over the same period, abatement efforts in the OECD have reduced fine particulate matter (PM_{2.5}) exposure considerably (Figure 13.17). The exposure levels in the SEE economies are well above the World Health Organisation Air Quality Guideline for annual PM_{2.5} exposure (10 micrograms per cubic metre, µg/m³). Even this level of exposure is associated with elevated risk of disease. Despite improvements in the early 2000s, Serbia's PM_{2.5} exposure has increased to reach 2000 levels, and remain the highest in the region. Albania, Bosnia and Herzegovina, the Former Yugoslav Republic of Macedonia and Kosovo, which had lower exposure rates at the turn of the century, have all surpassed the OECD average for particulate matter concentrations; Montenegro's comparatively clean air has deteriorated rapidly in recent years and is now on a par with the OECD average. Across the assessed economies, the problem is even worse in winter, when the local topography, traffic and low-quality household heating using wood or coal lead to extreme smog.

Figure 13.17. Mean population exposure to PM_{2.5} air pollution (2000-13)



Note: µg/m³ – micrograms per cubic metre; PM_{2.5} – fine particulate matter. All data points are moving five-year averages.

Kosovo data points are the population-weighted averages of macro-regional data for Kosovo, Kosovska Mitrovica, Kosovsko Pomoravlje, Peć and Prizren macro-regions. Serbia data are the population-weighted averages of macro-regional data concerning the remaining 25 macro-regions.

Source: OECD (2017e), “Exposure to air pollution”, *OECD Environment Statistics* (database), <http://dx.doi.org/10.1787/env-data-en>.

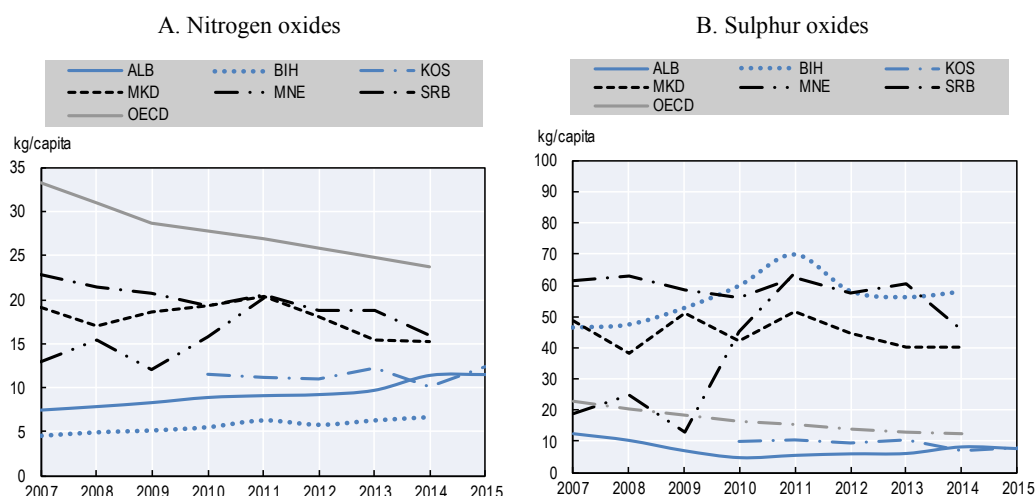
StatLink  <http://dx.doi.org/10.1787/888933706278>

Motor vehicle emissions in densely populated areas are a major source of exposure to nitrogen oxides (NO_x). NO_x emissions per capita among the six SEE economies are well below the OECD average, although Albania and the Republika Srpska in Bosnia and Herzegovina have gradually increased their emissions in recent years (Figure 13.18.A). At the same time OECD countries and Serbia have curbed theirs.

Exposure rates of sulphur oxides (SO_x) vary more widely across the six economies. Apart from Albania, a major factor of the assessed economies' high emission rates of SO_x is their reliance on coal-fired power plants, some of which are not equipped with the appropriate filters. Four of the economies – Bosnia and Herzegovina, the Former Yugoslav Republic of Macedonia, Montenegro and Serbia – release far more SO_x per

capita than Albania and Kosovo, which emit slightly lower levels than the OECD average (Figure 13.18.B). Bosnia and Herzegovina's emissions are even higher than they appear in this figure, since data were only available from one of its two entities. Fuel standards in Bosnia and Herzegovina, which allow considerably higher sulphur content in both diesel and petrol fuels than in the other five economies, contribute to its high emission rates (FuelsEurope, 2017).

Figure 13.18. Air pollutant emissions per capita (2007-15)



Note: Data for Bosnia and Herzegovina refer to the Republika Srpska only. Data for Kosovo refer to emissions from its coal-fired power plants only.

Source: ASK (2016), "Competitiveness in South East Europe: A Policy Outlook 2018: Environmental Policy Questionnaire", Responses to the OECD received from ASK; EPAM (2016), "Competitiveness in South East Europe: A Policy Outlook 2018: Environmental Policy Questionnaire", Responses to the OECD received from EPAM; MOE (2016), "Competitiveness in South East Europe: A Policy Outlook 2018: Environmental Policy Questionnaire", Responses to the OECD received from MOE; MOEPP (2016), "Air pollution", www.moep.gov.mk/?page_id=746&lang=en; RHMZRS (2016), "Competitiveness in South East Europe: A Policy Outlook 2018: Environmental Policy Questionnaire", Responses to the OECD received from RHMZRS; SEPA (2016), "Competitiveness in South East Europe: A Policy Outlook 2018: Environmental Policy Questionnaire", Responses to the OECD received from SEPA; OECD (2014a), "Air and GHG emissions" (indicator), <http://dx.doi.org/10.1787/93d10cf7-en>.

StatLink  <http://dx.doi.org/10.1787/888933706297>

The Former Yugoslav Republic of Macedonia and Montenegro have adopted air quality frameworks and begun developing corresponding action plans for areas with higher levels of air pollution. Legislation in Montenegro and the Former Yugoslav Republic of Macedonia is fairly well aligned with the EU *acquis* on air quality (such as Directive 2008/50/EC on ambient air quality); both economies also maintain well-functioning networks of automatic monitoring stations. Albania and Kosovo have adopted policy frameworks with clearly defined objectives and legislation that is nearing alignment with EU directives (including Directive 1999/30/EC relating to limit values for sulphur dioxide), but implementation has been lacking. Albania has a network of basic air quality monitoring stations, including stations that continuously perform measurements of SO₂, NO_x, carbon monoxide, benzene, O₃, coarse particulate matter (PM₁₀), fine particulate matter (PM_{2.5}) and lead. Kosovo's Hydrometeorology Institute maintains a basic network of stations that contribute to monitoring, but consistent real-time automatic monitoring is

required to ensure immediate action if limits are exceeded. Serbia's framework is largely in place and some local air quality plans have been adopted, but no plans exist for polluted areas. Bosnia and Herzegovina has adopted some air pollution control legislation, but it needs to be strengthened and implemented; it still lacks an effective national air monitoring network. The EC regulation on the European Pollutant Release and Transfer Register provides for collecting information on pollutant releases from large industrial facilities. Serbia and Kosovo have this system in place and are reporting, while the rest of the assessed economies are making progress but are not yet reporting aside from Montenegro which is still at an early stage.

Water supply and sanitation strategies are relatively advanced

Access to clean drinking water and sanitation reduces health risks and costs, resulting in increased labour productivity. On the other hand, insufficiently treated wastewater pollutes surface water and ecosystems (OECD, 2011b).

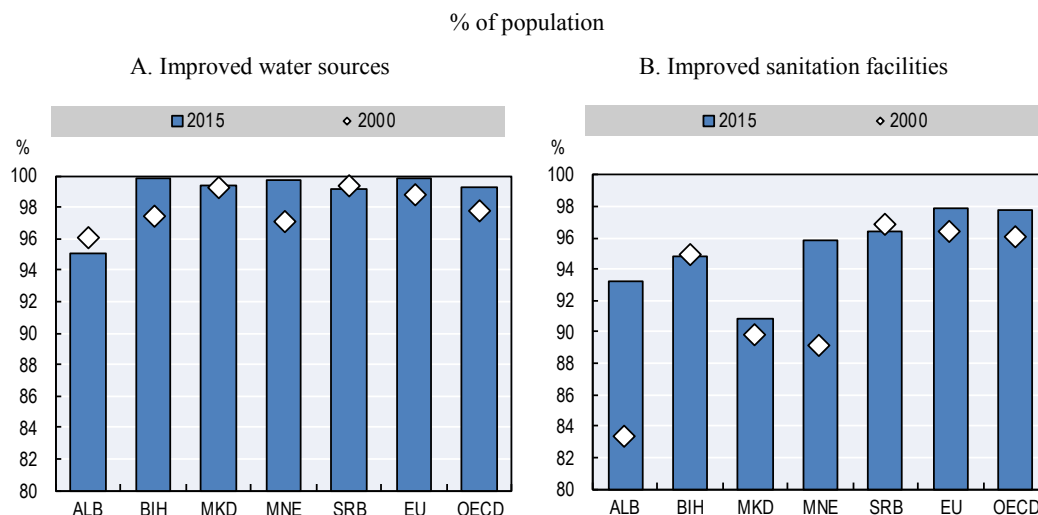
Access to an improved water source (e.g. household connection, public standpipe or protected dug well) is nearly universal in all assessed economies, except Kosovo – for which data are unavailable (Figure 13.19.A). Bosnia and Herzegovina, the Former Yugoslav Republic of Macedonia, Montenegro and Serbia have maintained rates above 99% over the past few years, in line with the EU and the OECD. Access in Albania is less universal, at 95%. A smaller share of the population is connected to the public water supply – 87% in Kosovo (2015), 83% in Serbia (2015), 81% in Albania 76% in Montenegro (2012), 75% in the Former Yugoslav Republic of Macedonia (2012), and 56% in Bosnia and Herzegovina (Eurostat, 2017d; Michaud et al., 2015; WSRA, 2016).

Over 90% of the populations in the assessed economies are connected to improved sanitation facilities (e.g. connection to a public sewer or septic system, pour-flush latrine, simple pit latrine) (Figure 13.19.B). Albania and Montenegro have made considerable progress over the past decade. However, the assessed economies are still below the OECD and EU level of about 98%.

Data on sewage systems and wastewater treatment are less comprehensive, but they seem to indicate a similar general upward trend. From 2010 to 2015, the share of population connected to a sewage system increased in Albania (to 50%), in Kosovo (from 48% to 65%), in Montenegro (from 66% to 68%) and in Serbia (from 52% to 59%). While the majority of these economies' populations now enjoy access to sewage systems, far fewer people are connected to wastewater treatment facilities. The share of the population whose wastewater is connected to a sewage treatment plant in Montenegro was 18% (2012), 13% in Albania (2013) and the Former Yugoslav Republic of Macedonia (2012), in Serbia 11.8% (2015), 3.6% in Bosnia and Herzegovina (2015) and in Kosovo since 2011 a pilot treatment plant has covered less than 1% (Michaud et al., 2015; UNSD, 2017; WSRA, 2016). By way of comparison, Slovenia – an OECD member with relatively low coverage – reached a rate of almost 60% in 2015 (OECD, 2017a).

Water supply and sanitation strategies are relatively advanced among the six SEE economies. Serbia has adopted a strategy that is aligned with the EU Water Framework Directive (2000/60/EC) and prepared a preliminary implementation plan. Serbia's new strategy shifts away from the traditional water quality management approach based exclusively on environmental quality standards. Instead, it has opted for a combined approach consisting of proactive pollution mitigation measures and stricter enforcement when environmental quality standards are not met. Albania has adopted a strategy for

Figure 13.19. Access to improved water sources and sanitation facilities (2000 and 2015)



Note: Data for Kosovo unavailable.

Source: World Bank (2017), *World Development Indicators* (database), <http://data.worldbank.org/data-catalog/world-development-indicators>.

StatLink <http://dx.doi.org/10.1787/888933706316>

water supply and sewerage which is accompanied by a plan for investments in the sector, and is in the process of aligning its legislation with the EU *acquis*. Kosovo has a policy framework with clearly defined objectives in place, but water and sanitation investment plans are not based on river basin plans. Although both the Former Yugoslav Republic of Macedonia and Montenegro have adopted policy frameworks, they still have shortcomings. The mechanism for funding the objectives in the Former Yugoslav Republic of Macedonia's framework is unclear, while the framework in Montenegro is not in line with the EU *acquis*. In Bosnia and Herzegovina, some water supply and sanitation measures are included in integrated water management strategies, but the large number of agencies involved in water supply and sanitation and the lack of co-ordination between them have slowed progress.

Water supply and sanitation infrastructure projects are still largely dependent on donor funding throughout the assessed economies, and water tariffs remain too low to cover service costs. The long-term affordability of new infrastructure maintenance under these conditions appears doubtful. Albania and Kosovo have taken a good first step by entrusting water tariff-setting responsibilities to independent water regulators and gradually increasing tariff levels. The Former Yugoslav Republic of Macedonia has also transferred competence for water tariff regulation to an independent body, its energy regulatory commission.

Industrial waste management is progressing

Industry, mining and construction activities all have the potential to be highly polluting. Effective industrial waste management safeguards the environment and public health from these risks.

In Serbia, legislation is mostly aligned with the EU *acquis*, including environmental liability (Directive 2004/35/EC). Data on hazardous waste are scarce and as no hazardous waste disposal facilities exist, it must be exported for treatment. However, these issues are addressed in the new waste strategy that Serbia is currently developing. Montenegro is progressing towards full transposition of the EU Directive 2010/75/EU on industrial emissions, and its legislation is almost fully aligned with other EU directives on industry and environmental liability. Albania, Kosovo and the Former Yugoslav Republic of Macedonia have adopted limited industrial waste management policy measures as part of broader waste management strategies. They have all made progress in transposing the EU directive on industrial emissions, although a lack of capacity is hampering the issuance of integrated permits (see environmental policy framework qualitative indicator). Bosnia and Herzegovina has adopted strategies and legislation that cover some aspects of industrial waste management, but the framework does not meet all the EU directives' requirements.

Little has been done throughout the region to clean up sites contaminated in the past. None of the six SEE economies has adopted plans with clear targets and secure budgets to address this, and little data are available on the issue. According to the Kosovo Agency of Statistics, Kosovo cleaned up 2 of its 27 contaminated sites between 2011 and 2013. Although Albania, Montenegro, and Serbia have identified contaminated areas they have not proceeded to clean them up (no data have been supplied for Bosnia and Herzegovina or the Former Yugoslav Republic of Macedonia).

The way forward for environmental quality of life

The six SEE economies need to improve their air quality monitoring systems. They could consider installing automatic all-day monitoring stations set up for real-time data production, especially for pollutants with immediate human health risks like fine particulate matter and ground-level ozone. Economies should encourage self-reporting by industries by implementing the Pollutant Release and Transfer Register. They should align abatement targets with policy developments in other sectors, particularly to reconsider the planned expansion of coal-fired power generation capacity.

The economies should funnel more investment into treating more wastewater to reduce effects on the environment. All six SEE economies should seek to wean themselves off donor funds and finance more projects from water tariffs and domestic government budgets. They should transition towards tariffs that cover the costs of service and, eventually, infrastructure.

Most of the six SEE economies have identified historically contaminated sites, according to available but limited data. However, they have taken little action to clean them up. As a first step, **they could consider drafting targeted clean-up action plans** with associated budgets and financial plans for contaminated sites.

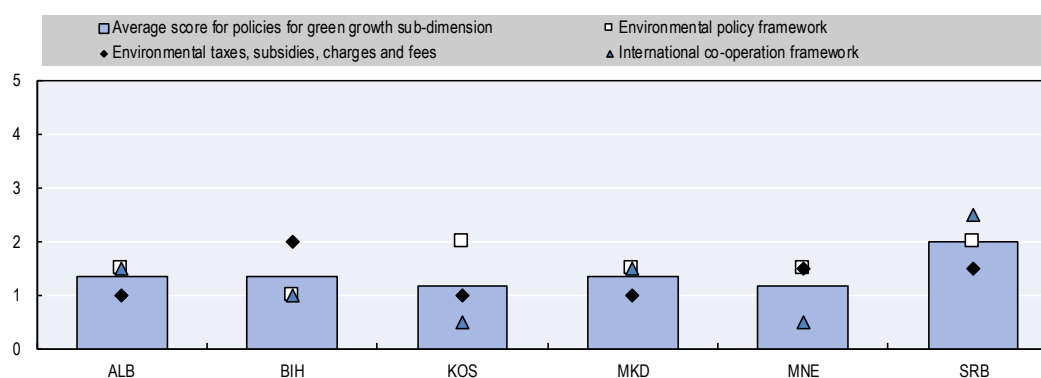
All six SEE economies have comparatively underdeveloped industrial waste management strategies, but have made good progress in transposing EU directives, such as the one on industrial emissions. **They should ensure that when they transpose these directives they also develop the required capacity** to ensure that environmentally risky activities comply with legal environmental liability; that they are insured for potential liabilities; and that waste owners demonstrate financial assurance for closure costs and post-closure care of hazardous waste.

Policies for green growth

Effective policies can facilitate green growth – that is, fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which citizen well-being relies (OECD, 2011a). Policies and regulation can spur innovation and new markets for greener technology and new jobs. Prices and taxes address negative externalities by encouraging emissions mitigation and resource productivity at the least cost, while potentially raising revenues for governments (OECD, 2016e). Investor confidence grows through stable and predictable policy responses to environmental issues. Because policies that affect the environment are typically cross-cutting, environmental considerations should be reflected in economic and sectoral policies, and vice versa. In addition to government co-ordination, environmental policy frameworks must be equipped with tools that allow them to address the environmental implications of economic activities across sectors. Three qualitative indicators assess the existence and degree of implementation of frameworks for 1) environmental policy; 2) environmental taxes, subsidies, charges and fees; and 3) international co-operation.

On average, the six SEE economies score 1.4 on this sub-dimension overall, indicating that policy frameworks are yet to be adopted (Figure 13.20). Across the assessed economies, environmental policy frameworks are mostly in place, but environmental taxes and international co-operation mechanisms are largely lacking. Serbia is the most advanced in all these areas, with the rest of the assessed economies at a similar level.

Figure 13.20. Policies for green growth: Sub-dimension average score and indicator scores



Note: See the methodology chapter for information on the *Competitiveness Outlook* assessment and scoring process.

StatLink  <http://dx.doi.org/10.1787/888933706335>

Environmental policy frameworks need to be reinforced in key economic and sectoral policies

Effective governance for green growth engages a wide variety of government bodies in a co-ordinated way to achieve its clear, strategic, long-term vision that links national economic and social objectives. In addition to government co-ordination, environmental policy frameworks must be equipped with tools that allow them to regulate the environmental implications of economic activities across all sectors. In particular, environmental impact assessment (EIA) and strategic environmental assessment (SEA) ensure that environmental concerns are identified and addressed before projects are undertaken. Integrated pollution prevention and control (IPPC) regulation requires industrial activities with a high pollution potential to have a permit. While other tools

exist, these three are particularly relevant for the six SEE economies because they have associated EU directives, the adoption of which supports the economies' goal of EU membership.

The assessed SEE economies have a variety of policies and tools to co-ordinate environmental objectives across the environment, economic development and sectoral policies. Every SEE economy has either a dedicated strategy for environment approximation or has it included in a wider approximation strategy and/or environment strategy. Montenegro's overarching sustainable development strategy includes environmental objectives as does the Former Yugoslav Republic of Macedonia's draft strategy. The entities in Bosnia and Herzegovina, Kosovo, and Serbia have strategies on environmental protection and Albania has a draft one. The Former Yugoslav Republic of Macedonia and Serbia have sustainable development councils, but they appear to be inactive. In Montenegro, their sustainable development council has been a useful forum to convene stakeholders from across the government (Government of Montenegro, 2017). Although Bosnia and Herzegovina has the Inter-Entity Steering Committee for the Environment to facilitate entity co-ordination, its fragmented and complex administration is still a challenge to policy and legal co-ordination. In 2017, Serbia established a separate ministry for environmental protection.

The transposition of the SEA and EIA Directives (2001/42/EC and 2014/52/EU) is nearly complete in Albania, Kosovo and Serbia, and it is progressing well in the Former Yugoslav Republic of Macedonia and Montenegro. In Bosnia and Herzegovina, both constituent entities are aligning their legislation with the EU directives, but their complex institutional set-up has held back progress. In terms of implementation, SEAs are not regularly conducted. While EIAs are being carried out throughout the assessed economies, they do not follow standard procedures and fail to act as an effective tool for minimising negative environmental impacts of projects. The poor quality of assessments can be attributed to insufficient public engagement and transparency during the decision-making process; a lack of financial resources and guidance; and inexperienced, poorly equipped staff. Capacity problems also hinder the regulating authorities' ability to monitor permit holders' environmental performance and enforce environmental standards (SEE SEP/WWF Adria, 2015).

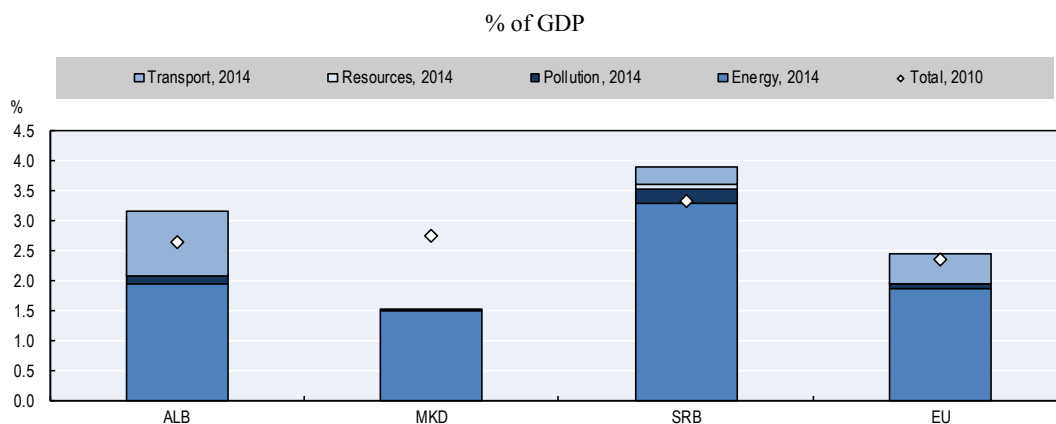
Integrated pollution prevention and control legislation exists in all six SEE economies, although Montenegro's permitting is not based on best available techniques (BAT) principles. Institutions are in place across the assessed economies, including an environmental permitting authority and enforcement agency, but implementation is at an early stage – both in issuing appropriate integrated permits and enforcing them effectively.

Taxes, subsidies, charges and fees should better reflect environmental costs

Economic instruments, such as taxes, subsidies and emissions trading systems, offer an economically efficient alternative to command-and-control regulatory instruments. By placing the tax burden more directly on environmentally harmful consumption and production patterns, well-designed environmental taxes provide incentives for abatement with more flexibility than prescriptive technology standards, allowing firms to achieve abatement at lowest cost. Government support measures for environmentally harmful economic activity should be phased out to avoid undermining environmental policies; for example, subsidies for carbon-intensive fossil fuels counteract climate change mitigation goals (OECD, 2017a). For data on energy subsidies in the six SEE economies, see Chapter 12 (Energy policy).

The tax mix in the SEE economies is tilted towards a higher tax burden on labour and indirect taxes (social security contributions and value-added taxes) and a lower tax burden on corporate and personal income tax rates. As such, social security contributions and value-added taxes are the largest sources of tax revenue in the assessed SEE economies (see Chapter 4, Tax policy, for more information). The tax burden and corresponding revenues related to environmental taxes is lower. Similar to the EU, taxes on energy consumption in the assessed SEE economies generate the most environmentally related tax revenue (Figure 13.21).

Figure 13.21. Revenue from environmental tax (2010 and 2014)



Note: Bosnia and Herzegovina, Kosovo, and Montenegro data not available. Albania data are provisional; the Former Yugoslav Republic of Macedonia data not available for transport.

Source: Eurostat (2017e), “Environmental taxes by economic activity”, *Environment* (database), <http://ec.europa.eu/eurostat/data/database>; World Bank (2017), *World Development Indicators* (database), <http://data.worldbank.org/data-catalog/world-development-indicators>.

StatLink  <http://dx.doi.org/10.1787/888933706354>

In the six SEE economies, the polluter pays principle is enshrined in legislation, but the design of taxes and charges does not reflect this principle in practice. Most of the assessed economies collect excise taxes on fuel, but there is no consistent price on carbon emissions through taxes on activities such as coal mining or an explicit carbon tax. In the OECD, carbon tax systems are not common, with nationwide carbon taxes implemented or scheduled for implementation in only 17 OECD member countries and a handful of sub-national districts, but the popularity of carbon pricing schemes is growing quickly (World Bank Group, 2016).

All six SEE economies have introduced a number of environmental charges and taxes, but many are set at levels too low to provide incentives to change production and consumption behaviour. The tariffs on electricity, water supply and sanitation, and waste collection are too low to achieve cost recovery or encourage sustainable consumption.

In Bosnia and Herzegovina, both constituent entities have established environmental funds to mobilise resources for environmental projects – these are the only functioning environmental funds among the assessed economies. Environmental funds have also been proposed in Kosovo and Montenegro. Albania has recently established a fund to subsidise energy efficiency measures. Serbia had an environmental fund, but it was abolished in 2012.

Implementation of international agreements and standards should be enhanced

Environmental concerns can be transboundary, and policy responses must be co-ordinated across borders to address them effectively and equitably. Multilateral environmental agreements (MEAs) brokered through organisations like the United Nations (particularly the UN Environment Programme and the United Nations Economic Commission for Europe), are important tools for creating transboundary norms. Competitiveness concerns may also encourage governments that find it difficult to act individually for political reasons to seek co-operative solutions to environmental problems through MEAs. While the assessed economies, aside from Kosovo, are signatories to key MEAs as described throughout the chapter, efforts to integrate the associated commitments into policies and implement them are at an early stage.

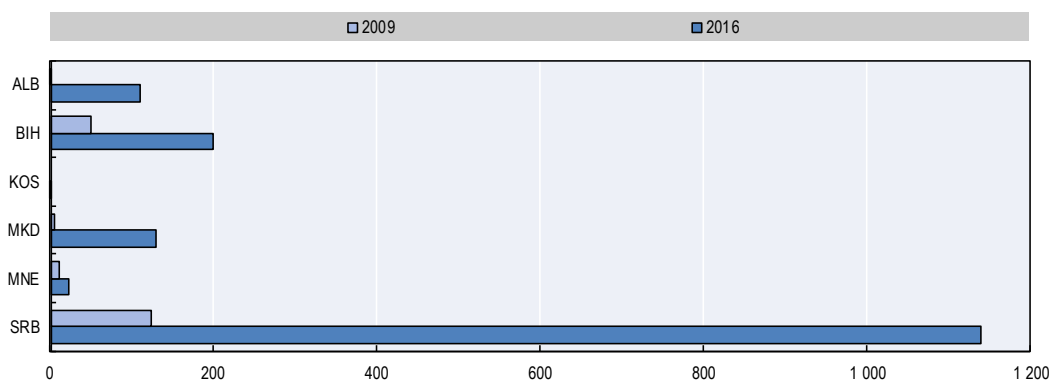
International co-operation measures can directly promote the environmental aspects of economic activities. These measures can be as diverse as encouraging corporate social responsibility, introducing environmental labelling and information schemes, and removing the barriers to trade in environmental goods and services.

Some corporate social responsibility strategies do exist in the six SEE economies, including for environmentally responsible business conduct. Serbia has adopted a Strategy on Development and Promotion of Socially Responsible Business Operations, which focuses not only on corporate social responsibility but also on attracting investment. Albania and the Former Yugoslav Republic of Macedonia also have corporate social responsibility action plans. Montenegro has a policy document on corporate social responsibility, and its broader development strategy also contains measures to encourage corporate social responsibility. Corporate social responsibility activities in the six SEE economies have largely been driven by private-sector initiatives and organised through networks of participating firms, but in Bosnia and Herzegovina and Kosovo these networks have not been complemented with or supported by government actions.

Ecolabelling schemes have arisen following consumer demand to be able to easily identify and purchase environmentally preferable products. As such, businesses see environmental labels as a market advantage, especially when exporting to more developed countries where demand for goods with ecolabels is stronger. Governments may administer mandatory and voluntary programmes. Successful ecolabels are those that are accepted by consumers, such as those in the EU (Earley and Anderson, 2003). Both Albania and Serbia have begun issuing voluntary ecolabels in line with EU regulations. The remaining assessed economies have some legislation in place, but have yet to issue them.

Non-governmental environmental labelling programmes include the International Organisation for Standardisation (ISO) 14000 series. Several companies and organisations, particularly in Serbia, have adopted the environmental management standards set by the ISO 14001, which defines criteria for an effective environmental management system. The uptake of ISO 14001 standards has not, however, been universal in the assessed economies, and Serbia has far outpaced its peers, especially since 2013 (Figure 13.22). ISO standards are not by any means a replacement for effective environmental assessments, especially since the certificates have no environmental performance component.

Figure 13.22. Number of ISO 14001 certificates (2009 and 2016)



Note: Data for Kosovo unavailable before 2016.

Source: ISO (2017), *ISO Survey of Management System Standard Certification* (database), <http://isotc.iso.org/livelink/livelink?func=ll&objId=18808772&objAction=browse&viewType=1>.

StatLink  <http://dx.doi.org/10.1787/888933706373>

The way forward for green growth policies

The six SEE economies have scope to **strengthen how environmental issues are addressed in overarching economic development and sectoral policies** – especially energy, transport and agriculture. *A Framework for Assessing Green Growth Policies* provides guidance on assessing policies with economic efficiency and growth objectives (de Serres, Murtin and Nicoletti, 2010). They should strengthen both horizontal and vertical co-ordination mechanisms. In Bosnia and Herzegovina there is a need to enhance the coherence of their environmental policies at the national level.

The six SEE economies should strengthen the collection of key environmental statistics and policy monitoring and evaluation activities. High-quality, basic statistics on the environment are essential for creating evidence-based policy across economic development and sectoral policy areas. They should make monitoring and evaluation activities routine and comprehensive to assess the state of the environment and the effectiveness of environmental policies. See Box 13.3 for an example of how Slovenia practices environmental policy and monitoring.

In the six SEE economies, the progress made in transposing EU legislation on SEAs and EIAs needs to be coupled with capacity building and quality-control measures to **improve the efficacy of environmental impact assessments**. Assessment documents should be made publicly available and stakeholder consultations (that include representatives of the private sector, civil society and academia) should be carried out systematically over sufficiently long periods.

The six SEE economies should continue their efforts to **strengthen integrated pollution prevention and control permitting procedures**, including an integrated analysis and public participation. They should carry out subsequent enforcement activities using risk-based inspections and set fines at a level high enough to dissuade infractions.

The six SEE economies should strengthen their use of economic instruments. While specific environmental taxes are collected in the six SEE economies and excise taxes on fuel are common, there is scope to broaden the tax base, reduce exemptions and

in some cases increase tax levels or introduce explicit carbon pricing schemes. Taxes could be shifted from labour towards environmental resource use and pollution, in line with the objective of the European Union's Seventh Environment Action Programme, which guides EU environmental policy until 2020.

Box 13.3. Good practice: Environmental policy monitoring and evaluation in Slovenia

Slovenia has established effective monitoring and evaluation practices by building on the OECD Green Growth indicator framework. This framework highlights key, actionable information aligned with Sustainable Development Goals in a concise and standard way, and is aligned with the System of Environmental and Economic Accounting guidelines.

Applying the framework, a committee selected 14 of the most relevant OECD Green Growth indicators as the basis for monitoring and evaluation. These indicators included emissions productivity, energy productivity, air pollution, budget for green research and development, and environmental taxes.

The committee then complemented the indicator set with five of their own indicators, such as separate waste collection, drinking water pollution and agricultural area, to best fit its national context. The statistics are reported with engaging, easy-to-understand figures in the statistical office's *Green Growth Indicators for Slovenia Report* (Žitnik, Šteharnek and Rutar, 2014) and on its website. Statistics are updated once a year and published on their website.

Slovenia has found both the process and the resulting report useful in raising awareness of environmental issues across policy areas, improving co-operation across government institutions, and strengthening the monitoring and evaluation of their progress towards green growth.

Slovenia is one of over 20 countries to date that have tailored the OECD Green Growth indicator framework to suit their national circumstances in pursuit of green growth, assessing their progress towards green growth with key, internationally comparable environmental indicators. International organisations, including those participating in the Green Growth Knowledge Platform (the Global Green Growth Institute, UN Environment and the World Bank) have also used the OECD Green Growth measurement framework and related indicators in their own reports, such as *Moving Towards a Common Approach on Green Growth Indicators* (GGKP, 2013) and *Measuring Inclusive Green Growth at the Country Level* (GGKP, 2016).

Source: Žitnik, Šteharnek and Rutar (2014), *Green Growth Indicators for Slovenia*, <https://www.oecd.org/greengrowth/Green%20growth%20indicators%20in%20Slovenia%202014.pdf>; OECD (2017a) *Green Growth Indicators 2017*, <http://dx.doi.org/10.1787/9789264268586-en>; and OECD (2014b), *Green Growth Indicators 2014*, <http://dx.doi.org/10.1787/9789264202030-en>.

The six SEE economies should evaluate the performance of existing and design of planned environmental funds. The OECD has produced a large body of useful guidance on evaluating the performance of public environmental funds, particularly in emerging and transition economies – see *Good Practices of Public Environmental Expenditure Management* (PEEM) (OECD, 2003). This builds on the *St. Petersburg Guidelines on Environmental Funds in the Transition to a Market Economy* (OECD, 1995). The OECD more recently extended the guidelines' application to all public agencies managing environmental expenditure programmes; see the OECD Council recommendation on good practices for PEEM (OECD, 2006).

While the assessed SEE economies have made progress by becoming parties and signatories of MEAs, **more efforts are needed to meet the commitments MEAs entail** – for example meeting their objectives as set by their Nationally Determined

Contributions under the Paris Agreement and the Convention on Biological Diversity's Aichi Biodiversity Targets.

The six SEE economies need to put an enabling policy environment in place to attract green investment and innovation, such as to exploit the potential use of renewable energy technologies. The OECD Centre on Green Finance and Investment develops policies, institutions and instruments for green finance and investment (OECD, 2017f). The OECD Guidelines for Multinational Enterprises outlines how governments can enable responsible business conduct, including environmental considerations, through effective regulation and measures (OECD, 2016f). Both are valuable resources for the six SEE economies to help them seize available opportunities through ambitious and effective green growth policies.

Conclusions

All six SEE economies are making progress in putting policy, legal, regulatory and institutional frameworks in place to achieve environmental objectives. They have, in particular, made progress in transposing key EU environmental directives and have developed strategies to approximate the remaining legislation. All assessed SEE economies except Bosnia and Herzegovina have adopted legislation for SEAs and EIAs, but further efforts are needed to use them consistently and effectively across economic sectors. Public participation in decision making needs to be enhanced. The six SEE economies have limited legal and policy frameworks in place to manage land, biodiversity, forestry and water. They need to adopt those elements that are still missing and reinforce their implementation and enforcement. For effective implementation, the economies need to define clear roles, responsibilities and co-ordination mechanisms among relevant government bodies at the central, regional and local levels, accompanied by sufficient funding and staff.

In order to pursue green growth, the six SEE economies need to integrate environmental considerations into their economic and sectoral policies. A critical area is climate change mitigation, where international commitments are unlikely to be achieved unless energy mixes are diversified away from fossil fuels and in particular large-scale coal-fired thermal power plants. Air pollution from energy production, transport and industry is a serious environmental risk that also demands a co-ordinated approach. Furthermore, the six SEE economies should increase the use of economic instruments such as taxes, charges and fees to provide incentives for efficient resource use, and remove environmentally harmful subsidies on fossil fuels and coal. Finally, the economies need to routinely collect high-quality, basic statistics on the environment to inform evidence-based policy. They should lay the foundations of routine, comprehensive monitoring and evaluating of the state of the environment and the effectiveness of environmental policies.

Notes

1. There are four main administrative levels in Bosnia and Herzegovina: the State, the Federation of Bosnia and Herzegovina, the Republika Srpska and the Brčko District. The administrative levels of the State, the Federation of Bosnia and Herzegovina and the Republika Srpska are taken into account in the *Competitiveness Outlook 2018* assessment, when relevant. The Brčko District is not assessed separately.
2. A score of 0 denotes absence or minimal policy development while a 5 indicates alignment with what is considered best practices. Each level of scoring is updated for the individual indicator under consideration, but they all follow the same score scale: a score of 1 denotes a weak pilot framework, 2 means the framework has been adopted as is standard, 3 that is operational and effective, 4 that some monitoring and adjustment has been carried out, and 5 that monitoring and improvement practices are systematic.

References

- ASK (2017), “Municipal waste”, *Environment Database*, Agency of Statistics of Kosovo, <http://ask.rks-gov.net> (accessed 19 December 2017).
- ASK (2016), “Competitiveness in South East Europe: A Policy Outlook 2018: Environmental Policy Questionnaire”, Responses to the OECD received from the Agency of Statistics of Kosovo, Pristina.
- BHAS (2016), “Competitiveness in South East Europe: A Policy Outlook 2018: Environmental Policy Questionnaire”, Responses to the OECD received from the Bosnia and Herzegovina Agency for Statistics, Sarajevo.
- CBD (n.d.), Convention on Biological Diversity, www.cbd.int (accessed 6 December 2017).
- Contreras-Hermosilla, A., R. Doornbosch and M. Lodge (2007), “The economics of illegal logging and associated trade”, Round Table on Sustainable Development, OECD, Paris, www.oecd.org/sd-roundtable/papersandpublications/39348796.pdf.
- de Serres, A., F. Murtin and G. Nicoletti (2010), “A framework for assessing green growth policies”, *OECD Economics Department Working Papers*, No. 774, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5kmfj2xvcmkf-en>.
- Earley, J. and L. Anderson (2003), “Developing-country access to developed-country markets under selected ecolabelling programmes”, OECD, Paris, [www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=com/env/td\(2003\)30/final](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=com/env/td(2003)30/final).

- EEA (2015), “Water-retention potential of Europe’s forests: A European overview to support natural water-retention measures”, *EEA Technical Reports*, No 13/2015, European Environmental Agency, Copenhagen, www.eea.europa.eu/publications/water-retention-potential-of-forests.
- EPAM (2016), “Competitiveness in South East Europe: A Policy Outlook 2018: Environmental Policy Questionnaire”, Responses to the OECD received from the Environmental Protection Agency of Montenegro, Podgorica.
- Endcoal (2017), “Coal plants by country (MW)”, *Global Coal Plant Tracker* (database), <https://endcoal.org/wp-content/uploads/2017/07/PDFs-for-GCPT-July-2017-Countries-MW.pdf> (accessed 1 July 2017).
- Eurostat (2017a), “Treatment of waste by waste category, hazardousness and waste operations”, *Environment* (database), <http://ec.europa.eu/eurostat/data/database> (accessed 1 October 2017).
- Eurostat (2017b), “Municipal waste by waste operations”, *Environment* (database), <http://ec.europa.eu/eurostat/data/database> (accessed 1 October 2017).
- Eurostat (2017c), “Annual freshwater abstraction by source and sector”, *Environment* (database), <http://ec.europa.eu/eurostat/data/database> (accessed 1 October 2017).
- Eurostat (2017d), “Population connected to public water supply”, *Environment* (database), <http://ec.europa.eu/eurostat/data/database> (accessed 1 October 2017).
- Eurostat (2017e), “Environmental taxes by economic activity”, *Environment* (database), <http://ec.europa.eu/eurostat/data/database> (accessed 1 October 2017).
- FAO (2017), *FAOSTAT* (database), Food and Agriculture Organization of the United Nations, Rome, <http://faostat.fao.org> (accessed 11 December 2017).
- FuelsEurope (2017), “Maximum gasoline sulphur limit”, *FuelsEurope Dataroom* (database), www.fuelseurope.eu/interactive-graph/maximum-gasoline-sulphur-limit (accessed 6 December 2017).
- GGKP (2016), “Measuring inclusive green growth at the country level”, *Working Paper*, No. 2, Green Growth Knowledge Platform, United Nations Environment Programme, Nairobi, <https://tinyurl.com/ybvsjuwg>.
- GGKP (2013), “Moving towards a common approach on green growth indicators”, GGKP Scoping Paper, Green Growth Knowledge Platform, Geneva, www.greengrowthknowledge.org/resource/moving-towards-common-approach-green-growth-indicators.
- Government of Montenegro (2017), “Nacionalni savjet za održivi razvoj i klimatske promjene” [National Council for Sustainable Development and Climate Change], www.gov.me/naslovna/Savjetodavna_tijela/Nacionalni_savjet_za_odrzivi_razvoj_i_klimatske_pr (accessed 7 December 2017).
- INSTAT (2017), “Urban and inert solid waste”, *Environment Database*, Institute of Statistics, www.instat.gov.al (accessed 19 December 2017).
- ISO (2017), *ISO Survey of Certifications to Management System Standards* (database), <http://isotc.iso.org/livelink/livelink?func=ll&objId=18808772&objAction=browse&viewType=1> (accessed 7 December 2017).

- IUCN (2017), “Threatened species in each country”, *IUCN Red List*, International Union for Conservation of Nature, http://cmsdocs.s3.amazonaws.com/summarystats/2017-3_Summary_Stats_Page_Documents/2017_3_RL_Stats_Table_5.pdf (accessed 7 December 2017).
- Karousakis, K. (2006), “Initial review of policies and incentives to reduce GHG emissions from deforestation”, OECD/IEA Publishing, Paris, www.oecd.org/env/cc/37672485.pdf.
- Karousakis, K. et al. (2012), “Biodiversity”, in *OECD Environmental Outlook to 2050: The Consequences of Inaction*, OECD Publishing, Paris, http://dx.doi.org/10.1787/env_outlook-2012-7-en.
- MakStat (2016), “Municipal waste”, *Environment Database*, Republic of Macedonia State Statistical Office, www.stat.gov.mk (accessed 19 December 2017).
- MESP and AMMK (2015), “State of environment in Kosovo 2015: Report”, Ministry of Environment and Spatial Planning and Kosovo Environmental Protection Agency, Pristina, www.ammk-rks.net/repository/docs/Anlisht-final.pdf.
- Michaud, D. et al. (2015), “Water and wastewater services in the Danube Region: A state of the sector”, World Bank Group, Vienna, <http://documents.worldbank.org/curated/en/327761467999140967/pdf/96396-REVISED-WP-P146139-PUBLIC-Box391472B-SoS-Report-150610.pdf>.
- MOE (2016), “Competitiveness in South East Europe: A Policy Outlook 2018: Environmental Policy Questionnaire”, Responses to the OECD received from the Ministry of Environment of Albania, Tirana.
- MOEPP (2016), “Air pollution”, *Environmental Indicators* (database), Ministry of Environment and Physical Planning, www.moepp.gov.mk/?page_id=746&lang=en (accessed 6 December 2017).
- MONSTAT (2016), “Municipal waste”, *Environment Releases* (database), Statistical Office of Montenegro www.monstat.org (accessed 19 December 2017).
- OECD (2017a), *Green Growth Indicators 2017*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264268586-en>.
- OECD (2017b), *Investing in Climate, Investing in Growth*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264273528-en>.
- OECD (2017c) “Municipal waste countries’ metadata”, OECD, Paris, <http://stats.oecd.org/wbos/fileview2.aspx?IDFile=9bc27df8-1205-468c-b178-ce0d200f2641>.
- OECD (2017d), “Municipal waste”, *OECD Environment Statistics* (database), <http://dx.doi.org/10.1787/data-00601-en> (accessed 10 December 2017).
- OECD (2017e), “Exposure to air pollution”, *OECD Environment Statistics* (database), <http://dx.doi.org/10.1787/env-data-en> (accessed 1 March 2017).
- OECD (2017f), “Centre on Green Finance and Investment”, www.oecd.org/cgfi (accessed 6 December 2017).
- OECD (2016a), *Policy Guidance on Resource Efficiency*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264257344-en>.

- OECD (2016b), *Extended Producer Responsibility: Updated Guidance for Efficient Waste Management*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264256385-en>.
- OECD (2016c), “OECD Council recommendation on water”, OECD, Paris, <https://www.oecd.org/environment/resources/Council-Recommendation-on-water.pdf>.
- OECD (2016d), *The Economic Consequences of Outdoor Air Pollution*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264257474-en>.
- OECD (2016e), *Effective Carbon Rates: Pricing CO₂ Through Taxes and Emissions Trading Systems*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264260115-en>.
- OECD (2016f), “Annual report on the OECD Guidelines for Multinational Enterprises 2015”, OECD, Paris, <http://mneguidelines.oecd.org/2015-Annual-Report-MNE-Guidelines-EN.pdf>.
- OECD (2015a), *Towards Green Growth? Tracking Progress*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264234437-en>.
- OECD (2015b), *Aligning Policies for a Low-carbon Economy*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264233294-en>.
- OECD (2015c), *Climate Change Risks and Adaptation: Linking Policy and Economics*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264234611-en>.
- OECD (2015d) *Going Green: Best Practices for Sustainable Procurement*, OECD Publishing, Paris, www.oecd.org/gov/ethics/Going_Green_Best_Practices_for_Sustainable_Procurement.pdf.
- OECD (2015e), “Financing water quality management and investment in infrastructure: Water policy in France: A decentralised and participatory system”, OECD, Paris, www.oecd.org/environment/resources/France-case-study-financing-water-quality-and-investment-diffuse-pollution.pdf.
- OECD (2014a), “Air and GHG emissions” (indicator), <http://dx.doi.org/10.1787/93d10cf7-en>.
- OECD (2014b), *Green Growth Indicators 2014*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264202030-en>.
- OECD (2011a), *Towards Green Growth*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264111318-en>.
- OECD (2011b), *Benefits of Investing in Water and Sanitation: An OECD Perspective*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264100817-en>.
- OECD (2007), “Guiding principles of effective environmental permitting systems”, OECD, Paris, www.oecd.org/env/outreach/37311624.pdf.
- OECD (2006), “Recommendation of the Council on good practices for public environmental expenditure management”, C(2006)84, OECD, Paris, www.oecd.org/env/outreach/38787377.pdf.
- OECD (2004), “Recommendation of the Council on the use of economic instruments in promoting the conservation and sustainable use of biodiversity”, C(2004)81, OECD, Paris, <http://acts.oecd.org/Instruments/ShowInstrumentView.aspx?InstrumentID=50&InstrumentPID=47&Lang=en&Book>.

- OECD (2003), “Good practices of public environmental expenditure management”, www.oecd.org/env/outreach/peem.htm (accessed 25 January 2018).
- OECD (1995), “St. Petersburg guidelines on environmental funds in the transition to a market economy”, OECD, Paris, www.oecd.org/env/outreach/stpetersburgguidelinesonenvironmentalfundsinthetransitiontoamarketeconomy.htm.
- RHMZRS (2016), “Competitiveness in South East Europe: A Policy Outlook 2018: Environmental Policy Questionnaire”, Responses to the OECD received from the Hydrometeorological Institute of the Republika Srpska, Banja Luka.
- SEE SEP (2016), “Energy poverty in South East Europe: Surviving the cold”, SEE Change Net, Sarajevo, http://seechangenetwork.org/wp-content/uploads/2016/10/Energy-Poverty-in-South-East-Europe_Surviving-the-Cold.pdf.
- SEE SEP/WWF Adria (2015), “EIA/SEA of hydropower projects in South East Europe: Meeting the EU standards”, SEE Change Net, Sarajevo, http://d2ouvy59p0dg6k.cloudfront.net/downloads/hidro_v6_webr.pdf.
- SEPA (2016), “Competitiveness in South East Europe: A Policy Outlook 2018: Environmental Policy Questionnaire”, Responses to the OECD received from the Serbian Environmental Protection Agency, Belgrade.
- UN Environment (n.d.), “Aichi Biodiversity Targets”, <https://www.cbd.int/sp/targets> (accessed 7 December 2017).
- UNCCD (1994), “Annex V: Regional implementation annex for Central and Eastern Europe” in *United Nations Convention to Combat Desertification*, UNCCD, Bonn, www2.unccd.int/sites/default/files/relevant-links/2017-01/UNCCD_Convention_ENG_0.pdf#page=50.
- UNSD (2017), “Population connected to wastewater treatment”, *Environment Statistics Database*, United Nations Statistics Division, <https://unstats.un.org/unsd/envstats/qindicators.cshhtml> (accessed 1 October 2017).
- World Bank (2017), *World Development Indicators* (database), World Bank, <http://data.worldbank.org/data-catalog/world-development-indicators> (accessed 7 December 2017).
- World Bank Group (2016), *State and Trend of Carbon Pricing: 2016*, World Bank, Washington, DC, <http://documents.worldbank.org/curated/en/598811476464765822/pdf/109157-REVISED-PUBLIC-wb-report-2016-complete-161214-cc2015-screen.pdf>.
- WSRA (2016), “Annual performance report for water service providers in Kosovo in 2015”, Water Services Regulatory Authority, Pristina, www.arru-rks.org/assets/cms/uploads/files/Publikimet/en/RAP_I_PERFORMANCES_2015_v_Eng.pdf.
- Žitnik, M., M. Šteharik and T. Rutar (2014), *Green Growth Indicators for Slovenia*, Statistical Office of the Republic of Slovenia, Ljubljana, www.oecd.org/greengrowth/Green%20growth%20indicators%20in%20Slovenia%202014.pdf.

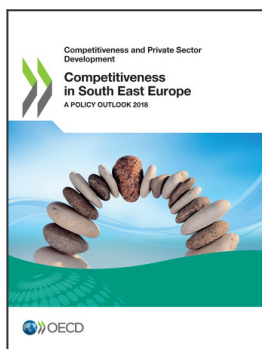
Annex 13.A1.

Environmental policy: Indicator scores

Table 13.A1.1. Environmental policy: Indicator scores

	ALB	BIH	KOS	MKD	MNE	SRB
Resource productivity						
Circular economy framework	0.5	0.5	0.5	0.5	1.0	0.5
Climate change adaptation and mitigation framework	2.0	1.5	2.0	1.5	1.5	1.5
Municipal solid waste management framework	2.5	1.5	2.5	2.5	2.5	3.0
Natural asset base						
Water management framework	1.5	2.5	2.0	2.0	1.5	2.0
Biodiversity and forest management framework	2.5	1.0	2.5	2.0	2.5	2.5
Land-use management framework	2.0	1.5	3.0	2.5	3.0	3.0
Environmental quality of life						
Air quality framework	2.0	1.0	2.0	2.5	2.5	1.5
Water supply and sanitation system	2.5	1.5	2.0	2.0	2.0	3.0
Industrial waste management framework	1.5	1.0	1.5	1.5	2.0	2.5
Policies for green growth						
Environmental policy framework	1.5	1.0	2.0	1.5	1.5	2.0
Environmental taxes, subsidies, charges and fees	1.0	2.0	1.0	1.0	1.5	1.5
International co-operation framework	1.5	1.0	0.5	1.5	0.5	2.5

StatLink  <http://dx.doi.org/10.1787/888933706392>



From:
Competitiveness in South East Europe
A Policy Outlook 2018

Access the complete publication at:
<https://doi.org/10.1787/9789264298576-en>

Please cite this chapter as:

OECD (2018), "Environmental policy in South East Europe", in *Competitiveness in South East Europe: A Policy Outlook 2018*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264298576-18-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.