



Agricultural Policy Forum 2022

Agriculture and Rural Development in the context of the Green Agenda for the Western Balkans: Overcoming the Impact of the Global Challenges

Towards the Regional Soil Partnership in the Western Balkans

Dragana Vidojevic, Environmental protection Agency, Republic of Serbia

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Tirana, Albania



Implemented by:



- Action Plan for implementation of the Sofia Declaration

3. Depollution

Action 42: Integrate soil protection in other policy areas and establish a **regional soil partnership** to improve knowledge exchange and identify examples of best practices for soil protection from pollution and degradation

Regional Expert Advisory Working Group - **Soil**

↓
National, regional and international experts



- Ministries of Agriculture and ministries of Environmental Protection



Objectives of the Western Balkan Soil Partnership

- Identify and restore degraded soils to improve productivity and the provision of ecosystem services.
- Enhance public awareness about the importance of soil and develop advice to improve national/regional technical capacity and the proper institutional response.
- Ensure broad stakeholder involvement, including civil society participation, to successfully implement soil-related actions related to the Green Agenda of the Western Balkans.
- Promote soil literacy and enhance involvement of younger generations in soil science.



Approach of the Western Balkan Soil Partnership

- Improved soil monitoring, based on indicators set out by EU and international (FAO Global Soil Partnership) entities (e.g., EU Soil Strategy 2030, GSP Action Framework 2022-2030) and national legislation including the development of regional soil characteristics statistics.
- Regional guidance on sustainable soil management, and exchange of best practices and demonstration projects.
- Establish a database of contaminated sites, and assessment of environmental and health risk.
- Improve national capacities to report soil characteristics statistics (SDG, UNCCD/LDN, Eurostat regional statistics, agri-environmental indicators, indicators for sustainable soil management).
- Develop regional soil assessment in support of European and global soil assessments.
- Establish a regional soil information system for soil monitoring, soil degradation assessment and science policy support.



Tasks of the Western Balkan Soil Partnership

- Develop a detailed, integrated, and scientific assessment of the soil degradation processes in WB and a set out a regional database of soil conservation practices and policy instruments for soil protection.
- Assess the institutional and scientific capacities of the WB countries for the implementation of the new EU Soil Strategy for 2030.
- Conduct regional meetings, and exchange best practices, in order to:
 - harmonize guidelines and methods, measurements, soil protection indicators, and sustainable soil management practices; improve the quality and availability of data and information about the soil: collection, analysis, verification, reporting, monitoring, and integration with other disciplines;
 - raise awareness in the area of soil protection and sustainable land use.
- Design and establish a regional soil platform for data storing and data sharing; ideally, a region-specific decision Support System (DSS) should become available based on the INSPIRE data specifications.
- Establish the WB Soil Museum for wider dissemination and awareness of the importance of soils for the wellbeing of the society.



Key messages

- Soil and land degradation pose a major threat to global food security and to the achievement of the Sustainable Development Goals (SDGs).
- 33% of the Earth's soils are already degraded and over 90% could become degraded by 2050.
- The economic cost of soil degradation for the European Union is estimated to be in the order of tens of billions of euros annually.
- 95 % of the food we eat comes from the soil and reduction of land degradation through the application of Sustainable Soil Management (SSM) is critical for protecting our soil while ensuring a sustainable and food secure world.
- Soil degradation is a transboundary issue, therefore tackling it requires a well-coordinated regional approach where all stakeholders have equal responsibility to ensure that soils are managed sustainably and the 2030 Agenda for SDGs are met.

- **The new EU Soil Strategy for 2030:**

“making sustainable soil management (SSM) the new normal requires coordination and working together at local, regional, national, EU and global level to promote and implement such practices”

- European Green Deal, Soil Deal for Europe, Global and European Soil Partnership, EU Soil Observatory



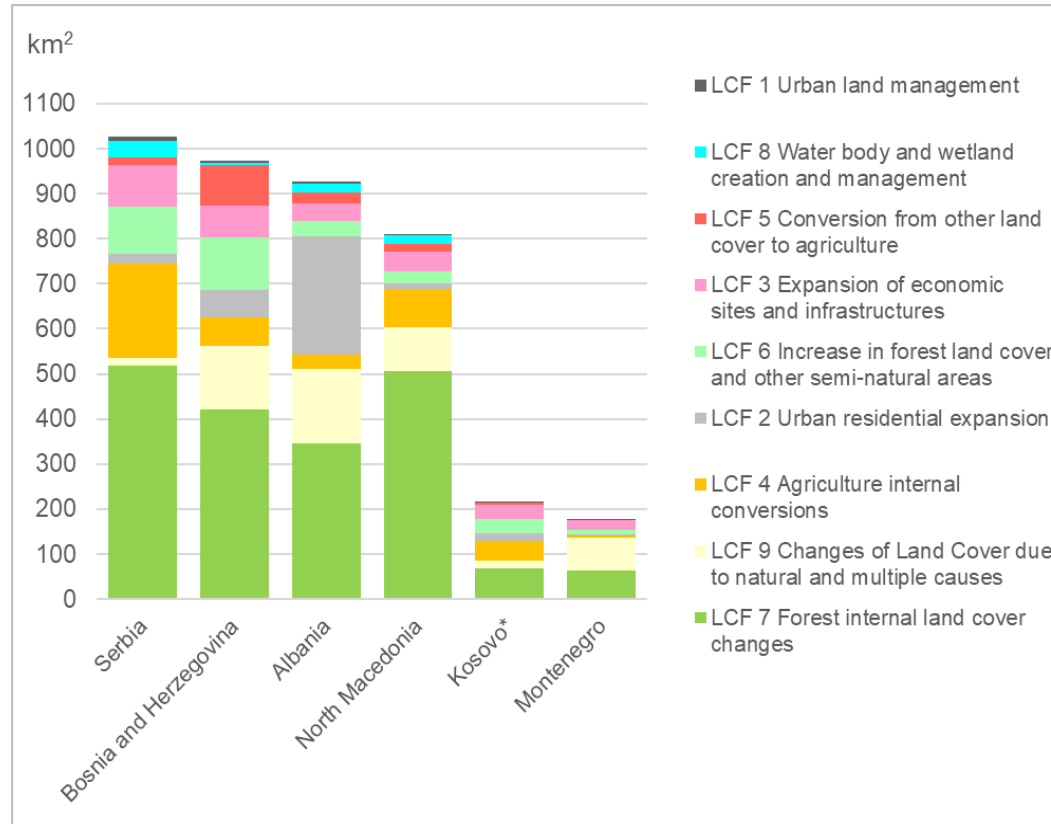
Land use and Land Cover in WB

| | 1 - Artificial surfaces | | 2 - Agricultural areas | | 3 - Forest and semi natural areas | | 4 - Wetlands | | 5 - Water bodies | | Total |
|-------------------------------|-------------------------|--------|------------------------|---------|-----------------------------------|---------|-----------------|--------|------------------|--------|---------|
| | km ² | % | km ² | % | km ² | % | km ² | % | km ² | % | |
| Total | 5,925 | 2.8525 | 83,182 | 40.0457 | 115,293 | 55.5049 | 609 | 0.2932 | 2,708 | 1.3037 | 207,717 |
| Albania | 842 | 2.9237 | 7,985 | 27.7337 | 19,173 | 66.592 | 117 | 0.4062 | 675 | 2.3443 | 28,792 |
| Bosnia and Herzegovina | 890 | 1.7373 | 16,964 | 33.1222 | 32,965 | 64.3649 | 53 | 0.1033 | 344 | 0.6725 | 51,215 |
| Kosovo* | 517 | 4.7415 | 4,157 | 38.1156 | 6,208 | 56.9171 | 1 | 0.0117 | 23 | 0.2141 | 10,907 |
| Montenegro | 272 | 1.9607 | 2,231 | 16.0688 | 10,991 | 79.1688 | 125 | 0.8983 | 264 | 1.9035 | 13,882 |
| North Macedonia | 467 | 1.837 | 9,129 | 35.8906 | 15,278 | 60.0654 | 21 | 0.0836 | 540 | 2.1234 | 25,435 |
| Serbia | 2,937 | 3.7904 | 42,716 | 55.1285 | 30,679 | 39.5931 | 292 | 0.3768 | 861 | 1.1112 | 77,484 |

*This designation is without prejudice to positions on the status and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.

- Forest and semi natural areas have the largest share of the land in the region (55.5%), followed by Agricultural areas with 40.04%.
- More than 2.8 % of WB land is used as Artificial areas which includes built-up areas and unbuilt surfaced areas such as transport networks and associated areas.

Key facts and figures



Main changes:

- Forest internal land cover changes - Serbia and North Macedonia.
- Changes of Land Cover due to Natural and multiple causes - Montenegro.
- Agriculture internal conversions - Serbia, followed by Kosovo*.
- Urban residential expansion - Albania, followed by Bosnia and Herzegovina.

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MINISTRY OF AGRICULTURE
AND RURAL DEVELOPMENT

Soil and land data in WB

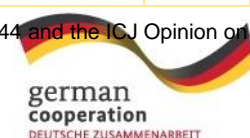
Agricultural
Policy Forum
Tirana, Albania



| | ALB | | BIH FBIH | | BIH RS | | KOS* | | MNE | | MKD | | SRB | |
|--------------------------|-----------|-----|-------------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|
| | Hard copy | GIS | Hard copy | GIS | Hard copy | GIS | Hard copy | GIS | Hard copy | GIS | Hard copy | GIS | Hard copy | GIS |
| Soil maps | | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Land use | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ |
| Land cover | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ |
| Soil physical properties | ✓ | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| Soil chemical properties | | ✓ | | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Erosion | ✓ | | | ND | | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | |
| Soil organic carbon loss | | ✓ | | ND | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ |
| Compaction | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Contamination | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| Soil sealing | ✓ | | | ND | | ND | | ND | | ND | | ✓ | | ✓ |
| Salinization | ✓ | | | ND | | ND | | NR | | ND | | ✓ | ✓ | ✓ |
| Acidification | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ND | ✓ | ✓ |
| Soil biodiversity | | ND | | ND | | ND | | ND | | ND | | ND | ✓ | |
| Drought | | ND | | ND | ✓ | | | ND | | ✓ | | ✓ | | ✓ |
| Floods | ✓ | | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Desertification | ✓ | | | ND | ✓ | | | ND | ✓ | | | ✓ | | ND |

ND - No data,
NR – Not relevant

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Summary of soil threats status in WB



| Soil treats | | ALB | BIH FBIH | BIH RS | KOS* | MNE | MKD | SRB |
|-----------------------------------|---|-----|-------------|-----------|------|-----|-----|-----|
| Land take and soil sealing | In densely populated parts of WB countries soil sealing is one of the most threatening phenomena. | ↕ | ↕ | ↘ | ↘ | ↘ | ↘ | ↘ |
| Contamination | Soil contamination is a problem in some parts of WB countries. The most frequent contaminants are heavy metals and mineral oil. | ↕ | ↕ | ↘ | ↘ | = | ↘ | = |
| Organic carbon change | The loss of organic carbon is evident in most agricultural soils. | = | = | ↘ | ↘ | ↘ | ↘ | ↘ |
| Soil erosion | Water erosion is active in all the cultivated mountainous areas and wind erosion in lowland areas. | ↘ | ↘ | ↘ | ↘ | ↘ | ↘ | ↘ |

Legend: Stable = Variable ↕, Improving ↗, Deteriorating ↘

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The main soil degradation processes in WB

- **Land take and soil sealing:** Data on soil sealing for the entire region can be obtained by the Corine Land Cover data analysis.
 - **Contamination:** The number of sites where contamination takes place is impossible to estimate. Some countries have made preliminary estimates, but it is not possible to get aggregated data for the region. Inadequate waste management is still an important source of soil pollution. Diffuse soil contamination is one of the specific threats to soils in WB.
 - **Erosion:** Erosion is an important driver of land degradation in the region.
 - There are no official data for most of the WB countries as regards areas affected by erosion and no erosion monitoring system in place. (North Macedonia: 4,1 t/h, Albania 30 t/ha/year)
 - **Landslides:** There is no data on the total affected areas in the region. Some countries have reported landslides in their territories. The Republic of Serbia reports a threat from landslides in one-third of the country.
 - **Organic matter decline** is an important driver of land degradation in the region.
- Contaminants of emerging concern, such as microplastics, pharmaceuticals and personal care products, and PFASs, are still poorly studied in the region, and require further attention.
 - Some WB countries have supported the initiative and implemented activities in the framework of UNCCD LDNP.



Legal framework for soil protection in WB

- No limited to one regulation: several by-laws regulating management of agricultural land, forests and forest land, spatial planning, environmental and water protection etc.
- Most countries in the region have laws on agricultural land, some also have laws on soil protection.
- There is a lack of an integrated systemic approach to soil management in the manner which will consider the adaptations of the soil to the local climate conditions, soil types and other aspects regarding land management.

- There is no country in the region with a comprehensive legal framework that covers soil protection, restoration, sustainable use and soil monitoring.
- Soil protection in the WB countries is gaining more attention recently.

Strategic documents for soil protection in WB

- Soil-related goals in strategic documents regarding agriculture and rural development.

Priorities and activities aimed at soil protection and soil management:

- Restoration, preservation and improvement of the ecosystem through sustainable management of natural resources and climate actions;
- Introduction of agricultural methods that protect the environment and mitigate climate influence (environmentally friendly practices);
- Revitalization and pasture preservation and others.

- All WB countries have very similar strategic priorities, objectives, and measures in their strategic documents related to agriculture and environmental protection.
- It is necessary to harmonise the goals set within the strategic documents of the WB countries with the requirements set in the new EU Soil Strategy for 2030.



Capacity assessment of the country to deal with soil protection in WB

- In all the countries, the ministries responsible for the management of agriculture soil and land are the ministries of agriculture.
- The responsibility for the environmental policy and environmental protection is located within the ministries responsible for the environment.
- The ministries responsible for the environment are usually the focal points for the international conventions related to the environment and soil (Biodiversity, Climate Change, Land Degradation and Desertification).
- The biggest challenge in the region is building the capacities of the existing institutions.
- The countries find that there are scientific institutions with the capacities of meeting future soil examination requirements and introducing sustainable soil management in the region.
- Institutions in the region are facing problems related to lack of professional expertise, insufficient level of personal and institutional capacities.



Problems with soil management in WB

| Main problems | Core actions for achieving sustainable soil management (SSM) in WB |
|--|---|
| Lack of knowledge and awareness for sustainable soil management | Promoting effective education programmes. Capacity development on SSM should be enhanced so that more professionals are brought up-to-date on “state of the art” methods and tools. |
| Lack of legislative framework | Establishing or strengthening inclusive SSM-supportive agricultural/environmental policies. |
| Division of responsibilities and lack of cooperation among institutions | Fostering cooperation/collaboration on soils at the national and international level. Promoting communication on SSM practices. |
| Inadequate agricultural practices | Agricultural extension services should promote SSM principles and practices. |
| Lack of a systematic soil condition monitoring and targeted soil research | The assessment of soil status should be a precondition to planning any SSM intervention. It is important that investment in soil research is increased to enable national research programs and their partners to work with land users to identify and address the constraints they face in increasing the ecosystem services provided by soils (i.e. soil productivity). Where appropriate, national soil information systems should be established or strengthened. |
| Low level of support for agricultural producers | Increasing responsible investment and positive incentives aimed at promoting sustainable soil management. |
| Industrial activities and mining | Preventing or minimizing soil degradation and restoring/rehabilitating degraded soils (including historically degraded soils) |
| Urban expansion | Where policy and legislation aim to minimize land conversion, measures should be implemented to encourage densification and re-use of existing urban or industrial areas such as abandoned areas and brownfields, and restoring degraded neighbourhoods after appropriate reclamation measures have been implemented. |



Key findings

- The WB region shows a great variety of climate, soil, and geomorphological characteristics.
- The region was blessed by some of the most fertile soils in Europe.
- Although agricultural land makes for around 40% of the surface of the WB region, productive agricultural land is limited.
- Soil in the region are also characterised by several natural constraints that include salinity, sodicity, poor drainage and texture conditions, shallowness and stoniness and other limitations.
- Serious threats to soil throughout the region have been identified.
- Main expected impacts of climate change and extreme weather phenomena that contribute towards vulnerability of agricultural land in the WB are: increased erosion and reduction of the organic matter content in the soil.
- There is nearly no structured soil monitoring or regular reporting on the state of the soil.
- More evidence is needed to support stronger soil protection policy and to monitor its implementation.



The main conclusions and recommendations

- There are insufficient data on the soil status in the WB countries. Investment is needed in soil monitoring.
- Land use change, contamination, erosion and the loss of organic carbon are serious threats to soil health.
- Soil has been overlooked in environment policy in recent decades. Enhancing policy coherence for development of soil management practices is needed.
- It is necessary to harmonize the goals set within the strategic documents of the Western Balkans countries with the requirements set in the new EU Soil Strategy for 2030.
- The low level of awareness is one of the biggest obstacles for proper implementation of the SSM practices.
- Capacity building should be conducted for all stakeholders from policy makers to the farmers' level.



Thank you!

