



Green Infrastructure and Spatial Planning in the EU

Author: Bruna Campos, EuroNatur

Project:
**“Improving connectivity
at the Balkan Green Belt”**

January 2023

Contact address

EuroNatur Foundation
Anne Katrin Heinrichs
Westendstraße 3
78315 Radolfzell
Germany
Tel: +49-7732-9272-12
Fax: +49-7732-9272-22
Email: anne.katrin.heinrichs@euronatur.org

This project is funded by the German Federal Environment Ministry's Advisory Assistance Programme (AAP) for environmental protection in the countries of Central and Eastern Europe, the Caucasus and Central Asia and other countries neighbouring the European Union. It is supervised by the Federal Agency for Nature Conservation (BfN) and the German Environment Agency (UBA).

The responsibility for the content of this publication lies with the authors.

Cover photo: Aleksandar Stojanov

Computer processing: Design and print sollution Studio "Mavroski"

Supervisor at BfN: Dr. Karin Ullrich
Supervisor at UBA: Dr. Sonja Otto

CONTENTS

List of figures	5
Acronyms	6
Abstract	7
Abstrakt	7
Апстракт	7
Abstrakte	8
Summary	9
Zusammenfassung	10
Introduction	11
The European Green Belt	11
Threats to the European Green Belt	12
The role of spatial planning and Green Infrastructure.....	12
Potential of Green Infrastructure to improve spatial planning in Albania and North Macedonia	13
Impact of EU decision-making on nature	14
Environmental commitments that drive long-term vision.....	15
Impact of EU-Western Balkan cooperation on Green Infrastructure and spatial planning in Albania and North Macedonia	16
An economic and investment plan for the Western Balkans	16
Guidelines for a Green Agenda for the Western Balkans	16
Ministers' views on Territorial cooperation.....	17

Influence of European policies on spatial planning and the integration of Green Infrastructure	18
The role of environment legislation in Green Infrastructure and spatial planning	18
Birds Directive and Habitats Directive	18
Water Framework Directive, Floods Directive, Groundwater Directive	19
Strategic Environmental Assessment Directive	19
Environmental Impact Assessment Directive	19
Marine Strategy Framework Directive	19
Environmental Noise Directive	19
INSPIRE Directive	20
The role of technical environmental guidance in Green Infrastructure and spatial planning	20
The role of sector-related legislation in Green Infrastructure and spatial planning	22
Renewable Energy Directive	22
Energy Efficiency Directive	23
Regulation on guidelines for trans-European energy infrastructure	23
Regulation on the trans-European transport network	23
Common Agricultural Policy	23
Maritime Spatial Planning Directive	24
The role of financial incentives in Green Infrastructure and spatial planning	24
Instrument for Pre-accession (IPA III)	25
LIFE programme	25
Legislation on monitoring, data collection and reporting to help implement Green Infrastructure and spatial planning	25
Future legislations to consider	27
Nature restoration regulation	27
Revision of the Renewable Energy Directive	27
Recommendations for Albania and North Macedonia	28
Conclusion	29

LIST OF FIGURES

Figure 1. The route of the European Green Belt and its regions.....	11
Figure 2. Green Infrastructure and its elements	12
Figure 3. Agricultural area in eastern parts of North Macedonia (source: MES).....	13
Figure 4. Preserved natural forests on Jablanica Mt, North Macedonia (source: MES)	17

ACRONYMS

AAP	German Federal Environment Ministry's Advisory Assistance Program
BfN	Federal Agency for Nature Conservation
BGB	Balkan Green Belt
CAP	Common Agricultural Policy
CEA	Cumulative Effect Assessment
CMS	Convention on the Conservation of Migratory Species of Wild Animals
EAP	Environmental Action Programme
EGB	European Green Belt
EIA	Environmental Impact Assessment
ENS	Environmental Noise Directive
ESI	European Structural Investment
EU	European Union
FD	Floods Directive
GES	Good Environmental Status
GI	Green Infrastructure
GWD	Groundwater Directive
IAS	Invasive Alien Species
IPA	Instrument for Pre-accession
MSFD	Marine Strategy Framework Directive
MSP	Maritime Spatial Planning
NGO	Non-governmental Organization
RED	Renewable Energy Directive
SEA	Strategic Environmental Assessment
TFEU	Treaty on the Functioning of the European Union
UBA	German Environment Agency
WFD	Water Framework Directive

ABSTRACT

To achieve a developed Balkan Green Belt (BGB) in Albania and North Macedonia with a secured connectivity as part of the Green Infrastructure (GI), both within and outside of protected areas, it is necessary to improve legislation and implementation of land use planning. In the light of the EU accession process of the two countries, it is important to understand the given EU framework to identify gaps and formulate recommendations for the adaptation of the national legal frameworks. This document aims to illustrate current EU legislation regarding spatial planning and GI. Relevant laws are compiled and analysed with regards to their potential to improve GI implementation. Also, financial incentives and data monitoring that might be important for GI and spatial planning in the present and in the future, are explored. This report is an important first step in promoting a common understanding of EU legislation to support the elaboration of laws, regulations and initiatives in the two countries as well as in other countries of the Balkan Green Belt, that support the implementation of GI and connectivity as part of land use planning.

ABSTRAKT

Um ein entwickeltes Grünes Band Balkan (BGB) in Albanien und Nordmazedonien mit einer gesicherten ökologischen Konnektivität als Teil der Grünen Infrastruktur (GI) sowohl innerhalb als auch außerhalb von Schutzgebieten zu erreichen, ist es notwendig, die Gesetzgebung und die Umsetzung der Landnutzungsplanung zu verbessern. Im Hinblick auf den EU-Beitrittsprozess der beiden Länder ist es wichtig, den durch die EU gegebenen Rahmen zu verstehen, um Lücken zu identifizieren und Empfehlungen für die Anpassung des nationalen Rechtsrahmens zu formulieren. Dieser Übersichtsbericht stellt die aktuelle EU-Gesetzgebung in Bezug auf Raumplanung und Grüne Infrastruktur dar. Er nennt und analysiert einschlägige Gesetze im Hinblick auf ihr Potenzial zur Verbesserung der Umsetzung von GI in Albanien und Nordmazedonien. Außerdem untersucht er finanzielle Anreize und Datenmonitoring, die für die Umsetzung von GI und die Raumplanung in der Gegenwart und in der Zukunft von Bedeutung sein könnten. Dieser Bericht stellt die Grundlage zur Förderung des Verständnisses der EU-Gesetzgebung dar. Damit unterstützt er die Ausarbeitung von Gesetzen, Verordnungen und Initiativen zur Umsetzung von GI und Konnektivität als Teil der Raumplanung in den Ländern des Grünen Bandes Balkan.

АПСТРАКТ

За да се постигне развиен Балкански зелен појас (БЗП) во Албанија и Северна Македонија со осигурна поврзаност како дел од Зелена инфраструктура (ЗИ) во и надвор од границите на заштитени подрачја, неопходно е да се подобри законодавството и имплементацијата на планирањето на користење на земјиште. Земајќи го предвид процесот на усогласување

со ЕУ на двете земји, важно е да се разбере дадената рамка на ЕУ за да се откријат недостатоците и да се формулираат препораки за адаптација на националните правни рамки. Овој документ има за цел да го претстави актуелното законодавство на ЕУ во однос на просторното планирање и ЗИ. Релевантните закони се компилирани и анализирани во однос на нивниот потенцијал за подобрување на имплементацијата на ЗИ. Исто така се истражуваат финансиски стимулации и мониторирање на податоци кои би можеле да бидат важни за ЗИ и просторно планирање во сегашноста и во иднината. Овој извештај е важен прв чекор во промовирањето и разбирањето на законодавството на ЕУ за поддршка на подготовка на закони, регулативи и иницијативи во двете земји, како и во другите земји од Балканскиот зелен појас, кои го поддржуваат спроведувањето на ЗИ и поврзувањето како дел од планирањето на користењето на земјиштето.

ABSTRAKTE

Për realizimin e një Brezi të Gjellbër Ballkanik (BGjB) të zhvilluar në Shqipëri dhe Maqedoninë e Veriut me një lidhshmëri të sigurt si pjesë e Infrastrukturës së Gjellbër (IGj), brenda dhe jashtë zonave të mbrojtura, është i nevojshëm përmirësimi i legjislacionit dhe zbatimi i planifikimit të përdorimit të tokës. Duke pasur parasysh procesin e anëtarësimit të dy vendeve në BE, është e rëndësishme të kuptohet kuadri i caktuar i BE-së për të identifikuar mangësitë dhe për të formuluar rekomandime për përshtatjen e kuadrove ligjore kombëtare. Ky dokument synon të ilustrojë legjislacionin aktual të BE-së në lidhje me planifikimin e territorit dhe IGj-në. Ligjet përkatëse janë përpiluar dhe analizuar në lidhje me mundësinë e tyre për të përmirësuar zbatimin e IGj-së. Gjithashtu, janë eksploruar edhe stimuj financiarë dhe monitorimi i të dhënave që mund të jenë të rëndësishme për IGj-në dhe planifikimin e territorit në të tashmen dhe në të ardhmen. Ky raport është një hap i parë i rëndësishëm në promovimin e një të kuptuari të përbashkët të legjislacionit të BE-së për të mbështetur përpunimin e ligjeve, rregulloreve dhe nismave në të dy vendet si dhe në vendet e tjera të Brezit të Gjellbër Ballkanik, që mbështesin zbatimin e IGj-së dhe lidhshmërinë si pjesë e planifikimit të përdorimit të tokës.

SUMMARY

Spatial planning can contribute to ecological connectivity and reduce biodiversity fragmentation. By defining how the natural environment can be enhanced with Green Infrastructure, spatial planning ensures that social and economic development takes place within ecological limits. The European Green Belt is an example of an EU-level Green Infrastructure. The European Union does not have dedicated laws on terrestrial spatial planning, rather the approach to terrestrial spatial planning varies across Member States. Each Member State has its own legal framework and spatial plans at the national, regional and local scales. Therefore, implementing the EU's environmental acquis is the first and foremost needed action for building the ecological integrity of Europe through Green Infrastructure and spatial planning.

EU environmental legislation specifies which species and habitats should be protected and how this should be achieved, including to limit the negative impact on protected species and habitats. The EU also sets out other visions for structural changes – in particular on energy and transport, which requires Member States to align with EU environmental legislation. The EU has therefore a range of guidance documents that supports EU Member States in implementing EU environmental legislation, sectoral policies and Green Infrastructure. Further to that, the European Green Deal is the current Commission's vision to driving solutions to tackle environmental challenges, and the 8th Environmental Action Programme sets the framework for the EU to act on the Green Deal.

Spatial planning of GI must prioritise biodiversity as a fundamental consideration. It requires data and mapping as well as investment in stakeholder participation. It also needs financial incentives, which, if these are properly programmed, can enable deployment of GI. Implementing GI and spatial planning therefore requires national policies that integrate the needs of EU legislation, in particular environmental legislation, regional and local comprehensive planning of activities, sufficient data with open access for planners, mapping of biodiversity and its sensitivity, and ensuring early stakeholder participation.

ZUSAMMENFASSUNG

Raumplanung kann zur ökologischen Vernetzung und zur Verringerung der Fragmentierung beitragen. Durch Raumplanung wird definiert, wie die natürliche Umwelt durch Grüne Infrastruktur (GI) verbessert werden kann. Zudem stellt sie sicher, dass eine soziale und wirtschaftliche Entwicklung innerhalb der ökologischen Grenzen stattfindet. Das Europäische Grüne Band ist ein Beispiel für eine EU-weite Grüne Infrastruktur. In der EU gibt es keine speziellen Gesetze zur terrestrischen Raumplanung. Die Herangehensweise an die terrestrische Raumplanung ist von Mitgliedstaat zu Mitgliedstaat unterschiedlich. Jeder Mitgliedstaat hat seinen eigenen Rechtsrahmen und seine eigenen Raumordnungspläne auf nationaler, regionaler und lokaler Ebene. Daher ist die Umsetzung des EU-Acquis im Umweltbereich die erste und wichtigste Maßnahme, die für den Aufbau der ökologischen Integrität Europas durch Grüne Infrastruktur und Raumplanung erforderlich ist.

In den Umweltvorschriften ist genau festgelegt, welche Arten und Lebensräume geschützt werden sollten und wie dies zu erreichen ist, einschließlich der Begrenzung negativer Auswirkungen auf geschützte Arten und Lebensräume. Die EU legt auch andere Visionen für strukturelle Veränderungen fest - insbesondere in den Bereichen Energie und Verkehr, die mit dem EU-Umweltrecht in Einklang gebracht werden müssen. Die EU verfügt daher über eine Reihe von Leitfäden, die die EU-Mitgliedstaaten bei der Umsetzung des EU-Umweltrechts, der sektoralen Politik und der Grünen Infrastruktur unterstützen. Darüber hinaus ist der Europäische Green Deal die Vision der Kommission, um Lösungen für die Bewältigung von Umweltherausforderungen voranzutreiben, und das 8. Umweltaktionsprogramm bildet den Rahmen für das Handeln der EU in Bezug auf den Green Deal.

Die Planung von GI ist eine Notwendigkeit, die die biologische Vielfalt berücksichtigen sollte. Dies erfordert Daten und Kartierungen sowie Investitionen in die Beteiligung der Interessengruppen. Auch richtig geplante finanzielle Anreize können die Umsetzung von GI ermöglichen. Die Umsetzung von GI in der Raumplanung erfordert daher eine nationale Politik, die die Erfordernisse der EU-Gesetzgebung berücksichtigt. Dies umfasst insbesondere die Umweltgesetzgebung, die umfassende regionale und lokale Planung von Eingriffen, ausreichende Daten mit offenem Zugang für Planer, die Kartierung der biologischen Vielfalt und ihrer Sensibilität sowie die Gewährleistung einer frühzeitigen Beteiligung der Interessengruppen.

INTRODUCTION

The European Green Belt

The European Green Belt is a broad stretch of land that crosses from north to south, enabling the connectivity of protected areas, with a large variety of habitats and species. Created from the strict border regimes of the former Iron Curtain, the European Green Belt became a place with high ecological value surrounded by intensive land-use. The European Green Belt is home to a wide range of habitat types including, among others, alluvial forests dependent on free-flowing rivers, primary and old-growth forests, grasslands dependent on high nature value farming, high carbon stock peatlands and seagrass meadows at sea. These habitats support the life of many endangered and rare animals. The Balkan Green Belt is the southernmost part of the European Green Belt and is a biodiversity hotspot with high endemism such as for the critically endangered Balkan Lynx and the endangered Danube salmon. Predominantly located in the mountain ranges of the Balkan Peninsula, it forms an extremely heterogeneous mosaic of natural landscapes, including pristine alpine ecosystems, forest and steppe habitats, as well as lakes and coastal zones.



Figure 1: The route of the European Green Belt and its regions

Threats to the European Green Belt

Despite its importance, Europe's nature, including the European Green Belt, is severely threatened by human activities. Resource overexploitation, agriculture production, energy production and illegal hunting are some of the pressures European nature is facing. Furthermore, these and other pressures lead to additional impacts such as climate change and introduction of invasive species.

The extension and intensification of infrastructure, cities, cropland, and pastures can result in the loss and fragmentation of natural landscapes. Fragmentation of nature occurs when suitable habitat areas are destroyed and reduced to the point where there is a lack of continuous habitat that was originally present. Habitat areas are therefore then spread out without interconnections. The European Environment Agency tracks the fragmentation pressure and trends¹ in Europe and has calculated that in 2015, 28% of the EU's area was strongly fragmented, a 0.7% increase since 2009. Ecological connectivity² between areas is fundamental for ensuring ecological coherence of habitats and species. This connectivity can help mitigate the negative impacts of habitat fragmentation, for example by enabling species to move and disperse between habitats throughout their life cycles, rather than confining their genetic diversity to a single location.

The role of spatial planning and Green Infrastructure

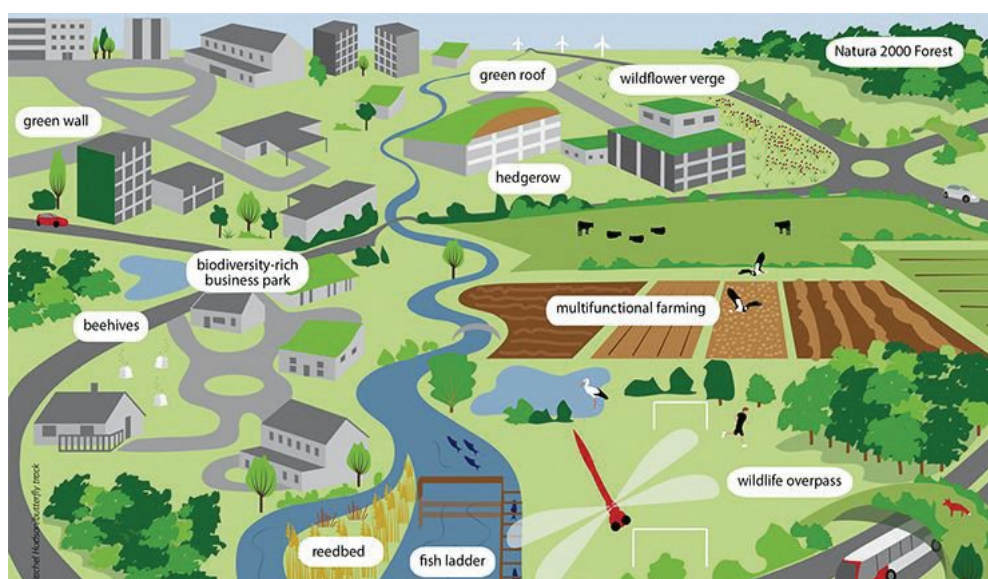


Figure 2: Green Infrastructure and its elements (European Commission, 2013:8)

Spatial planning can promote ecological connectivity and minimise the fragmentation of natural areas. By incorporating not only infrastructure projects and land usage, but also strategic considerations that extend beyond individual plans – like functional ecological zones and the combined effects of various land uses – spatial planning can effectively safeguard habitats and

¹ EEA. Landscape fragmentation pressure and trends in Europe. 13 Dec 2019. <https://www.eea.europa.eu/data-and-maps/indicators/mobility-and-urbanisation-pressure-on-ecosystems-2/assessment>

² Defined as the degree of connection between the various natural environments present within a landscape, in terms of their components, spatial distribution and ecological functions

species. Ideally, plans define how the natural environment can be enhanced, such as with GI³, and how to ensure that social and economic development takes place within ecological limits. GI is infrastructure that is placed strategically to enable a network of natural and semi-natural areas. Building GI can look differently depending on the need for reducing fragmentation. It can, for example, consist of restoring natural components such as wetlands, forests, meadows, or soils. It can also encompass green technology that can enhance grey infrastructure such as green overpasses over roads, green roofs/green walls, or creating permeable pavements.

In spatially planning GI, solutions can be delivered for societal benefits such as preserving biodiversity, providing food, or supporting climate change adaptation and mitigation. GI can therefore be planned to focus on restoring ecological connections between different areas of habitat in heavily developed, developing or urbanised landscapes. Spatial and land use planning is fundamental for implementing adequate GI, large or small.

Potential of Green Infrastructure to improve spatial planning in Albania and North Macedonia

In utilising GI, Albania and North Macedonia can effectively maintain and restore ecological connectivity within their borders and parts of the Balkan Green Belt. This is especially crucial within their network of protected areas. This effort holds particular significance for migratory species, ensuring the availability of habitats for birds along their flyways.

This document attempts to explain the different EU legislations and their relationships with spatial planning and GI to provide a better understanding of how GI can be strategically incorporated into spatial planning, thereby acting as a tool for implementing EU legislation. Therefore, all EU legislations relevant for spatial planning and GI have been compiled and analysed with regards to their potential to improve GI implementation in Albania and North Macedonia. Supplementary information sources are included for each of these legislations.



Figure 3. Agricultural area in eastern parts of North Macedonia (source: MES).

³ Defined as a strategically planned network of natural and semi-natural areas

IMPACT OF EU DECISION-MAKING ON NATURE

For countries aiming to join the EU, such as the Western Balkan countries along the Balkan Green Belt, implementing the EU acquis is a fundamental requirement. Implementing the environmental acquis will be the first and foremost needed action for building the ecological integrity of Europe through GI and spatial planning.

The EU acquis is deliberated through overarching treaties which set the objectives of the EU, the rules for EU institutions, how decisions are made and the relationship between the EU and its member countries. The EU treaties can be amended to reform the EU institutions and to give them new areas of responsibility. They have also been amended to allow new countries to join the EU. The treaties are negotiated and agreed by all the EU countries and ratified by their parliaments. Articles 11 and 191 to 193 of the Treaty on the Functioning of the European Union (TFEU) defines the competency of the EU in all areas of environment policy. On matters related to fiscal, planning, land use, water management policy and choices of energy sources/supply, the EU requires unanimity in the Council⁴.

To implement the overarching treaties, the EU legislates⁵ in different ways:

Type	Legally binding	What it does	Examples
Regulations	yes	Rules that automatically apply to all EU countries as soon as they enter into force, without needing to be transposed into national law.	Regulation on the Aarhus Convention
Directives	yes	Laws that set results that need to be achieved by the EU, but leaves it to Member States to choose how to do so. EU countries must transpose Directives into national law and define how they will contribute to achieving the objectives set by the directive.	Birds Directive, Habitats Directive
Decisions	yes	These relate to specific measures and can be directed at specific EU Member State/ company/ individuals.	Decision on Environmental Action Plan (EAP) to 2030
Recommendations	no	Can be provided by any EU institution and allows the EU institutions to make their views known and to suggest a line of action without imposing any legal obligation on those to whom it is addressed.	Green Deal
Opinions	no	An instrument that allows the EU institutions to make statement, without imposing any legal obligation on the subject of the opinion.	European Parliament Resolution, Green Infrastructure - Enhancing Europe's Natural Capital

⁴ Publications Office of the European Union. Glossary Term. Unanimity. <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=LEGISSUM:unanimity>

⁵ European Union. Types of Legislations. https://european-union.europa.eu/institutions-law-budget/law/types-legislation_en

Type	Legally binding	What it does	Examples
Delegated acts	yes	Acts (either as regulations or decisions) that allow the Commission to supplement or amend non-essential parts of EU legislative acts. Delegated acts are often defined by legally binding legislation and usually are required to be adopted following recommendations from Member States. The Commission adopts the delegated act if Parliament and Council have no objections.	EU Taxonomy Climate Delegated Act
Implementing acts	yes	Acts (either as regulations or decisions) that enable the Commission, under the supervision of committees consisting of EU countries' representatives, to set conditions that ensure that EU laws are applied uniformly.	Implementing Act updating the List of invasive alien species (IAS)

Environmental commitments that drive long-term vision

In December 2019, the Commission launched the European Green Deal⁶. The European Green Deal is the current Commission's vision to making the EU economy more sustainable by turning climate and environmental challenges into opportunities. One important headline was for the Commission to adopt a biodiversity strategy to 2030⁷. The Biodiversity Strategy sets targets, commitments and actions in an effort to protect nature and reverse the degradation of ecosystems. The strategy aims to put Europe's biodiversity on a path to recovery by 2030. In particular, it states that the EU should achieve 30% of land and seas as protected areas and apply strict protection (e.g. non-intervention/no take zones) to 10% of EU land and sea areas. It also sets a target to achieve 25,000 km of "free-flowing" rivers. One concrete action has been to further develop a staff working document⁸ that gives guidance for achieving the targets on protected areas. This document was made available in January 2022.

Although both the Green Deal and the Biodiversity Strategy are communications from the European Commission (and therefore not legally binding), they have been endorsed by the Environmental Council and the European Parliament. This means that both the European Parliament and the European Council agree that the Commission should continue pursuing the implementation of those files.

The 8th Environmental Action Programme (EAP)⁹ establishes the framework for the EU to act on issues related to environmental policy. It defines the necessary conditions to enable the achievement of objectives within environmental policy. For the 8th EAP, this means the implementation of the Green Deal. It is legally binding and has undergone ordinary legislative procedure. The 8th EAP sets out priorities and long-term vision and goals, and has six thematic priority objectives including *protecting, preserving, and restoring biodiversity and enhancing natural capital, notably air, water, soil and forest, freshwater, wetland and marine ecosystems*.

⁶ COM/2019/640

⁷ COM/2020/380, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0380>

⁸ SWD/2022/23

⁹ (EU) 2022/591

IMPACT OF EU-WESTERN BALKAN COOPERATION ON GREEN INFRASTRUCTURE AND SPATIAL PLANNING IN ALBANIA AND NORTH MACEDONIA

Given the ecological connection between the EU and the Western Balkans, it is fundamental that there is cooperation in sustaining the ecological integrity in Albania and North Macedonia. All Western Balkan countries are candidates for membership to the EU, including Albania and North Macedonia, and this therefore sets the basis for cooperation. Nevertheless, beyond accession negotiations, the European Commission adopts visions for its cooperation with Western Balkan countries, in an effort to guide the implementation of the EU acquis.

An economic and investment plan for the Western Balkans

The European Commission adopted a communication in October 2020 that lays down future investment plans for the EU in the Western Balkans¹⁰ in order to make the region a more attractive investment area. The plan emphasises aligning Western Balkan countries with the European Green Deal and the EU's digital strategy. It focuses on investing in sustainable transport, clean energy, environment and climate, digital skills development, e-government, e-procurement, and e-health services. It also focuses on boosting the private sector and investing in human capital (e.g. education and improving the labour market). For what concerns environment and climate, the plan prioritises the five broad areas covered by the Green Deal: decarbonisation; depollution of air, water and soil; circular economy; farming and food production; and protecting biodiversity.

Guidelines for a Green Agenda for the Western Balkans

Along with the Economic and Investment Plan for the Western Balkans, the European Commission has also introduced guidelines to support countries in implementing the Green Agenda.¹¹ The intention of the guidelines is to define, under the five broad areas of the Green Deal, the actions with which the European Commission will want to invest and participate in. Some actions concern GI and spatial planning. For example, as part of climate action, the European Commission envisions aiding Western Balkan countries in preparing and implementing long-term strategies for climate adaptation, with the objective of increasing resilience. This connects to the initiative in the biodiversity action of the guidelines to assist in identifying nature-based solutions and opportunities within climate plans. Furthermore, the European Commission intends to facilitate the implementation of a Western Balkans Forest Landscape Restoration Plan. The guidelines additionally establish a mechanism to support the execution of the Green Agenda, and highlight the crucial role of environmental assessments for strategic planning, programmes and projects.

¹⁰ COM/2020/641

¹¹ SWD/2020/223

Ministers' views on Territorial cooperation

Under the Slovenian Presidency in December 2020, the ministers responsible for spatial planning in the EU have also adopted a vision for territorial cooperation (i.e. Territorial Agenda 2030¹²). Although the document is not legally binding, it shows the direction and intention of European Ministers. Within their vision, they believe in the need to act to halt biodiversity loss and tackle climate change. They specifically support GI as a tool to link ecosystems and protected areas in spatial planning and land management as a way to improve ecological livelihoods and create climate-neutral and resilient towns, cities and regions.



Figure 4. Preserved natural forests on Jablanica Mt, North Macedonia (source: MES).

¹² Territorial Agenda 2030. A future for all places. Dec 2020. https://territorialagenda.eu/wp-content/uploads/TA2030_jun2021_en.pdf

INFLUENCE OF EUROPEAN POLICIES ON SPATIAL PLANNING AND THE INTEGRATION OF GREEN INFRASTRUCTURE

The EU does not have dedicated laws on terrestrial spatial planning. The approach to terrestrial spatial planning varies across Member States. Each Member State has its own legal framework and spatial plans at national, regional and local scales. Some regions in the EU have developed large-scale terrestrial spatial plans that identify desired land uses with respect to environmental, social and economic needs. Also, not all Member States explicitly address biodiversity in spatial planning, in particular management measures to achieve biodiversity objectives, such as establishing GI. Instead, sectoral and thematic EU legislations and activities are the backbone of spatial planning, and financial incentives often drive the plans.

The role of environment legislation in Green Infrastructure and spatial planning

Environmental legislation is the backbone for implementing GI. It details which species and habitats should be protected and how this should be achieved, as well as concrete recommendations for how to limit the negative impact on protected species and habitats. However, it is up to the Member State to ensure that this is taking place. Nevertheless, jurisprudence of European court rulings is the basis for setting out which actions are appropriate and where Member States are lacking. For this reason, mapping the sensitivity of species and habitats to planned projects and programmes is necessary to ensure data on the state of nature align with planned activities, and to identify GI that is best placed to limit impacts, restore areas or ensure connectivity of species populations and habitat areas.

Birds Directive and Habitats Directive

The Birds Directive¹³ aims at protecting and managing all species of birds within the EU, while the Habitats Directive¹⁴ aims at protecting and managing habitats and other non-bird species. Collectively, they establish the Natura 2000 Network, with designated sites intended to form a cohesive network for safeguarding habitats and species, including those that are vulnerable or migratory.

Through the implementation of management measures, these directives require spatial planning to consider protected areas for species and habitats. Any project or plan likely to impact the conservation objectives of Natura 2000 areas is required to undergo an impact assessment, also known as an Appropriate Assessment. Management measures should also be applied to protect species and habitats regardless if they exist within protected areas, in particular to ensure the ecological integrity of species and habitats. GI is therefore a useful method for managing both protected and non-protected areas, ensuring the integrity of species populations and habitat connectivity.

13 2009/147/EC

14 92/43/EEC

Water Framework Directive, Floods Directive, Groundwater Directive

The Water Framework Directive (WFD)¹⁵ aims to create a coordinated approach towards water management and improving water quality within the EU. Member States are required to produce national river basin management plans, which consider factors such as the hydromorphology of the river. Building on the WFD, the Floods Directive (FD)¹⁶ aims to reduce the adverse impacts of floods to human health, cultural heritage, the environment and economic activities. This directive mandates the creation of flood risk maps and flood risk management plans by Member States, employing spatial planning as a means of mitigation. The Groundwater Directive (GWD)¹⁷ sets quality standards and measures to limit pollution of groundwater.

Strategic Environmental Assessment Directive

As specified by the Strategic Environmental Assessment Directive¹⁸, any plan or program that requires approval from national, regional, or local authorities – including spatial plans and other planning permissions – is required to undergo an environmental assessment. This assessment also involves the evaluation of the cumulative impact of different plans. A Strategic Environmental Assessment (SEA) assesses the environmental impacts, in particular on the fauna, flora, human health, soil, water, and air. It also analyses the impact of the planned activities on protected areas and their conservation objectives. SEAs identify measures that need to be undertaken to mitigate adverse effects.

Environmental Impact Assessment Directive

As per the Environmental Impact Assessment (EIA) Directive¹⁹, projects require an impact assessment, including for urban development projects, industrial development projects, motorways, railways and other transport infrastructure. The assessment must include information on all relevant environmental impacts and measures that need to be set up to reduce adverse effects. EIAs must also assess the cumulative impact of different projects.

Marine Strategy Framework Directive

The aim of the Marine Strategy Framework Directive (MSFD)²⁰ is to protect more effectively the marine environment across Europe, in particular to add to the Birds and Habitats Directive, and therefore achieve “Good Environmental Status” (GES). The Commission sets detailed criteria and methodological standards to help Member States implement the MSFD and achieve GES.

Environmental Noise Directive

Furthermore, spatial planning also needs to consider “acoustical planning” as per the Environmental Noise Directive (END)²¹. Through periodical mapping of noise effects on

15 2000/60/EC

16 2007/60/EC

17 2006/118/EC

18 2001/42/EC

19 2014/52/EU

20 2008/56/EC

21 2002/49/EC

agglomerations from infrastructural facilities such as major roads, railways or airports, action plans are required to reduce the level of noise on human health. Land use planning is therefore used as a tool to reduce adverse effects of noise.

INSPIRE Directive

The INSPIRE Directive is responsible for shaping spatial information used in European environmental policies. This directive covers 34 spatial data themes, including land use, species distribution, soil and oceanographic features, habitats, and biotopes. The legislation ensures that spatial data collected and reported by Member States are compatible and coherent with one another. Several implementing acts lay out the technical details, including defining a set of data elements, data validation instructions, and value domains for each dataset.

The role of technical environmental guidance in Green Infrastructure and spatial planning

In May 2013, the European Commission adopted a strategy²² to support Member States in their implementation of GI. Amongst other things, this strategy helped set a common understanding of what is GI. It also provided different examples of how GI can be used to deal with different problems, such as reducing heat from asphalt within cities, restoring forest floodplains to reduce the risk of flooding from rivers, restoration of tidal habitats to improve coastal flood defences, and improving soil quality to prevent soil erosion in agricultural lands. The strategy specifically highlights the European Green Belt initiative as an important GI to connect protected areas and national parks.

The German Green Infrastructure Concept

In 2017, the German Federal Agency for Nature Conservation released an overview of Germany's GI²³ in an effort to lay the groundwork for a unified planning approach. This overview established the links between protected and ecological areas of Germany and specific themes that are important for Germany, including river floodplains, seas, soils and settled areas. The plan includes a comprehensive map that brings together different components of GI, earmarking ecologically important spaces for improvement and conservation.

In May 2019, the European Commission reviewed the progress of EU Member States in the implementation of the Green Infrastructure strategy. In particular, although there has been some progress, the main challenges laid in deploying GI strategically, specifically at a larger scale through spatial planning, and that the uptake through EU funds for GI projects was low.

The Commission released two guidance documents to further support planning and better illustrate the connection between nature, GI, spatial planning and sectoral policies. Commission guidance documents are recommendations and not legally binding. They are often concluded following several discussions within Commission expert groups, in which Member

²² COM/2013/0249

²³ https://www.bfn.de/sites/default/files/2022-02/bkgi_broschuere_englisch.pdf

States and stakeholders take part. The *Guidance on a strategic framework for further supporting the deployment of EU-level green and blue infrastructure*²⁴ establishes criteria for identifying GI projects. Projects should do one or more of the following:

1. Enhance the delivery of multiple ecosystem services;
2. Significantly contribute to the goals of EU Nature legislation;
3. Have a strategic approach that yields EU-wide impact. This can be achieved through demonstrating significant scale that extends beyond administrative boundaries, involving at least two Member States, or implementing a national GI strategy or a national restoration prioritisation framework;

Evaluation of the European Green Belt as EU-level Green Infrastructure

The European Green Belt has been evaluated²⁵ using the indicators provided in the EU's guidance document. This evaluation demonstrates its suitability as the foundation for a transnational ecological network at the European level, qualifying it as an EU-level GI project. Specifically, it contributes to:

1. **Regulatory, cultural and provisional services.** High-ecological-value farmlands in the EGB contribute significantly to European biodiversity and to traditional cultural heritage that is shaped by extensive farming, such as the traditional pasture landscapes of the Balkan Mountains.
2. **Natura 2000 network protection.** Notably, 35% of the Balkan Green Belt is incorporated into the Natura 2000 network, making it a crucial protector of core habitats for threatened species.
3. **Extensive connectivity.** The project links over 24 countries through an already established governance structure that fosters collaboration between government bodies and non-governmental organisations.

The guidance document delves deeper into the process of implementing EU funds for GI, emphasising the thematic objectives of the funds and their links to GI, such as financing research and innovation and generating employment and nature-based solutions. The other guidance document, *EU Guidance on Integrating Ecosystems and their Services into Decision-Making*²⁶, aids decision makers in understanding the benefits of GI in terms of ecosystem services. It highlights eight principles to integrate ecosystems into policies and plans, including how to apply mitigation hierarchy and the precautionary principle, and how to set long-term planning.

²⁴ <https://circabc.europa.eu/ui/group/3f466d71-92a7-49eb-9c63-6cb0fadf29dc/library/dc48dc2a-b87f-4e54-9852-a18c7239260e/details?download=true> COMMISSION STAFF WORKING DOCUMENT

²⁵ Christine, E., Gorm, D., Stefan, K., Hugo, C., Julie, R., Anne, T., 2019. Strategic Green Infrastructure and Ecosystem Restoration.

²⁶ https://environment.ec.europa.eu/topics/nature-and-biodiversity/green-infrastructure_en

Estonia's Green Network

To implement a Pan-European ecological network, Estonia adopted an eco-stabilisation approach which focuses on establishing a landscape-wide ecological network, their Green Network. Apart from functioning as a network to conserve species, the Green Network of Estonia also aims to minimise conflicts between different land uses through spatial planning, or to help decision makers with establishing settlements and land use. The Green Network supports the network of protected areas, incorporating Natura 2000 sites, and developing a unified and linked system of natural areas.²⁷ The Estonian government has adopted a Planning Act which defines the process for implementing the Green Network at different levels.

At a national level, the government established a long-term spatial plan that defines basic principles of the Green Network and established corridors and 12 core areas of national and international importance. At a regional level, each of the 15 counties of Estonia were required to develop a thematic plan. A methodology for delineating areas of the Green Network at the county level was created to support authorities when compiling their information in the thematic plan. At a local (municipal) level, comprehensive plans are developed to detail the boundaries and land use conditions for the proper functioning of the Green Network – for example, the use of Green Infrastructure. In implementing the Green Network, the different levels of government are implementing their respective spatial plans.²⁸

The role of sector-related legislation in Green Infrastructure and spatial planning

The EU also sets out other visions for structural changes, especially on energy and transport, which significantly influence the EU's course in those areas. The implementation of these legislations requires EU countries to align with EU environmental legislation. Unfortunately, EU environmental legislation is not implemented robustly. This is evident in the production of low-quality EIA studies to expedite permit approvals, as well as the lack of integrating public input in processes through, for example, consultations. These shortcomings can lead to environmental degradation, such as the fragmentation of habitat connectivity.

Renewable Energy Directive

The Renewable Energy Directive²⁹ establishes a common framework for the use of energy from renewable sources within the European Union. It sets mandatory national targets for the overall share of energy from renewable sources. Member States must also clearly define and

27 Raet, J., Sepp, K., Kaasik, A., Kuusemets, V. and Kylvik, M., 2010. Distribution of the green network of Estonia. *Forestry studies*, 53, p.66.

28 Suškevičs, M., Tillemann, K. and Kylvik, M., 2013. Assessing the relevance of stakeholder analysis for national ecological network governance: The case of the Green Network in Estonia. *Journal for Nature Conservation*, 21(4), pp.206-213.

29 (EU) 2018/2001

coordinate the authorisation, certification and licensing procedures, including spatial planning with transparent timetables for determining planning and building applications.

Energy Efficiency Directive

The Energy Efficiency Directive³⁰ establishes a common framework of measures to achieve energy efficiency targets including energy efficiency plans to reduce energy consumption through energy management systems. Therefore, this Directive can influence the planning of infrastructure projects to reduce energy consumption.

Regulation on guidelines for trans-European energy infrastructure

Trans-European energy infrastructure is regulated by guidelines³¹ that define priority corridors and areas of trans-European energy infrastructure. The guidelines define how to coordinate and spatially plan projects of common interest in the areas of energy, transport and telecommunication infrastructure considering economic, technical and environmental impacts. Preference is given to existing or disused routes to be reused, in order to reduce to a minimum any negative social, economic, environmental and financial impact. Projects of common interest are allocated a status of high national significance in permit granting processes. Nevertheless, they should still undergo impact assessments.

Regulation on the trans-European transport network

Trans-European transport infrastructure is regulated by guidelines³² to help develop a comprehensive transport network. The regulation defines projects of common interest and specifies the requirements to be complied with for the management of the infrastructure. This therefore influences spatial planning systems, in particular when linked to the Cohesion Fund, the European Regional Development Fund, the European Fund for Strategic Investment and the Connecting Europe Facility.

Common Agricultural Policy

The Common Agricultural Policy (CAP) that applies since January 2023 is defined by three regulations that determine: financing rules³³, rules for national CAP strategic plans³⁴ and rules for agricultural markets³⁵. The CAP is an important policy as it incentivises certain agricultural activities and plans farming-land use. Agricultural practices can put pressure on habitats and lead to fragmentation. For example, enriching the soil with fertilisers and using pesticides on crops leads to a decrease in the number of pollinators which are a fundamental ecological pillar.

30 2012/27/EU

31 (EU) 347/2013

32 (EU)/1315/2013

33 (EU) 2021/2116

34 (EU) 2021/2115

35 (EU) 2021/2117

Maritime Spatial Planning Directive

At sea, the Maritime Spatial Planning (MSP) Directive³⁶ establishes a framework for maritime spatial planning aimed at coordinating the sustainable growth of maritime economies within the limited spatial possibilities. The directive only applies to marine waters and not to coastal waters and land planning. Maritime spatial plans need to apply an ecosystem-based approach to planning. This is currently being defined by the European Commission and the MSP working group.

Public Participation in the Netherlands

To update its North Sea Spatial Plan post 2022, the Dutch government initiated an interactive process of joint fact-finding with stakeholders, in which different scenarios for the spatial plans of the North Sea were created, assessed and evaluated. The Dutch government put great effort in bringing the sectoral and NGO stakeholders to the table as part of the cross-sectoral participation process, with scientists informing the process along the way. The process began in June 2020 and one criticism to the process by scientists was the time-stressor, in that the process started too late. Hence, the need to factor stakeholder interactions earlier.³⁷

Several working group workshops with stakeholders were organised to discuss specific North Sea subjects. Monthly meetings with ministries and research providers were held to discuss scenario outcomes and define alternative scenarios. A public webinar was organised to consult the wider public about the outcomes of the final scenarios.

The scenarios included applying a Cumulative Effect Assessment (CEA) that calculated the difference in impact of seven important human/economic activities on ecosystem components (fish, seabirds, marine mammals and habitats) between the present situation (2017) and the (hypothetical) future situations (2040/2050). This provided insight into the influence of various policy measures and spatial planning variants on ecological and biodiversity effects.

The role of financial incentives in Green Infrastructure and spatial planning

The EU provides several financial incentives to the Western Balkans that can be used to support GI, including through the Western Balkans Investment Framework and through the Instrument for Pre-accession. Financial instruments influence the types of national financing available, specifically thematic objectives. The role of financial incentives is especially felt through the European Structural Investment Funds (ESI Funds) within the EU. Through ESI Funds, national operational programmes determine the types of projects that are financed. GI is usually defined in these operational programmes, including rural development programmes. Through strategic planning, which is one of the main challenges countries face when deploying GI, Western Balkan countries can guide EU funds to support GI.

³⁶ 2014/89/EU

³⁷ Jongbloed, R., Piet, G. and Roebeling, P., 2021. Study on Integrating an Ecosystem-based Approach into Maritime Spatial Planning.

Instrument for Pre-accession (IPA III)

Financing from IPA III³⁸ is provided to support candidate countries in adopting and implementing the political, institutional, legal, administrative, social and economic reforms that will get them to comply with Union values, rules, standards, policies and practices.

LIFE programme

The LIFE programme³⁹, part of the EU budget, is the EU's funding instrument for the environment and climate action created in 1992. For 2021-2027, the LIFE programme received 5.43 million EUR. There are three objectives to the LIFE programme post 2021: (i) projects can be innovative; (ii) projects can support the implementation of EU legislation; (iii) projects can act as catalysts for larger developments. Projects that are usually about systematic monitoring and management are usually not financed unless these are linked to testing/trialling of solutions. Western Balkan countries can take part in projects when these countries have established an Associated agreement with the LIFE programme.

Legislation on monitoring, data collection and reporting to help implement Green Infrastructure and spatial planning

Regular and systematic data are a fundamental component for establishing good GI projects through strategic spatial plans. Therefore, it is important to establish mechanisms to be able to collect data and report back, especially on the state of nature.

Good data, good assessments, good infrastructure and good spatial plans

Considering biodiversity in impact assessments and spatial planning requires a range of biodiversity data. Data should address questions that enable authorities to identify information about the area covered by the plan or the possible impact zone of proposed infrastructure. Good data sets should help answer the following questions (non-exhaustive)⁴⁰:

1. Which biodiversity assets (species, habitats, etc.) are present?
2. Where are they?
3. What is their conservation importance?
4. What is their conservation status, e.g. what is their threat status and/or long-term trend?
5. Are there other habitats/features that provide important ecological functions (e.g. food resources and connectivity)?
6. What protected areas and other areas of conservation concern are present?

Mapping biodiversity is an important part of spatial planning, including mapping the sensitivity of biodiversity to land use and defining low ecological risk areas. Therefore, to do so, it is important to have land cover maps, habitat and biotope distribution data, species

³⁸ (EU) 2021/1529

³⁹ (EU) 2021/783

⁴⁰ Underwood, E., Taylor, K. and Tucker, G., 2018. The use of biodiversity data in spatial planning and impact assessment in Europe. *Research Ideas and Outcomes*, 4, p.e28045.

distribution maps, location of protected areas, and other environmental data that directly relate to relevant pressures on biodiversity.

However, there are obstacles to being able to access or gather biodiversity data. Solving this requires data standardisation and data quality governance and systems, licensing approaches to increase data access, and financial investment that targets gaps in data coverage and develops and advertises policy-relevant data products. Investing in integrated data collection and management systems can also provide information for spatial planning and impact assessment from data gathered by local data collection and monitoring bodies.

The Birds and Habitats Directives have a reporting mechanism to understand the progress made with their implementation and to ensure that Member States are reporting on every species and habitat within their territory that are protected by the Directives. Furthermore, they have to report on the progress in implementing management measures in their protected areas – and the impact this has on improving its protection. All data is available online⁴¹ and can be explored through the European Environment Agency.

The INSPIRE Directive⁴² aims to create a database of spatial data to inform EU environmental policies in order to enable the sharing of spatial information and facilitate public access to spatial information. This includes cadastral parcels, transport networks, hydrography, geology, energy resources, protected sites, habitats and biotopes, etc. The Directive aims to create consistency in data regulations across the EU, thereby simplifying cross-border spatial planning processes.

The EU also runs the European Earth Observation Programme (Copernicus), which provides satellite observation data on land, ocean, atmosphere and climate change.

SITxell – Barcelona’s tool to integrate data on ecological value into planning

The region of Barcelona created a territorial analysis tool to tackle the absence of common territorial planning to improve the administrative coordination between departments and administrations. The Territorial Information System for the Network of Open Areas (SITxell) identifies the values of natural spaces based on scientific data to help plan open spaces. It is therefore able to demonstrate the natural and socio-economic values of undeveloped land. SITxell is run on ArcGIS software, on a 1:50 000 scale, and helps ensure that open areas maintain their key ecological and socio-economic functions. The information contained in SITxell is available to the appropriate authorities and the tool offers technical assistance in the urban and regional spatial planning processes.

The current mapping of ecosystem services has now also been applied to the entire Catalan territory, in an effort to support the planning of green infrastructure at the entire governmental level. SITxell has also now been piloted in Ireland, the Netherlands and Hungary.

⁴¹ <https://www.eea.europa.eu/en/topics/at-a-glance/nature/state-of-nature-in-europe-a-health-check/explore-nature-reporting-data>

⁴² 2007/2/EC

FUTURE LEGISLATIONS TO CONSIDER

Nature restoration regulation

Under the EU's Biodiversity Strategy to 2030, the Commission proposed a new regulation in June 2022 with legally binding targets to restore EU nature. This proposal will undergo an ordinary legislative procedure and hence this process will take around another two years before completed. This legislation will be key in implementing Green Infrastructure in restoration projects.

Revision of the Renewable Energy Directive

The Renewable Energy Directive (RED) was revised in 2023 in an effort to align it with the Green Deal, in particular the outcome of the 2030 Climate Target Plan and the assessment of the National Energy and Climate Plans. The RED has been updated to account for planning and also define other aspects related to sustainability of renewable energy production.

RECOMMENDATIONS FOR ALBANIA AND NORTH MACEDONIA

EU procedures relating to GI and spatial planning are complex and require thorough understanding of several EU policies. The following are recommendations that can support Albania and North Macedonia in implementing GI and good spatial planning while aligning with EU requirements:

1. Adopt national legislation on spatial planning that determines procedures and responsibilities at a federal, regional and local level.
2. Undertake sensitivity analysis of all protected species and habitats (including species protected by the Birds Directive, Habitats Directive and the Bern Convention) before mapping and planning areas for sectoral development.
3. Establish a participatory consultation process that integrates written consultations and workshops to planning documents, while ensuring that scientific advice is followed based on stakeholder and civil society input.
4. Consult with other countries on the impact of national plans on their biodiversity.

CONCLUSION

Implementing effective GI requires good spatial planning. This requires national policies that integrate the needs of EU legislation, in particular environmental legislation, regional and local comprehensive planning of activities, sufficient data with open access for planners, mapping of biodiversity and its sensitivity, and ensuring early stakeholder participation.

Given that there is not one legislative act that aligns GI and terrestrial spatial planning at the EU level, developing national policies on spatial planning that can integrate GI is an important step for all countries, including those in the Western Balkans. Furthermore, enabling regional and local planners to take part in the planning process allows for defining concrete actions that become part of a wider spatial plan. Therefore, a national legislation that reinforces GI as mandatory will ensure that regional and local authorities identify their needs and GI solutions.

To achieve greater alignment between environmental policy and sectoral policy, investing in sensitivity mapping and defining low ecological risk areas is fundamental. However, this also depends on the available data – data that is relevant and accurate. When such data is lacking, the development of spatial plans should include a data-gathering component.

Early participation of stakeholders into the process of defining spatial plans will also ensure greater local understanding of the problems, scenarios and acceptance of the solutions. This is especially important where there is limited knowledge of the benefits of GI and its use to solve existential problems such as flood protection and job creation.

Furthermore, large GI will also require transboundary cooperation. To understand ecological connectivity, it will not be sufficient to analyse solely at a national level, given that species and habitats occur in different countries. Therefore, the survival of certain species might be dependent on the actions of other countries. For example, freshwater fish migrate up rivers. Therefore, if one country builds a dam, it disables the fish from being able to migrate and reproduce. In order to ensure connectivity for fish species, the whole length of the river needs to be protected. The same holds true for large GI; building the ecological integrity of Europe through GI and spatial planning needs all countries to cooperate.

