



SDG 15: Life on land

University of Applied Sciences Burgenland



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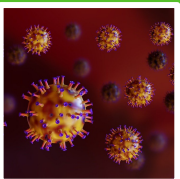


**Interpretation
of life on land**



Main goal: to protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss

Forests, mountains, soils, rivers — they are the basis of life on the planet and provide us with food, clean water and clean air to breathe. As a result of deforestation, the extraction of raw materials and climate change, areas such as the great Amazon rainforest are threatened in their biodiversity. The UN demands a sustainable dealing with nature, the preservation and restoration of the planet's ecosystems, for instance, through reforestation projects and the protection of biodiversity, putting an end to trading of protected plants and animal species. We should live in harmony with nature, not only to preserve the beauty and diversity of our planet but to secure our livelihood and that of other species.



Life on the planet depends on...

...biological diversity, meaning the variability among living organisms from all sources, terrestrial, marine and other aquatic ecosystems and ecological complexes of which they are part, this includes diversity within species, between species and of ecosystems.

Source: iucn.org



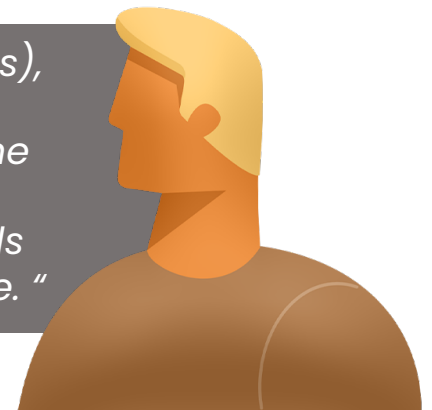
Did you know that around 1 million animal and plant species are threatened with extinction – many within decades?

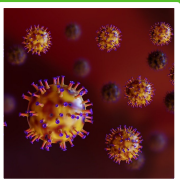
Source: nature.com

"An ecosystem is a geographic area where plants, animals (including humans), and other organisms, as well as abiotic elements, such as weather and landscapes, work together to form a "bubble of life." I recently learned that the relationship between these elements is very delicate and can be upset by changes in the environment and human actions. Even if only one species falls out of the equation it can have a devastating effect upon life in such a bubble."

Source: nationalgeographic.org

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Life on the planet is threatened by...

...land degradation that is caused by multiple forces, including extreme weather conditions, particularly drought. It is also caused by human activities that pollute or degrade the quality of soils and land utility. It negatively affects food production, livelihoods, and the production and provision of other ecosystem goods and services. Desertification is a form of land degradation by which fertile land becomes desert. Deforestation is another such form.

Source: who.int



Did you know that the "Great Green Wall" in Africa is the biggest ecosystem restoration project in the world?

Source: unep.org

"In the area where I live there are people who protect and revive old and rare species of fruit trees. They also offer seeds and products from those. I really like the different tastes that are lost from our grocery stores where we can only buy a handful of types of fruits – an impoverished experience of what the planet offers."

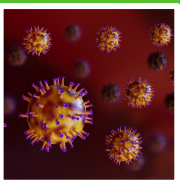
Source: arche-noah.at

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What is desertification?

It is the persistent degradation of dryland ecosystems by variations in climate and human activities. These drylands are home to over a third of the entire human population and they occupy nearly half of Earth's land area.

Source: savory.global



Did you know that desertification can be reversed on most rangelands through increasing livestock numbers while planning their concentration and movement carefully.

Source: savory.global

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"I want to learn more about permaculture and work my garden that way, just to see what else could happen when I let the land be more of what it wants to be than produce what I think I need or want to see there."

What is deforestation?

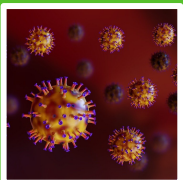
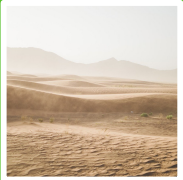
It refers to the cutting, clearing, and removal of natural forests. Lost forests mean the disappearance of livelihoods in rural communities, increased carbon emissions, diminished biodiversity and the degradation of land.

More Info: [nationalgeographic.org](https://www.nationalgeographic.org)

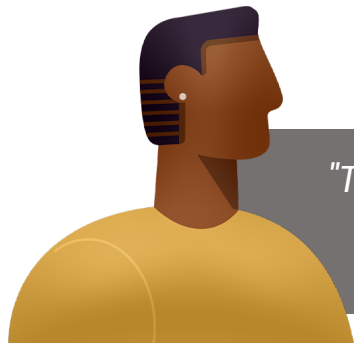


Did you know that forests cover 38% of the habitable land area on our planet, 26% of total land area (habitable and uninhabitable)?

Source: ourworldindata.org



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"To offset my CO2 emissions, I support an organization that plants trees. While planting trees is good, eliminating deforestation would be even better."

Human life is threatened by...


...zoonotic diseases that are infectious diseases transmitted from non-human animals to humans — like HIV or Corona virus, rabies or salmonellosis. They tend to begin as a zoonosis but later mutate into human-only strains.

Source: who.int

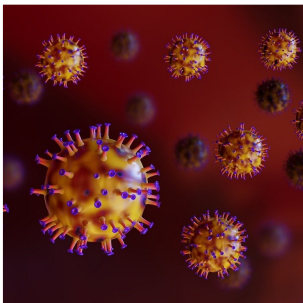


Did you know that 75% of all emerging infectious diseases in humans are zoonotic? This surge is tied to the increased interference of humans in natural ecosystems.

Source: unep.org



"I am very scared that soon there will be another outbreak of a zoonotic disease because we have occupied almost all habitable land on earth so frequent contact with different animal species is inevitable."

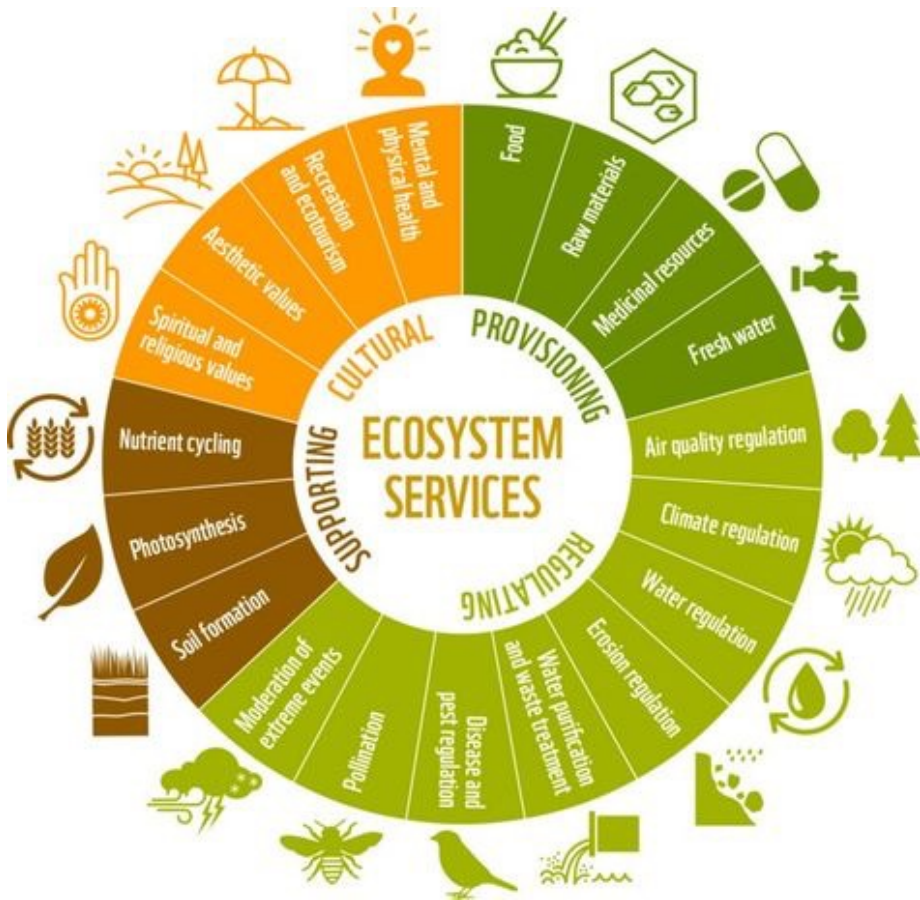


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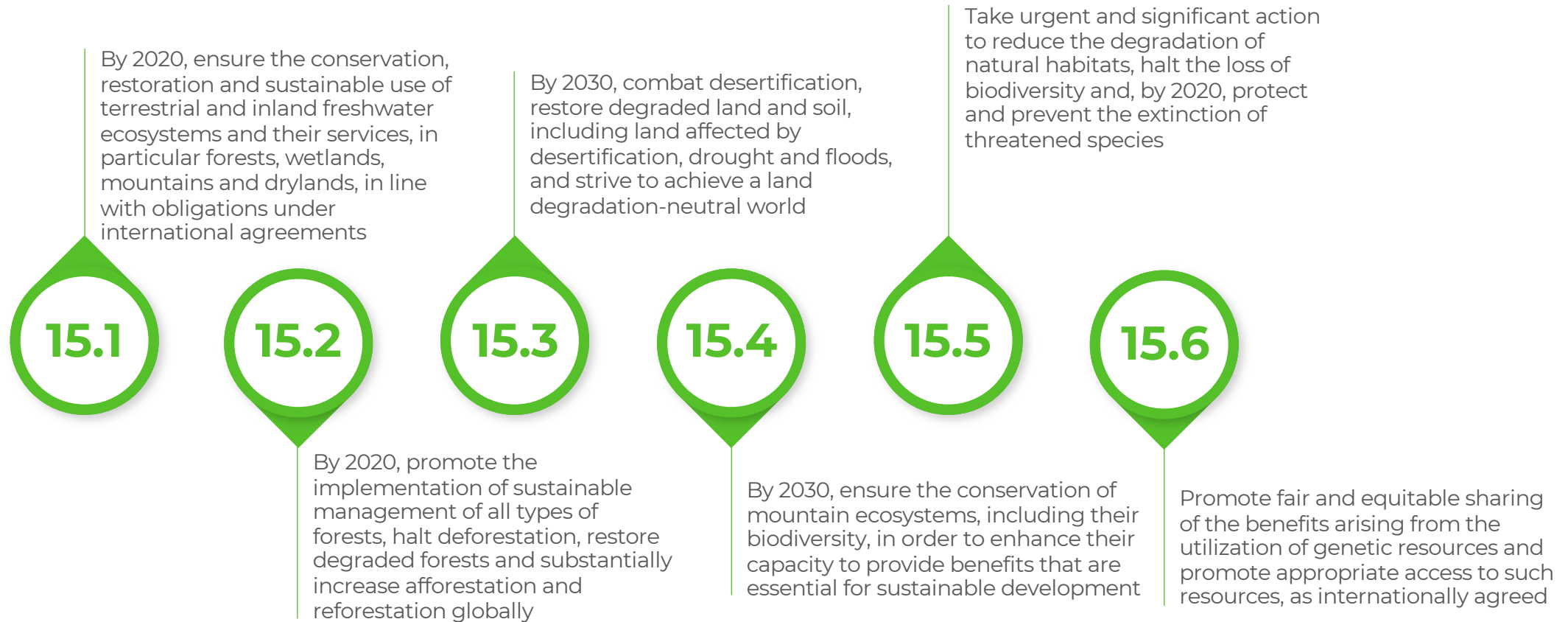
Model: biodiversity for ecosystem health



Did you know that human activity has altered almost 75% of the earth's surface, squeezing wildlife and nature into an ever-smaller corner of the planet. This is called the Anthropocene.

Sources: un.org, un.org and agci.org

Subgoals: targets and measures

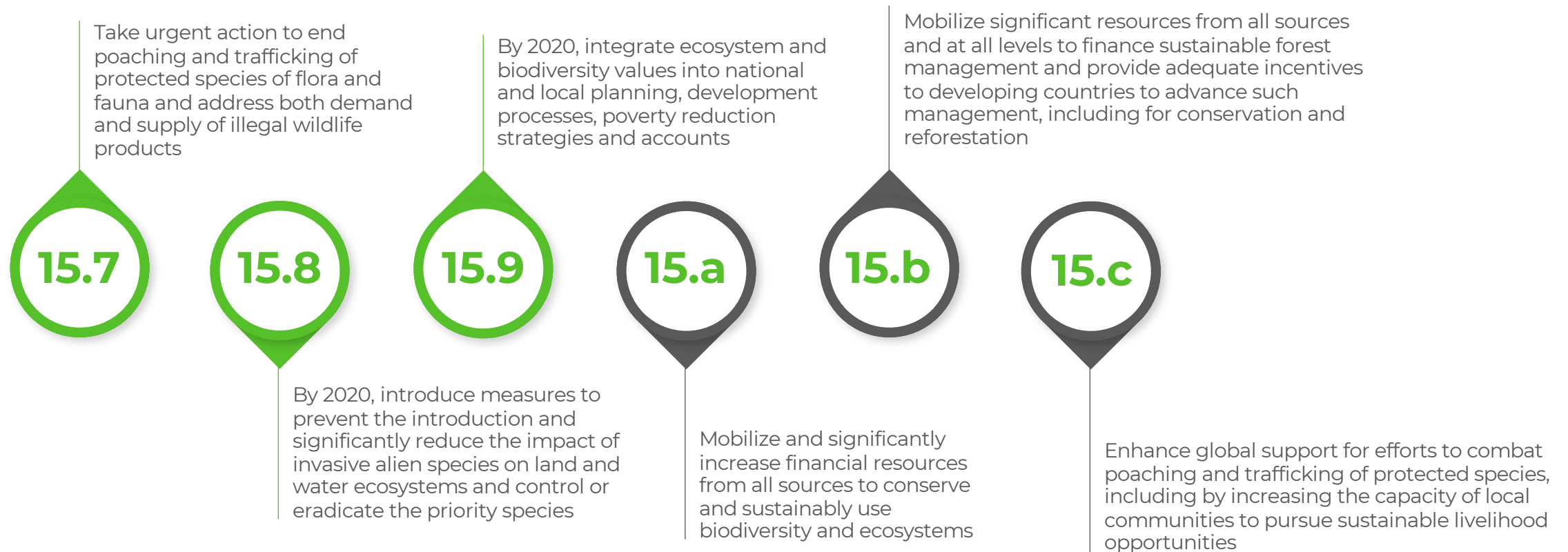


Source: un.org

Targets = Numbers, Measures = Letters



Subgoals: targets and measures



Source: un.org

Targets = Numbers, Measures = Letters



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**Current state of life
on land**

Report 2020

The Sustainable Development Goals Report 2020



Source: un.org

The Sustainable Development Goals Report 2021



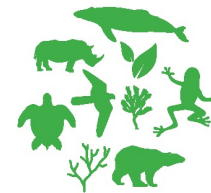
Source: un.org



PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, AND HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS

BEFORE COVID-19

THE WORLD IS FALLING SHORT ON 2020 TARGETS TO HALT BIODIVERSITY LOSS



OVER 31,000 SPECIES ARE THREATENED WITH EXTINCTION

WHICH IS

27% OF OVER 116,000 ASSESSED SPECIES IN THE IUCN RED LIST



FOREST AREAS CONTINUE TO DECLINE AT AN ALARMING RATE, DRIVEN MAINLY BY AGRICULTURAL EXPANSION

EACH YEAR, 10 MILLION HECTARES OF FOREST ARE DESTROYED (2015-2020)

COVID-19 IMPLICATIONS

WILDLIFE TRAFFICKING DISRUPTS ECOSYSTEMS AND CONTRIBUTES TO THE SPREAD OF INFECTIOUS DISEASES



PANGOLINS ARE POSSIBLY THE INTERMEDIARY ANIMAL THAT TRANSFERRED THE CORONAVIRUS

THE EQUIVALENT OF 370,000 PANGOLINS WERE SEIZED GLOBALLY (2014-2018)



TWO BILLION HECTARES OF LAND ON EARTH ARE DEGRADED, AFFECTING SOME 3.2 BILLION PEOPLE, DRIVING SPECIES TO EXTINCTION AND INTENSIFYING CLIMATE CHANGE

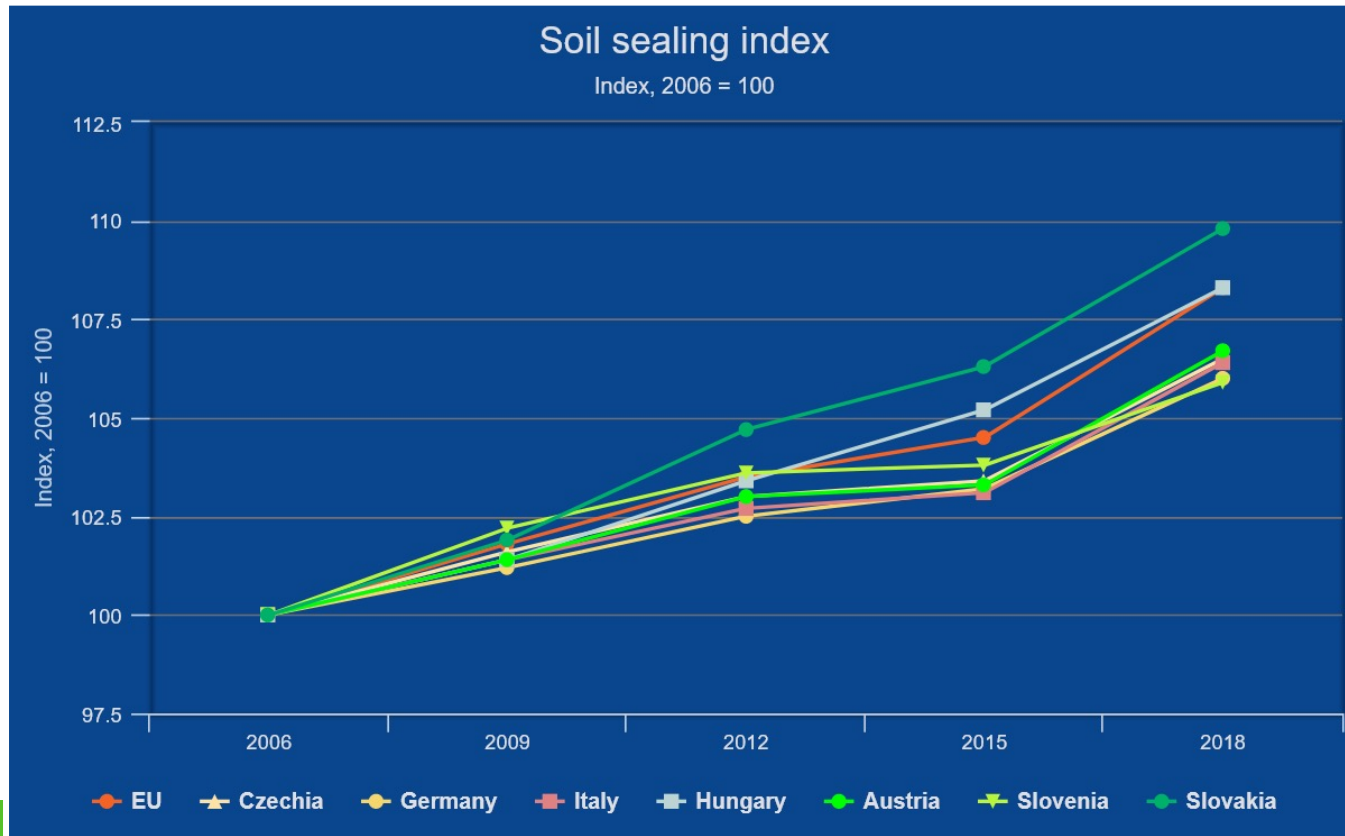


ONLY A THIRD OF 113 COUNTRIES WERE ON TRACK TO ACHIEVE THEIR NATIONAL TARGET TO INTEGRATE BIODIVERSITY INTO NATIONAL PLANNING



Source: un.org

Some European statistics



Source: ec.europa.eu



Did you know that the primary drivers of the loss of biodiversity are habitat loss from unsustainable agriculture, deforestation, unsustainable harvest and trade, climate change and alien invasive species?

Source: unstats.un.org



"We keep building more and more, steadily sealing the earth underneath our feet. In Austria, soil was reduced by 39 square kilometers in 2020."

Source: umweltbundesamt.at



Implementation in Austria as of 2020

Target	National indicators (selected)	Trend
15.1	Forest area as a proportion of total land area	↗
15.2	Total amount of above-ground biomass in forest	↗
	Woodland in protected areas	↑
	Proportion of forest area with a long-term management plan	↗
	Certified forest area	↑
15.6	Nagoya Protocol – access to genetic resources and equitable sharing of benefits	✓

Source: Statistics Austria. 8-year trend 2010–2018 (if figures missing, at least 7-year trend) in 4 categories (↑↗↘↓) if there is a clear target (quantitative/normative); ✓ (part of the) indicator target achieved; : calculation of trend not possible. More information about methodological questions can be found in the National Indicator Report 2020.

- > Forest area as a proportion of total land mass in Austria increased slightly from 46.8% (2010) to 47.2% (2018).
- > In 2018, around 22.6% of Austria’s woodlands were located in protected areas. This share has increased considerably since 2010 (18.8%).
- > In 2019, Austria implemented the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization.



Did you know that in 2018, 50.1% of all woodlands in Austria were cultivated with a forest management plan?

Source: un.org

Main issues to solve in Austria as of 2020



Loss and endangerment
of species



Loss and endangerment
of habitats



Soil degradation
and sealing



Did you know that the Austrian federal government's COVID-19 economic stimulus package provides key investments in measures and actions on climate change and environmental protection?

Source: platform2020redesign.org

"I love to watch the bees fly steadily into my lavender blossoms. In our garden we have designated a patch of grass where we planted wildflowers and other herbs and grasses that are important for bees and insects to survive in the city landscape."



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**Potential
contributions
Learning activity**

Before thinking about potential contributions...

- Imagine an organization (business).
What is the core purpose of this organization*?
- Who are this organization's internal and external stakeholders?
- How do trends concerning "life on land" impact it (its purpose, its stakeholders, its operation, its viability)?
- What challenges and/or costs emerge for this organization for "safeguarding the environment and biodiversity"?
- On the other hand, what opportunities and/or benefits arise?
- With all this in mind, what contributions** might this organization make to reach SDG 15 within its sphere of influence via inward and outward actions?

* Meant here are all sizes, all types

** Consider contributions inside the organization (referring to everything that is a resource to the organization and is directly or indirectly controlled by the organization, for instance, human resources, know how, monetary and material resources) and the outside of the organization (referring to everything outside of the organization that it can influence but lies outside of its control, for instance, policy change, partnering with other organizations, etc...)



Potential contributions by educational institutions

The purpose of educational institutions is to educate and train for life and for particular professional interests.

In terms of SDG 15, the tasks lie in teaching and researching ways to protect, restore and promote sustainable use of terrestrial and freshwater ecosystems, how to sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss. Additionally, institutions hold the responsibility for raising awareness about the actions needed from individuals, as well as the private and public sectors to achieve SDG 15.



Did you know that there are 24 master programs focused on biodiversity on the European continent?

Source: [masterstudies.com](https://www.masterstudies.com)

Potential contributions by educational institutions, cont.

Potential inward actions:

- adjust educational programs to include the various topics related to “life on land”
- focus research on topics related to SDG 15
- engage students in conservation activities, either around the institution or as field trips

Potential outward actions:

- partner with other institutions to increase the interest in protecting biodiversity (collaborative projects or research)
- consider partnering up with local non-profit organizations on tree planting, garden initiatives etc.
- collaborate on projects for green buildings and decarbonisation

Potential contributions by municipalities

The purpose of municipalities is to plan, manage, and improve public work and services to the community.

The tasks for municipalities connected to SDG 15 are to protect endangered species and local ecosystems through regulations and educating the public.



Did you know that there are over 700 city beekeepers with more than 6000 beehives in Vienna alone?

Source: wien.info

“The city of Vienna has a strategic plan to establish and maintain a network of green spaces throughout the city, so that people and animals can use this natural infrastructure to get around while being directly connected to nature and reaping the health benefits from this connection.”

Source: wien.gv.at



Potential contributions by municipalities, cont.

Potential inward actions:

- adjust policy and project planning to include life on land preservation
- train public staff in the topics related to “life on land” and how municipality can make a difference
- plan local projects to increase untouched areas for nature and stop sealing soil with concrete

Potential outward actions:

- collaborate with neighbouring towns to raise awareness about the state of biodiversity in the region and co-design potential actions to improve the situation
- work with citizens to inspire individual and group actions to improve the richness of their natural environment
- co-initiate public projects on community gardening and thereby also increase bird and butterfly populations and beehives in the area

Potential contributions by corporations and other organizations

The purpose of for-profit organizations (i.e. business) is to provide a service in exchange for resources (i.e. money). The purpose of non-profit organizations is to impact society in a certain way — both need to generate and/or collect adequate resources to pay for their operations and activities and/or make profit.

In terms of SDG 15, the opportunities for contribution may vary greatly between different types or sizes of organizations, but their core contributions to society for reaching SDG 15 are to measure and reduce their impact on natural land and to lobby for others to join them in this effort.



Did you know that ecosystem services such as plant products for food, timber and pharmaceuticals, atmospheric regulation, soil stability and leisure and aesthetic value are crucial for many businesses, and that the tourist industries are highly effected sooner or later by land degradation and biodiversity loss?

Source: [pwc.com](https://www.pwc.com)

Potential contributions by corporations and other organizations, cont.

Potential inward actions:

- measure and manage the organization's impact on land
- invest only in funds or companies that guarantee preservation of "life on land"
- implement responsible sourcing policies, applying environmental and social safeguards

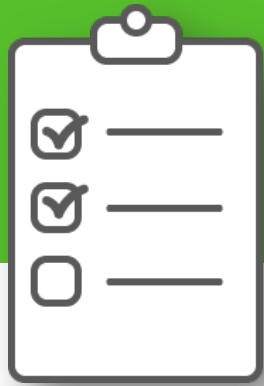
Source: sdgcompass.org

Potential outward actions:

- collaborate with universities, governments, other businesses and local communities to find solutions for best practices for land use planning and management
- co-initiate with industry partners practices that address challenges for "life on land"
- cooperate with neighbouring companies on generating green areas and / or planting trees in the immediate neighbourhood

"When I started working as chief sustainability officer, we immediately got to work finding out what the main vendors for providing resources are, e.g. for catering, cleaning materials, electricity and if they are eco-certified."





Activity: potential contributions by an organization of your choice

The purpose of xyz organization is to...

In terms of SDG 15, the tasks for this organization might be:

Potential inward actions:

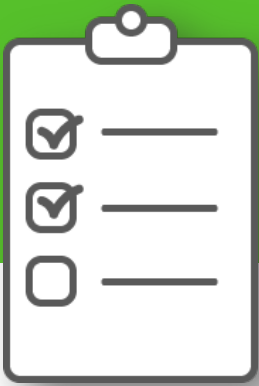
Potential outward actions:

How do inward and outward actions interact and impact each other?

Are partnerships necessary for the desired impact?



Activity: checking design of potential contributions



Returning to the opening questions:

- In which ways do the designed actions support the core purpose of xyz organization?
- In which ways do the designed actions serve the internal and external stakeholders of xyz organization?
- What balance between costs vs. benefits (or challenge vs. opportunity) can be noticed for xyz organization for “safeguarding the environment and biodiversity”?
- How do the designed inward and outward actions cohere and create synergy for xyz impact?



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**Reflection and
resources
Learning activity**

Reflection and some resources

- How do the various challenges for “life on land” interconnect? What are the underlying dynamics?
- What is meant by Anthropocene?
- What is the status quo in your country in terms of contribution to SDG 15?
- What consequences result from a lack of action toward achieving SDG 15?
- What can you do as an individual? How can you influence “life on land” and biodiversity with your consumption?
- What are the opportunities for businesses in terms of SDG 15?

Further Infos:

- [SDG definition of the UN](#)
- [EU progress report on SDGs 2020](#)
- [SDG Compass on SDG 15](#)
- [Global Assessment Report on Biodiversity and Ecosystem Services](#)
- [Platform wir-leben-nachhaltig.at](#)
- [Platform landschaftleben.at](#)
- [SDG Report 2021](#)



Activity: SDG journey

- Put your SDG glasses on and observe your environment under the SDG 15 umbrella for a week. You can do this regardless of whether you live in an urban or rural environment. What are you noticing about the status quo of nature surrounding you? What restoration efforts can you observe? How do people in your neighbourhood connect to nature?
- If appropriate and allowed, take pictures of the found circumstances and catalogue the photos (begin making a scrapbook) — they will lead to a final assignment at the end of the series. Before you venture out, it might be a good idea to inform yourself about legal responsibilities when taking photos of people: [oesterreich.gv.at](https://www.oesterreich.gv.at) (If you are not in Austria, look for the regulations of the respective country!)

Possible resource for online scrapbook (free for classrooms and non-profits): [canva.com](https://www.canva.com)



“On World Earth Day groups in my kids’ school joined a river clean-up, it was not just a great activity for them, but also big learning experience, also for the parents.”



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Sources

Slide 3:

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Slide 4:

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- <https://www.nationalgeographic.org/encyclopedia/ecosystem/>
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Slide 5:

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- <https://www.arche-noah.at/sortenerhaltung/obst-und-obstsammlung>
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Slide 6:

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Slides 10 & 11:

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Slide 14:

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