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SDG 15: life on land

Introduction

Decades of unsustainable practices in using Earth ecosystems have led to a significant threat to multiple species and even to whole ecosystems. Goal 15 of Agenda 2030 addresses this problem and is focused on preserving natural habitats. It aims at protecting, restoring and promoting sustainable use of terrestrial ecosystems, sustainable management of forests, combating desertification, halting and reversing land degradation and ending biodiversity loss. Simply speaking 15th sustainable development goal (SDG) is the answer to mass species extinction, unsustainable practiced in forestry and in land use and deterioration of soil quality.

The primary issues covered in the 15th SDG—mass species extinction, altered land use, and declining soil quality—will be introduced at the beginning of this chapter. These issues and their history will be covered in this chapter. Understanding the primary causes of the issue and potential solutions to halt the further degradation of terrestrial ecosystems and aid in the restoration of natural habitats is beneficial. The text's last section will list the indicators and targets covered by the 15th SDG, which are intended to aid in achieving the objective.

Main challenges addressed in the 15 SDGs

There are three main factors that influence terrestrial ecosystems and significantly threaten the life of Earth. The first, and most important, is the mass extinction of species that we are currently experiencing, which lowers biodiversity by causing the extinction of numerous fragile species. The second element is the altered land use, which includes deforestation, which is occurring more quickly than in the past and depriving us of the valuable and advantageous influence of forests on terrestrial life. One of the most important elements in the preservation of biodiversity is the role that forests play in the natural carbon cycle and flood protection. Yet, for industrial and economic purposes, they are cut down, leading to unbalancing many



ecosystems¹. The last but crucial factor posing a threat to terrestrial ecosystems is the deterioration of soil quality, which significantly influences soil productivity and food security in the regions in which it occurs. Moreover, deterioration of soil quality aggravates climate change impact on inflicted areas. These three factors have the biggest impact on the deterioration of quality of life on the land and threaten survival of some species. These factors are interlinked, and any worsening in one of them intensifies the impact on the other two.

Humankind relies on the natural environment, yet our unlimited expansion and resource consumption has led to largest species extinction since dinosaur era (UN, n.d.) According to WWF and Zoological Society of London we have experienced “an average 69% decline in wildlife populations around the world between 1970 and 2018” (WEF, 2022). This means that we lose species faster than any time in history, and this trend could lead to species extinction, and even loss of some ecosystems. International Union for Conservation of Nature claims, that “more than 46,300 species are threatened with extinction. That is still 28% of all assessed species.” (IUCN, n.d.). The biggest harm has been done to cycads; it is claimed that 71% of these species are on the IUCN *Red list of threatened species*². These plants have historical significance because they are thought to be older than dinosaurs, having first appeared about 280 million years ago during the Permian epoch. They are primarily found in tropical and subtropical areas now, and they haven’t changed much since they first appeared. Despite having lived for millions of years, nearly three-thirds of cycad species are in danger of going extinct. The Svalbard Global Seed Vault, which is situated on the Norwegian island of Spitsbergen, offers hope for plants. The purpose of this vault is to preserve plant seeds from throughout the globe. It is a global gene bank, it can store up to 4.5 million seed samples, each of them contains about 500 seeds. One of the main reasons for creating the vault was to secure food safety.

The second group of most endangered species are reef-building coral species. Researchers found out that even 44% of these animals are endangered (IUCN, 2024). Coral reefs play crucial role as a natural barrier against floods, storms, and waves. They help prevent erosion and protect shorelines. They also serve as a habitat for thousands of marine species and are important not only for animals but also for people, “more than 500 million people worldwide depend on reefs for food, jobs and coastal defense” (Natural History Museum, n.d.). The value

¹ Unbalancing ecosystems refers to disturbance of interactions in ecosystems between living organisms and their physical environment. When these interactions are changed, it can lead to changes in ecosystem’s structure and/or functions.

² The IUCN *Red List of Threatened Species* was founded in 1964 to monitor the mass extinction of the species. Its aim is to provide information on status of endangered species and help to make research-based conservatory decisions.



of coral reefs is estimated at the level of 6 trillion as they provide income from fishing and tourism as well as they are important in coastal protection (ibid.). Unfortunately, climate change, pollution, and unsustainable fishing are significant threat to coral reefs.

It is claimed that in terms of biodiversity loss we crossed a tipping point³ of our planet, it is one of the most serious threats to the Earth⁴. What has caused this dramatic situation? According to Bandera (2023) there are 10 causes of biodiversity loss. These are:

1. Habitat loss and fragmentation – lots of natural ecosystems have been changed into cities, agricultural land or used for infrastructure. This has deprived many native species of their natural environment.
2. Climate change – changes in temperatures or rain patterns have forced many animals and plants to change their habitat. Those accustomed to lower temperatures are in the most dramatic situation, as they could lose their habitats.
3. Overhunting – hunting for leisure or for industrial purposes has threatened significantly some species of animals.
4. Overfishing has caused a serious damage to marine ecosystems and heavily threatened some species of fish. As is in the case of sharks, the demand for shark meat is so big that more than one-third (37,5%) of species of sharks are threatened with extinction (Dulvy et al., 2021).
5. Invasive species – non-native species are often very hard competitors that either transmit diseases or suppress the native species, leading them to extinction due to the lower ability of native species to compete for resources.
6. Pollutants – these can pollute ecosystem at many levels harming some species as well as their habitat.
7. Disease – usually, species can deal with various sorts of diseases. However, fighting them becomes a challenge when the ecosystem is infected with non-native microbes and various plants or animals are not adjusted to fight them.
8. Genetic pollution – “the release of genetically modified organisms or the hybridization of closely related species can lead to the loss of genetic diversity, which is crucial for species’ adaptability and resilience.” (ibid.)
9. Ocean acidification – higher levels of carbon dioxide (CO₂) in the atmosphere influence oceans that absorb this greenhouse gas. Due to chemical processes the pH of the ocean

³ In terms of ecosystems tipping points are points which causes significant change in ecosystem as it cannot come back to its natural state.

⁴ Climate change is believed to be the other most serious threat.



is becoming acidic, and many marine species are becoming more vulnerable to changes in ocean's composition.

10. Ecosystem simplification – natural ecosystems are rich in various forms of life and thus they are more resilient to changes. Human beings have changed many ecosystems into monocultures, which significantly reduces the number of species and ecological niches and thus lowers the ecosystem's resilience.

The above problems show how anthropogenic⁵ impact on nature and industrialization together with business development have influenced various ecosystems. The economic interests often clash with environmental goals. Overfishing is a great example of conflict between care for national GDP and the nature protection goals. Moreover, industrialization has many side effects like pollution, greenhouse gases emissions or spread of urban ecosystems. All these phenomena have led to significant changes in ecosystems and even threatened some of the species with extinction.

The other very important factors that have significantly threatened terrestrial ecosystems are land use changes, which include deforestation, afforestation (planting of trees), urbanization and rewilding. It is estimated that “land use change has affected almost a third (32%) of the global land area in just six decades (1960-2019)” (Winkler et al., 2021). Quoted research has found out that we experience “a global net loss of forest area of 0.8 million km², but an expansion in global agriculture (i.e. cropland and pasture/rangeland) of 1.0 and 0.9 million km², respectively” (ibid.). Deforestation is a very significant factor in land use changes, and it significantly influences ecosystems. According to Encyclopedia Britannica (2024) deforestation estimates are typically based on the amount of forest area cleared for human activities, such as harvesting trees for wood products or converting land for agriculture and grazing. Clear-cutting involves removing all trees from an area, leading to complete forest destruction. However, even partial logging and accidental fires can significantly alter the forest structure by thinning out the trees (Cf. Pimm, 2024). Deforestation is not a new phenomenon, for ages humans have cleared the land to settle down and to have space for housing, cattle grazing or agricultural purposes. However, nowadays, it is happening much faster than any time before and thus, it poses a big threat to natural habitat. It is estimated that “around 10% of the world's forests, an area larger than the European Union, have been lost worldwide through deforestation over the past 30 years, and about 10% of forests globally are severely fragmented with little or no connectivity.” (European Commission, n.d.). Deforestation is one of the main

⁵ Term “anthropogenic” is used to denote environmental change caused by people.



drivers of climate change, as trees serve as carbon sinks⁶, and they absorb carbon dioxide from the atmosphere. Moreover, deforestation contributes to habitat loss for many species as most of plants and animals live in forests, that cannot be substituted with monocultural forests planted by humans. Additionally, forests play crucial role in preventing soil erosion and coastal flooding. Trees retain water in the soil, without them soil erodes and washes away. Furthermore, forests are the most ecologically rich ecosystems; therefore, their destruction causes an irreversible loss to terrestrial ecosystems. In the near term, clearing forests for agriculture is advantageous and results in financial gain. In the long run, it has a negative impact on people and Earth's ecosystems; it endangers terrestrial ecosystems, fuels climate change, and reduces biodiversity.

Since larger trees absorb more carbon dioxide than smaller ones, simply planting trees is not the answer. Furthermore, human-planted forests are typically monocultures, which are less advantageous for ecosystems than a more diverse species composition, and we are unable to replicate the natural richness of forests. Therefore, even if we use economic considerations to gauge our success, it is crucial to consider ecological aspects when assessing development. What does this mean?

The last crucial factor threatening terrestrial ecosystems is soil degradation. Although we rely on soil for food and wood production, yet even “a third of the world's soil is moderately to highly degraded” (Begum, 2021). Soil degradation is the loss of land's productivity, soil fertility or biodiversity. It could happen due to natural factors or could be a side effect of human activity. This phenomenon includes: “physical soil degradation processes include wind and water erosion, and the loss of soil structure; chemical soil degradation processes are mostly related to anthropogenic activities and include salination, overfertilization, and pollution with trace elements, microplastics and organic chemicals; (...) biological soil degradation processes are losses of soil organic matter and biodiversity. The functioning of soil biodiversity and community composition are still poorly understood. The relevance of biological soil degradation, however, is more and more recognized” (Müller, et. al., 2023). Soil degradation might relate to a lack of nutrients and organic matter; it could occur as soil erosion, desertification, or acidification or could be caused by pollution. Furthermore, the process itself poses a serious risk to the food security of the regions where it occurs. It also contributes to climate change, as “soils themselves could potentially sequester enough greenhouse gases in a year to equal about 5% of all annual human-made GHG emissions” (Sulaeman, Westhoff,

⁶ Carbon sink is anything that absorbs more carbon from the atmosphere than it releases, and it plays crucial role in natural carbon cycle.



2020). The key to using full potential of soil and vegetation for carbon sequestration lies in growing more plants that absorb carbon from the atmosphere. An important contributing factor to the worsening of climate change is areas devoid of vegetation. Furthermore, soil erosion is exacerbated by climate change, which leads to a self-enhancing cycle of declining soil quality and climate change.

As agricultural development accelerates, soil erosion is also becoming more widespread. It is estimated that soil erosion in EU is at the level of “1 billion tons per year. Nowadays, approximately a quarter (24%) of EU soils are affected by water erosion, mainly in cropland, with projections referring to a possible increase of 13-25% by 2050. Unsustainable water erosion affects about a third (32%) of agricultural land. The mechanical agitation of soil, a common practice in agriculture, can also initiate soil degradation. This phenomenon, called tillage erosion, can have a significant impact on cultivated fields. Other forms of erosion include wind erosion and crop harvesting, among others.” (European Commission, 2024).

There are a few possible ways in which the situation could be improved, or soil erosion processes could be stopped or alleviated. The first solution is the usage of soil-friendly practices. Agricultural practices are one of the reasons for soil erosion, and among them, some are more destructive for topsoil while others prevent the loss of soil or enrich it. First, deep-rooted and shallow-rooted crops have a positive impact on soil structure, they are helpful in preventing soil erosion. Second, manure enriches soil in organic matter. Third, full crop cover helps keep soil in place. Lastly, intercropping, which is the cultivation of two or more crops simultaneously on the same field, is also very beneficial in soil erosion prevention. But it's important to keep in mind that using sustainable land management techniques could result in reduced yields. Therefore, farmers may require some recompense. Additionally, rehabilitation procedures can be required if the soil has been degraded. The phenomena described above, significantly influence the quality of life on the Earth. As terrestrial ecosystems are of tremendous importance for any living being, including humans, Agenda 2030 has set a few targets for better and more systematic protection of them.

Targets and indicators

The 12 goals set forward by the UN are to enhance the quality of life on land and stop further deterioration of terrestrial ecosystems. Together with targets there is a list of indicators that helps us to monitor the situation and control how much should be done to achieve the goal. Nine targets include a date of goal realization and the metric aspect (15.1-15.9). The other three



targets (15.a-15.c) are more general, they rather outline a long-term goal than a specific and metric target.

The first target (15.1) aims at ensuring the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements by 2020. There are two indicators for this target, the first one is a forest area as a proportion of total land area, and the second focus on the proportion of important sites for terrestrial and freshwater biodiversity that are under protection. Target 15.2 is somehow similar as it focuses on forest ecosystems protection; it aims at promotion and implementation of sustainable management of all types of forests, halting deforestation, restoration degraded forests and substantially increase afforestation and reforestation globally. Its indicator is the enhancement of sustainable forestry practices and its substitution to other forms of forests management.

These two targets are combined with a more overarching target, namely 15.b, that is aimed at forestry management (including conservation and reforestation), and it addresses the financial aspect, especially elaboration of adequate incentives for actions in this area. It will be monitored by (a) official development assistance on conservation and sustainable use of biodiversity; and (b) revenue generated and finance mobilized from biodiversity-relevant economic instruments.

Despite the efforts to stop deforestation the world coverage in forests declines. However, the process of clearing forests has been slower than in previous decades. “The proportion of forest cover to total land area decreased from 31.9% in 2000 to 31.2% in 2020 with agricultural expansion accounting for nearly 90% of global deforestation” (UN, n. d.). Nevertheless, there is a visible trend of implementing sustainable forests management practices and long-term management plans (ibid.). This is a positive trend, although a lot more could be done to halt deforestation. Moreover, according to “official data, the global coverage of protected and conserved areas has now reached 17.6% of terrestrial and inland waters and 8.4% of marine and coastal areas” (Protected Planet Report 2024). This shows a significant growth, yet the percentage of protected areas is not satisfactory, and national governments could enhance their efforts to widen the amount of the land under legal protection. As UN experts notice “particularly worrying is Central, Southern and Western Asia, Northern Africa, and Oceania, where average protected and conserved area coverage of key biodiversity areas is less than 30%. Progress has been more positive in Northern America and Europe, Sub-Saharan Africa, Latin America and the Caribbean, and Australia and New Zealand, where over 40% of each key biodiversity area is now covered on average.” (UN, n. d.)



Target 15.3 focuses at combating desertification, restoring degraded land and soil, including land affected by desertification, drought and floods, and striving to achieve a land degradation-neutral world by 2030. The progress in this area will be measured by the proportion of degraded land to total land area. According to UNEP (n.d.) as much as “a quarter of the world’s total land area has been degraded” and 3.2 billion people are negatively impacted by this phenomenon (ibid.). The most vulnerable groups are people dependent on agriculture⁷, as their living is threatened by possible food shortages. What is bothering is the scale and speed of soil degradation, UNEP experts claim that “if current trends continue, 95% of the Earth’s land areas could become degraded within the next 30 years” (ibid.), which poses a significant threat to food safety all over the world.

Target 15.4 is directed at biodiversity and ecosystems protection, it aims at conservation of mountain ecosystems, including their biodiversity, to enhance their capacity to provide benefits that are essential for sustainable development. Its indicator is coverage by protected areas of important sites for mountain biodiversity, and mountain green cover index. Mountains offers a varied habitats for range of animals and plants. “At higher altitudes harsh environmental conditions generally prevail, and a treeless alpine vegetation, upon which the present account is focused, is supported. Lower slopes commonly are covered by montane forests. At even lower levels mountain lands grade into other types of landforms and vegetation – e.g., tropical or temperate forest, savanna, scrubland, desert, or tundra.” The highest mountain range is Himalaya in Tibet. The longest mountain range stretches from Alaska to Chile. The other big mountain ecosystems are Alps and Pyrenees in Europe, and Caucasus and Urals in Asia.

The important factor in monitoring these ecosystems is so-called “mountain green cover index”, which was created to monitor changes in vegetation in mountain ecosystems, it will monitor forests, shrubs, trees, pasture, crops, and so on. Some mountain plants and species are extremely vulnerable to climate change and global warming processes. These species that need colder climate are slowly losing their habitats due to changes in weather patterns, and conservationists monitor the changes of habitat by these species. However, because of the shortage of suitable habitat brought on by rising global temperatures, several species are seriously threatened. This is the situation with Atlantic puffins (*Fratercula arctica*) „the species faces extreme weather and a decrease in food sources. And things are set to get even worse. New research suggests that puffins will lose about 70% of their nesting grounds by the end of the century due to the impacts of climate change” (Alberts, 2023).

⁷ For more information see case study: *SDG 2, Zero hunger: The Sahel Integrated Resilience Programme and Scale-Up, 2023-2028.*



Target 15.5 is aimed at protection of species, its goal is to take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species. And tools for monitoring the progress are records in the Red List Index. This target is of tremendous importance as the speed of biodiversity loss is faster than in previous decades, and more and more species are under the threat of extinction. One of the reasons for native plants and animals becoming extinct is that they are suppressed by invasive alien species. This problem has been addressed in target 15.8, which aims at introducing measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species. The indicator for this task is the proportion of countries adopting relevant legislation and adequately resourcing the prevention or control of invasive alien species.

Invasive alien species (IAS) “are animals and plants that are introduced accidentally or deliberately into a natural environment where they are not normally found, with serious negative consequences for their new environment. They are a major threat to native plants and animals in Europe and are one of the five major causes of biodiversity loss.” (European Commission, n. d. b). In some cases, IAS have been introduced accidentally (for example brought by tourists), while in the other have been deliberately introduced to certain ecosystems, like was the case with Arctic Lupin (*Lupinus arcticus*) in Iceland. Country has been struggling with soil erosion since its origin, as the first settlers (9th to 11th century) have cleared forests on the island starting a huge soil erosion. As this was a very serious problem, in 1907, the Icelandic Soil Conservation Service (SCS) was founded with the aim of solving this issue. SCS was focused on searching for a plant that will bind the soil and prevent erosion. The first solution was to plant sand blowfly (*Leymus arenarius*), which is a type of grass that can grow on sand and very poor quality of soils. It was the perfect solution until Hákon Bjarnason discovered during his travel to Alaska in 1945 a much more effective plant, namely the arctic lupin. The plant has become incredibly successful, and invasive in Iceland. It is claimed that arctic lupin “cover(s) 0,4 percent of Iceland’s land surface, based on aerial footage estimates. That sounds meager but considering the country’s afforested land cover only amounts to 400 square kilometers, that’s a lot of lupines.” (Bjarnason, 2018) The plant has even become one of the tourists’ attractions as the island look incredibly picturesque and beautiful while lupin blossom. During this time the island is covered with rugs of blue flowers and these views are amazingly attractive.

Despite the fact that lupin is currently so widespread that it is difficult to eliminate, Icelanders now have to decide whether to preserve the plant or eradicate it. The answer is not



readily apparent. Some Icelanders support the plant because it offers stunning views. Additionally, as plants absorb nitrogen from the atmosphere and transfer it to their roots, they enrich the soil. It is a highly invasive plant, though, and has been quite effective in colonizing islands. It would be extremely difficult to eradicate or stop its spread. Therefore, despite the excellent intentions behind bringing arctic lupin to Iceland, for a while people were urged to grow it and lupin seeds were freely given out to aid in the planting process. Nevertheless, the success of implementation outgrows the expectations causing a new problem, which is outcompeting the native plants in Iceland.

Target 15.6 aims at promoting fair and equitable sharing of the benefits arising from the utilization of genetic resources and promoting appropriate access to such resources, as internationally agreed. Its progress will be measure by the number of countries that adopted policies ensuring fair and equitable share of resources. As UN informs “by the end of 2023, 75 countries (up from 6 countries in 2016) and 93 countries (up from 12 countries in 2015) had reported on their legislative, administrative or policy measures under the Nagoya Protocol and the International Treaty on Plant Genetic Resources for Food and Agriculture, respectively.” (UN, n. d.).

The *Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) to the Convention on Biological Diversity* was adopted on 29 October 2010 in Nagoya, Japan and entered into force on 12 October 2014. It is a supplementary agreement to the Convention on Biological Diversity (Convention on Biological Diversity, 2015). It recommends creating national points and authorities to support implementation of the protocol and information sharing in form of technology transfer or various initiatives contributing to fair and equitable access to genetic resources. This is one of the documents that aims at contributing to biological diversity and preventing species extinction.

Target 15.7 recommend taking urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products. It will be monitored by tracing the proportion of poached or illicitly trafficked wildlife. This target is closely related to target 15.c which aims at “enhance(ing) global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities” (United Nations, n.d.). Its implementation will be controlled by the proportion of traded wildlife that was poached or illicitly trafficked.



Poaching is a serious threat to many endangered species, among them are for example rhinos, which horn is more valuable than gold. Organization Save the Rhino (n.d.) claims that in the last decade 8 879 African rhinos have been a victim of poachers. There is still more to be done, despite the fact that the number of rhinos being poached decreased to 1,349 in 2015. (ibid.). Poaching poses a threat to rhinos' population as well as to the other animals. They also promote as unhealthy and unsustainable hobby as hunting for pleasure. It must be underlined that those who oppose hunting point out that poachers have armor designed to target animals that are unable to fight themselves. Moreover, a significant proportion of hunted animals (or parts of their bodies) is subject to illegal trafficking. Poaching is also a threat to sustainable tourism practices. It curbs using unique natural sites to create protected areas in which animals can move freely, as due to the threat from poachers, in these areas there is a need to set some standards of protection for animals. This lowers the value of some sites. As is often the case in conservation; to implement a successful and effective protection plan, it is necessary for neighboring countries to cooperate and have the same goals in national conservation policies.

Target 15.9 aims at integrating ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts by 2020. It will be monitored by “(a) number of countries that have established national targets in accordance with or similar to Aichi Biodiversity Target 2⁸ of the Strategic Plan for Biodiversity 2011-2020 in their national biodiversity strategy and action plans and the progress reported towards these targets; and (b) integration of biodiversity into national accounting and reporting systems, defined as implementation of the System of Environmental-Economic Accounting⁹.” (United Nations, n.d.).

The targets 15.a-15.c are more overarching, and they set rather general goal than a very specific and measurable ones. Two of them have been already presented. Target 15.a states that it wants to mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems. It will be monitored by the “(a) official development assistance on conservation and sustainable use of biodiversity; and (b) revenue generated and finance mobilized from biodiversity-related economic instruments” (United Nations, n.d.). Economic instruments are tools used to boost and promote activities related to

⁸ Target two states: “By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.” (Convention on Biological Diversity, 2020)

⁹ System of Environmental-Economic Accounting is based on internationally agreed scheme that helps to monitor interactions between economic and environmental factors. Thus, enabling to direct national policies to conservation goals.



environmental protection. These could be applied in the form of taxes, subsidies, tariffs, and quotas. Often governmental institutions use these instruments to direct an individual into taking more pro-environmental decision and activities. They could be applied as a sort of “punishment” for wrongdoing, for example additional payments for plastic usage or for polluting environment or as an incentive like subsidies to solar panels or any type of green technologies.

The targets described above split a general goal of terrestrial ecosystem protection into smaller manageable actions that UN countries should undertake to protect their natural habitats. UN has also outlined a series of indicators to monitor the progress in the conservation activities. Even though, the efforts are taken by many national and international bodies still a lot must be done to secure the proper protection and stability of terrestrial ecosystem.

Summary

Sixth mass species extinction is one of the tipping points and the biggest environmental challenges mankind is currently facing. This biotic¹⁰ crisis is interconnected with land use changes and deterioration of soil quality. Alterations in any of these three spheres impact the others, and regrettably, most national governments prioritize economic and development objectives over the well-being of natural ecosystems. Thus, contributing significantly to deterioration of conditions for terrestrial ecosystems. In the short-term the economic goals might seem more important for human beings. However, in the long-term perspective we need healthy ecosystems more than economic gains. Thus, the protection of natural habitats is beneficial for us in many ways that are not visible at first glance. To support and navigate actions in this area UN has crafted a set of targets guiding its member countries in protecting land on Earth. Thus, now it depends on us and our ability to re-define the perception of development and making it more sustainable. Goal 15 contributes to this long-term undertaking.

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¹⁰ The term “**biotic**” refers to anything related to or resulting from living organisms. This includes all forms of life, such as plants, animals, fungi, and microorganisms.



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