

Can Tourism contribute to improve and enlarge Norwegian Protected Area Network in the light of the expected 30%-target for 2030?

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1. Introduction

a. CBD-Aichi target 11 and expected decision at COP15

During the [10th meeting](#) of the Conference of the Parties from the 18th-29th October 2010 in Japan (Aichi Prefecture in Nagoya) of the [Convention on Biological Diversity](#) were the Aichi Biodiversity Targets adopted. The NGO Linking Tourism & Conservation (LT&C) understands itself as a support organisation for Aichi [Target 11](#): “By 2020, at least 17 percent of terrestrial and inland water, and 10 percent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.” As the Strategy Plan for these targets was set for the period 2010-2020, it is interesting to consider the current status of these goals, now in the last year to achieve these targets.

The relevant document, where the status of protected areas is regularly updated, is the [World Database on Protected Areas](#) (WDPA), hosted at the IUCN/UNEP World Conservation Monitoring Center (WCMC). In September 2019, the area that is protected was 15% on land with a modest increase since 2010 and 7.8% of marine area with a significant increase. Besides the quantitative elements, there are also other aspects important for the conservation of the global biodiversity, e.g. protection of areas that are important for biodiversity and the connectivity of protected areas. While the coverage of protected areas on land is higher than for marine areas, only 19% of all terrestrial [Key Biodiversity Areas](#) (KBAs) are protected while 24% marine KBAs are. And only less than one third of protected areas are ‘well-connected’ by protected area networks. However, many countries showed an increase in connectivity since 2010. In conclusion, the coverage elements are on track to be met by the end of 2020 (see [Gannon et al., 2019](#)).

b. SDGs 14 and 15

In 2015, when the period of the [Millennium Development Goals](#) ended, all the 193 UN-member countries adopted the [Sustainable Development Goals](#) to be reached by 2030. They consist of 17 goals and 169 targets aiming to end all forms of poverty, fight inequalities, and tackle climate change by 2030.

These goals can be categorized at different levels (see picture). SDGs 6 (Clean Water and Sanitation), 13 (Climate Action), 14 (Life below Water), and 15 (Life on Land) build the fundament of the earth and life. These goals are necessary to be able to establish sustainable societies with No Poverty (SDG 1), Zero Hunger (SDG 2), Good Health and Well-being (SDG 3), Quality Education (SDG 4), Gender Equality (SDG 5), Affordable and Clean Energy (SDG 7), Sustainable Cities and Communities (SDG 11), and Peace, Justice and Strong Institutions (SDG 16). And these societies can achieve SDGs 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 10 (Reduced Inequalities), and 12 (Responsible Consumption and Production). To achieve these goals globally, cooperation among the states is necessary (SDG 17: Partnerships for the Goals). Although the biodiversity SDGs 14 and 15 belong to the fundament of all the other goals, often

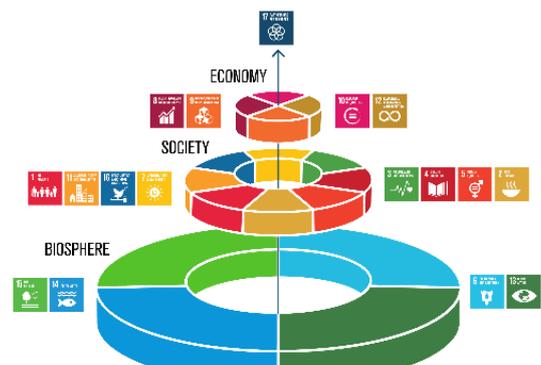


Figure 1: Classification of SDGs. Source: ©Yannick Beaudoin

the misleading argument is brought forward that for the sustainable use of natural resources, economic sustainability would be a precondition.

In this context, two targets are especially important:

- [SDG 14.5](#): *By 2020, conserve at least 10 percent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.*
- [SDG 15.1](#): *By 2020, ensure 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.*

These targets were adopted from the Aichi target 11 to continue the progress of this successive goal and effective method to conserve biodiversity and ecosystem services.

c. Expected decisions at COP15

In the present discussion on the new protected area targets, several countries are arguing that 30% of the earth surface needs to be protected, both on land and the marine environment. The EU, with its Biodiversity Strategy 2030 (read more below), has committed itself already for this 30% goal. This pioneering decision of the EU may also trigger a progressive decision at the fifteenth meeting of the [Conference of the Parties](#) to the Convention on Biological Diversity ([COP15](#)). The adoption of this [#30x30](#) goal for the whole world (read more [here \[1\]](#)) can even be seen as a minimum, if not following the arguments of the “Half-Earth” movement of the [E.O. Wilson Biodiversity Foundation](#) to conserve at least 85% of the world’s species (read more below).

d. The 30% movement and EU-Biodiversity Strategy 2030

As the deadline for Aichi target 11 and SDGs 14.5 and 15.1 is expired by the end of 2020, the EU set up the next conservation goal for 2030 in the [EU-Biodiversity Strategy](#). The key element of this Strategy, and thereby the continuation of the Aichi target/SDGs, is the establishment of protected areas for at least 30% of land in Europe and 30% of the sea in Europe, with legally binding nature-restoration targets in 2021 providing stricter protection of EU forests. Further targets are:

1. Restoring degraded ecosystems at land and sea across the whole of Europe
2. Unlocking €20 billion per year for biodiversity through various sources, including EU funds and national and private funding
3. Making the EU a world leader in addressing the global biodiversity crisis

This EU-Biodiversity Strategy holds on the successive improvable conservation tool of protected areas.

e. “Half Earth”

The [‘Half-Earth’-project](#) is the idea to protect 50% of the world’s area to ensure the conservation of the planet in a long term and to reverse the species extinction. The idea was introduced by E.O. Wilson in 2016 by publishing his book ‘Half-Earth’. It is a call to protect half the land and sea to manage sufficient habitat to protect 85%, or more, of species. The ‘Half-Earth’ project works on mapping the earth’s biodiversity to be able to guide future conservation plans in the right direction. The aim is to

conserve sites that are most important for the biodiversity on the whole earth and to protect these sites with all their species and inhabitants, including indigenous people who live in these areas.

f. Who defines Protected Areas?

IUCN

Necessary for all the goals listed above is the definition of protected areas. The [International Union for Conservation of Nature](#) (IUCN) defines them as a *clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values* (see [here \[2\]](#)).

As biodiversity loss happens mainly through habitat loss, safeguarding these habitats should be the primary response ([IUCN, 2020](#)). Protected areas conserve nature and endangered species by reducing the rate of species loss. They are one of the most important tools for mitigating the loss of endangered species by maintaining their habitat. But certainly, it is very important to manage them well.

Besides their value for global biodiversity, they also provide cultural and socio-economical value. Protected areas are important sites for recreation and tourism, support physical and mental well-being, and provide cultural identity and heritage for indigenous people. As well as that they are used for education and research – especially, to access the progress of the protected area.

Caused by the man-made climatic change, we are and will be facing increasing events of weather extremes. Protected areas can provide help to reduce the effects of these weather extremes. E.g., natural vegetation including particularly forests can help to control landslip due to snowfall and avalanches, hillside soil erosion, or earth movement (see [Stolton et al., 2008](#)).

Such a socio-economical value is e.g., the contribution of protected areas to the sustainability of fisheries. No-take zones are crucial sites of recovery for marine species and prevent the overexploitation and thereby the loss of marine resources. In the Ra-national park on the Skagerrak coast of Southern Norway, small research reserves of the Marine Research Institute (IMR) demonstrate the value and significance of no-take zones. These no-fishing areas have a significant effect on the lobster population. Fishers capture larger individuals in areas close to these zones than in comparison to sites with no such enclosures (see [Thorbjørnsen et al., 2018](#)). Protected areas are cost-effective methods to maintain ecosystem services, such as clean water, food, and raw materials.

The Categories of protected areas are defined as the following:

[Category Ia: Strict nature reserves](#)

Protected areas that are strictly set aside to protect biodiversity and also possibly geological/geomorphological features, where human visitation, use, and impacts are strictly controlled and limited to ensure the protection of the conservation values. Such protected areas can serve as indispensable reference areas for scientific research and monitoring.

Primary objective: to conserve regionally, nationally or globally outstanding ecosystems, species and/or geodiversity features: these attributes will have been formed mostly or entirely by non-human forces and will be degraded or destroyed when subjected to all but very light human impact.

[Category Ib: Wilderness Area](#)

Protected areas that are usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition.

Primary objective: to protect the long-term ecological integrity of natural areas that are undisturbed by significant human activity, free of modern infrastructure and where natural forces and processes predominate so that current and future generations have the opportunity to experience such areas.

[Category II: National Park](#)

Large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities.

Primary objective: to protect natural biodiversity along with its underlying ecological structure and supporting environmental processes, and to promote education and recreation.

[Category III: Natural Monument or Feature](#)

Protected areas set aside to protect a specific natural monument, which can be a landform, sea mount, submarine cavern, geological feature such as a cave or even a living feature such as an ancient grove; they are generally quite small protected areas and often have high visitor value.

Primary objective: to protect specific outstanding natural features and their associated biodiversity and habitats.

[Category IV: Habitat/Species Management Area](#)

Protected areas aiming to protect particular species or habitats and management reflects this priority; many category IV protected areas will need regular, active interventions to address the requirements of particular species or to maintain habitats, but this is not a requirement of the category.

Primary objective: to maintain, conserve and restore.

[Category V: Protected Landscape/Seascape](#)

A protected area where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.

Primary objective: To protect and sustain important landscapes/seascapes and the associated nature conservation and other values created by interactions with humans through traditional management practices.

[Category VI: Protected area with sustainable use of natural resources](#)

Protected areas that conserve ecosystems and habitats, together with associated cultural values and traditional natural resource management systems. They are generally large, with most of the area in a natural condition, where a proportion is under sustainable natural resource management and where low-level non-industrial use of natural resources compatible with nature conservation is seen as one of the main aims of the area.

Primary objective: To protect natural ecosystems and use natural resources sustainably, when conservation and sustainable use can be mutually beneficial.

UNEP-WCMC

The [World Conservation Monitoring Centre](#) (WCMC) in Cambridge is a UK charity that collaborates with the [United Nations Environment Programme](#) (UNEP). The mission of UNEP-WCMC is: *To provide authoritative information about biodiversity and ecosystem services in a way that is useful to decision makers who are driving change in environment and development policy* (see [here](#) [3]). They provide information for policy makers, meaning:

1. Biodiversity information systems addressing data access, data management, data processing
2. Policy analysis and advising policy, strategy, and plan development to support policy development so that it is consistent with international environmental agreements
3. Building relationships between different decision-makers to integrate biodiversity into development/sectoral planning through workshops, peer-to-peer learning, guidance documents, and tools
4. Environmental safeguards and standards development to avoid negative and enhance positive impacts on the environment
5. Spatial planning, scenarios and modelling allowing the visualization of trade-offs and potential synergies between competing land and marine uses and resource patterns
6. Facilitating the sharing of skills and knowledge on biodiversity and natural capital through training, guidance materials and developing networks and partnerships.

g. Role of LT&C and Tourism

Tourism has a bad reputation when it comes to topics like climate action and nature conservation. However, there are many examples where tourism is supporting the establishment and maintenance of protected areas. Especially national parks profit from tourism through fees visitors must pay. This financial support is crucial for many national parks to keep up the management of these areas. The profits nature conservation gains from tourism are often underestimated and must be valued much higher in the future to achieve the increasing goals of protecting biodiversity and building a network of protected areas. As we live today in a globalized world, “tourism has become an unavoidable component of conservation efforts worldwide and deserves far greater attention from the conservation community” ([Buckley, 2012](#)).

LT&C’s mission is to raise support from tourism for reaching the protected area goals such as SDGs 14.5 and 15.1 and facilitate the establishment and improvement of protected areas all around the world. To demonstrate where this is happening, LT&C profiles worldwide leading cases (so-called LT&C-Examples), where tourism supports protected areas. Support can be generated in different ways. Many national parks take an entrance fee from tourists that they use (transparently) for managing the protected area. Other, just as important, forms of support are educational activities and political engagement. Educating tourists visiting protected areas about nature values and the importance of preserving them can be influential. Tourists often can be so impressed just by the beauty of the nature that they become engaged in nature conservation and can become a vital force influencing political decisions.

h. Norway's attempt to be the best in the world and their strong support to UNEP and CBD

If you ask 'Nordmenn' they will tell you that Norway always strives to be the 'best'.

- Per Lykke, head of the Hardangervidda National Park Center

Norway is very ambitious when it comes to creating 'a future we want'. Therefore, they contribute a lot to the United Nations Environment Programme (UNEP) and the Convention on Biological Diversity (CBD). In 2016 the UNEP and The Ministry of Foreign Affairs of the Kingdom Norway both signed a [Programme Cooperation Agreement](#), and in 2019, Norway raised their contribution to UN Environment to NOK 360 ([Government.no, 2019](#)).

With its ability to produce nearly all the energy the entire country needs from renewable energy (read more [here \[4\]](#)); Norway is one of the front-runners of the world. But even though Norway stands out for its renewable energy, there are many sectors where Norway should improve for 'a future we want'. For instance, the percentage of marine protected areas (MPAs) reaches by far not the goal of SDG 14.5.

Another contribution of Norway to the UN environment agenda is [GRID-Arendal](#), established by the Norwegian Ministry of Environment as a non-profit environmental communications centre based in Norway. GRID-Arendal collaborates with and supports UNEP by providing scientific knowledge for decision-making. They produce publications, graphics, photos, and video, and arrange activities for pathing the way for important political, environmental protection decisions.

i. Effects of the Corona-situation on the global tourism and nature conservation

The current Corona-situation affects all sectors, and most of them negatively. Tourism is one of the sectors which is hit hardest and the economic loss in this sector is huge. This influences also protected areas where tourism supports conservation. Areas without any alternative income are most endangered. The local communities may use the natural resources for their own consumption or to generate income and thereby, overexploit nature (UN, 2020).

However, in some regions where tourism was not well-managed, the lack of tourists had a positive effect on nature. One example of this is Venice (Responsible Travel, 2020). The large numbers of tourists visiting the city every year displace the natural wildlife in Venice. The lack of boats and cruise ships let nature recover and animals resettle the rivers (The Guardian, 2020).

Therefore, this exceptional situation gives us the opportunity to create a sustainable recovery for tourism. In the future, we should manage tourism in a way that profits nature and people who are depending on tourism, so that the tourism sector is more resilient against future exceptional situations like this. As tourism is connected to all 17 SDGs, it is very important to create a sustainable and resilient tourism sector (read more [here \[5\]](#)).

2. Status of Protected Areas in Norway

Norway is as one of the northern countries of Europe shaped by mountains and forests, and 69% of known species are connected to the forest. While 11,5% of this country is considered as wild area already 17,5% of the land area in Norway is protected, meaning that theoretically SDG 15.1 is reached. However, the quality of protection needs to be looked at. The main reasons in Norway for the degradation of natural areas are land-use, climate change, urbanization, and fragmentation. In 2018,

30% of the natural areas which were categorized on the red list were threatened. Areas most at risk in the South of Norway are bogs and wetlands, e.g. because of draining and water regulation (read more [here \[6\]](#)).

And when it comes to the protection of marine areas, the maritime nation of Norway is not the best example. Only 3,1% of the marine area in Norway is under protection – less than half of the 10%-goal until 2020.

Tab. 1: Number, area and percentage of the total area of protected areas in Norway, and of the different types of protected areas. Status: 2019. Source: Miljødirektoratet; Miljøstatus.

Verneform	Totalt		Landareal		Marint areal	
	Antall	Vernet (km ²)	Vernet (km ²)	Andel landareal	Vernet (km ²)	Andel av terr.farvann
Totalt	3117	61144	56574	17,5%	4570	3,1%
Nasjonalpark	40	32980	31524	9,7%	1456	1,0%
Landskapsvernområdene	195	18335	17262	5,3%	1073	0,7%
Naturresevat	2414	9007	7401	2,3%	1606	1,1%
Annet vern	462	657	394	0,1%	263	0,2%
Marine verneområder	6	242	0	0%	242	0,2%

3. Regulations for Norwegian Protected Areas

The geological features of Norway had a strong influence on the culture and tradition of this country. Due to the mountain-rich geography, marine resources were more promising than farming on land. Therefore, fishing is a big part of the cultural heritage of *Nordmenn*. This results in fewer restrictions in national parks regarding fishing. One example of this is the Ra-national park in South Norway that consists of 90% of marine area. The ‘concept’ of this national park is ‘conservation by use’ which is why fishing is mostly allowed (read more below).

As most of the areal in Norway is not well suited to farming, using this area in a different way – e.g., for cattle – is important. This is another reason why the regulations for national parks in Norway are not that strict as the international standards.

The definition for national parks in Norway are “*large natural areas with representative ecosystems or landscapes without strong interference in nature*” (Miljødirektoratet, 2020). The criteria for national parks are that there is no greater, technical interference, but fishing and hunting are allowed as they are described as activities that do not harm the conservation values. Furthermore, regarding the IUCN, the difference between national parks and the other categories is (or should be):

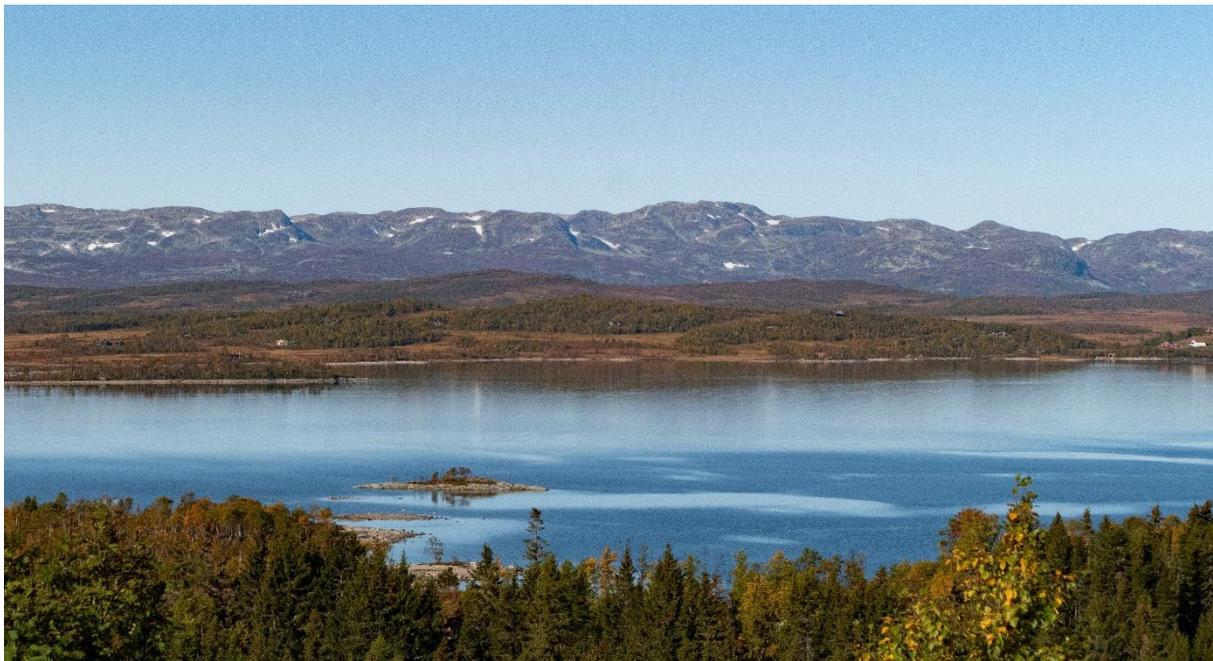
1. That tourist infrastructure is allowed (not in category Ia and b)

2. The focus is on maintaining the whole ecosystem
3. The aim is to restore nature (not maintain the state as in category V)
4. Category II has no general permission for resource use.

Therefore, the state of Norwegian national parks overlaps with the international categories for national parks, protected landscapes/seascapes, and protected areas with sustainable use of natural resources.

Whether national parks in Norway will be established, and how they will be managed, is decided by the communes that are associated with the national park. In the United States, for instance, these decisions are made at a higher political level, like the state in which the national park is. The Norwegian system implicates the problem that the income of local community members and their traditions depend on the use of the areas that are considered to become a protected area. Consequently, hunting, fishing, and cattle ranching are allowed in most national parks and categorized as only small interference of human activity.

a. Example: Hardangervidda National Park



Picture 1: Hardangervidda National Park. Source: © Lena Moritz

The [Hardangervidda National Park](#) is Europe's most extensive high mountain plateau and Scandinavia's largest national park (except Svalbard). A special feature of the Hardangervidda national park is the wild reindeer stock. But since natural predators, like wolves and wolverines, were eradicated in this region, people hunt the reindeer to manage their population. The argument is that otherwise too many reindeers would eat up their resources and get sick. On the other hand, sheep are allowed to graze in the entire park competing with the reindeer. Hunting tries to replace a natural self-regulating system. Norwegian culture and local people play an important role in decision making. And sheep-grazing conflicts also with predators. These are reasons and background why hunting is generally allowed in the national parks of Norway, but predators are not. The exemption, where a limited stock of wolves are permitted, is a region in Eastern Norway on the border to Sweden, where

special management and protection roles apply. In Sweden, wolves due to different policies are thriving, and it is just difficult to stop them from crossing the border.

In a film, shown in the National Park Visitor Center, about the Hardangervidda national park nice spots for fishing are specifically advertised. That fishing is allowed or even promoted in the entire national park is also a general rule in Norway and contrasts international standards of this category of protected areas.

The following idea heard in the National Park Visitor Centre, would be revolutionary in Norway if implemented: to reintroduce wolverines and to take out the sheep for achieving natural reindeer management. Indeed, this concept would sell better in German-, Danish- or Dutch tourist societies, which are visiting Norway for exploring wild nature, than in Norway.

(Information derived from an interview with Per Lykke and the visit of the Hardangervidda National Park Visitor Center.)

b. Comparison to German Protected Areas

Due to the [BfN](#) (Bundesamt für Naturschutz) in Germany, national parks are:

1. large areas, mostly continuous areas of uniqueness
2. in most of the part fulfilling the criteria for a national park
3. mostly undisturbed from human and human influence, so that the processes can be natural

Agriculture, forestry, water management, hunting, or fishing are not allowed (some exceptions only under strict regulations). Most of these activities are allowed in Norwegian national parks and/or under looser regulations. Therefore, German national parks conform to the international standards of the IUCN better than Norwegian. The Federal Nature Conservation Act standardizes the criteria of the IUCN category “National Park” as a baseline.

For both nations, tourism, recreation, and education play an important part in national parks. Related infrastructure and education centres to optimise the conservation-tourism-interaction belong to a national park in all countries and are mostly not in

Tab. 2.: List of national parks in Germany, year of establishment, size and habitats. Status: 2020. Source: Bundesamt für Naturschutz, Deutschland.

Nationalparke in Deutschland (Stand: April 2020)			
Nationalpark	Gründungs-jahr	Gesamtfläche [ha]	vorrangig geschützte Lebensräume
Bayerischer Wald (BY)	1970	24.217	Buchen-Bergmischwälder mit Tanne, Hochlagen-Fichtenwälder, Moore, Bergbäche, Blockhalden
Berchtesgaden (BY)	1978	20.804	Alpine Felschuttfloren, Rasengesellschaften und Latschen-Gebüsche, subalpine, montane und submontane Wälder, Almweiden, Seen
Schleswig-Holsteinisches Wattenmeer (SH)	1985	441.500 davon ca. 99,5% Wasserfläche*	Wattenmeerökosysteme, Salzwiesen des Vorlandes, Sandbänke und Dünen
Niedersächsisches Wattenmeer (NI)	1986	345.000 davon ca. 94% Wasserfläche*	Wattenmeerökosysteme, Salzwiesen und Dünen der Ostfriesischen Inseln
Hamburgisches Wattenmeer (HH)	1990	13.750 davon ca. 97,5% Wasserfläche*	Wattenmeer im Mündungsgebiet der Elbe mit starkem Gezeiten- und Brackwassereinfluss
Jasmund (MV)	1990	3.070 davon ca. 20% Wasserfläche	Buchenwälder auf Kreidestandorten, Moore, Kreidesteilküste, küstennahe Ostsee
Harz (ST/NI)	1990/1994	24.732	Hochlagen-Fichtenwälder, Buchenwälder, Moore, Bergwiesen, Blockhalden und Felsformationen, Fließgewässer
Sächsische Schweiz (SN)	1990	9.350	Sandsteinfelsen, submontane wärme- und trockenheitsliebende Wälder, Schlucht- und Schatthangwälder
Müritz- Nationalpark (MV)	1990	32.200	Kiefern- und Buchenwälder, Erlen- und Birkenbruch, Seen, Röhrichte, Moore
Vorpommersche Boddenlandschaft (MV)	1990	78.600 davon ca. 83% Wasserfläche*	Boddengewässer, Salzwiesen, Dünen und Röhrichte, Kiefern- und Buchenwälder, Trockenrasen
Unteres Odertal (BB)	1995	10.323	Flussauenlandschaft, Altarme und -wasser, Ried- und Röhrichtbestände, Feuchtgrünland, Hangwälder, Steppenrasen
Hainich (TH)	1997	7.513	Laubmisch- und Buchenwälder mittlerer und reicherer Standorte in unterschiedlichen Sukzessionsstadien
Eifel (NW)	2004	10.770	Atlantisch geprägte, bodensaure Buchenmischwälder (kollin bis submontan), Magerweiden, Felsen, Urft-Stausee
Kellerwald-Ederssee (HE)	2004	5.738	Submontane, bodensaure Buchenwälder, felsig-trockene Steilhänge, Waldwiesen
Schwarzwald (BW)	2014	10.062	montane fichtenreiche Buchen-Tannen-Mischwälder, Hochheiden
Hunsrück-Hochwald (RP/SL)	2015	10.230	bodensaure Buchen- und Eichenwälder, Fichtenforste, Blockschutthalden und Hangmoore

conflict with the international national park criteria.

4. LT&C-Examples Norway could learn from

a. [Poor Knights Islands Marine Reserve New Zealand](#)

The “no-take” zones of the 44 marine protected areas (MPAs) in New Zealand – where no fishing, no mining, no oil extraction, and minimal interference is allowed – benefit from ecotourism. These protected areas support the biodiversity of the region and report, e.g. significant increases in the biomass of snapper populations. The higher productivity of no-take zones provides also economic benefits for close areas where fishing is allowed. In addition, the MPAs in New Zealand support the local economy through tourism. These two positive aspects of MPAs encourages the local population to provide sustainable management of these protected areas for the benefit of nature and the people.

Ideas that can be transferred from this example are:

- fishing vessels can be used as tourist charter vessels
- education programs
- inviting universities to carry out research

b. [Apo Island Marine Reserve, Philippines](#)

This MPA is an example of community-based tourism management. Before the protected area was established, the main activity on the island was fishing. Today, the Marine Management Committee – which is set up by fishermen – collects donations and fees from visitors. The tourist revenue provides income and sustainable fishing leads to bigger catches.

What could be transferred from this example:

- involvement of local NGOs working together with the local government to manage the area
- use scientific knowledge to convince stakeholders

c. [Chumbe Island Coral Park](#)

The Chumbe Island Coral Park is a private marine park where ecotourism supports conservation, research, and environmental education. The revenue from tourism is reinvested in supporting the park management and environmental education programs. The local communities benefit from these protected areas because of the ‘spill-over-effect’. The no-take zones help to restock depleted fishes and the recovery of the fishing ground and lead to higher catches in surrounding areas.

Important points of this example:

- It generates education programs and research, political support, and capacity building
- Political support is important, but it also needs private and community investment

d. [The Cape Whale Coast, South Africa](#)

The Cape Whale Coast is an example of a joint stakeholder approach to conservation. Tourism provides income for local people and the protected area employs many local people. The tourism income also provides income to research marine ecosystems.

What could be transferred from this example:

- A collaborative multi-stakeholder approach that involves local communities, municipal governments, the local and national business community and NGOs

e. [Misool Private Marine Reserve, Raja Ampat Islands, Indonesia](#)

The MPAs within the Indonesian archipelago of the Raja Ampat Islands protect an extraordinary amount of biodiversity. By doing so, they also increase the catches of fishermen in the surrounding areas. All in all, the areas created a lot of jobs for the local population.

The Idea that could be transferred:

- Using tourists to collect scientific data while also helping to fund MPAs

f. [Area Marina Protetta di Torre Guaceto, Italy](#)

This MPA in Italy is supported by tourism through income and public awareness. They built a visitor center – the Torre Guaceto Visitor Centre – to engage with tourists, schools, and the local communities.

What made this area successful?

- Visitor center
- Maintaining equitability between local access and tourism as a key factor

g. [Delaware Bay, New Jersey, USA](#)

The Delaware Bay on the eastern coast of the USA is known for its arctic shorebirds. Nature-based tourism and, especially, birding tourism support endangered species in the bay. This tourism supports the local economy by paying for accommodation, restaurants, and different activities, and a part of this income is going toward the conservation of the bay.

Important aspects of this example:

- Showing people the interconnectivity between the local community and tourism, so they will be more likely to support it
- Educating, while putting research practices into action, could be the most important part

h. [Marine Protected Areas around Antarctica](#)

The ring of protected area around Antarctica is promoted by the engagement of different Antarctic tour operators and tourist. That kind of political support from tourism played already a role when the

Ross Sea MPA was decided and can be significant for future establishments of protected areas. Since Antarctica is the largest wilderness on earth without permanent human societies living and impacting nature, people from outside are fascinated by this status and support its protection. The experience of tourist can generate public awareness and influence decision-makers.

What could be transferred from this example:

- Tour operators can both encourage and put pressure directly on their country representatives making decisions

5. Examples where Tourism is already supporting Conservation Efforts in Norway

a. [Svalbard](#)

In 1995, a Norwegian coal company planned to construct the first long-distance road through the tundra of Svalbard. After this plan, not only large, undisturbed landscape would have been fragmented, it also would set precedence what other Svalbard treaty members could be allowed as well. The formation of a coalition of conservation NGOs and tourism operators started a campaign to stop this project. The result was impressive: Not only the road plan got abolished. Instead, new national parks were established, and an environment fund set up, where tourists pay in with their entrance fee.

Why Svalbard is a good example of linking tourism and conservation:

- Joined political action of both tour operators and conservation NGOs
- Entrance fees are used in a transparent and efficient way and are used for projects and initiatives with the purpose of protecting the environment
- Several tour operators with their highly skilled guides are doing a great job educating tourists about the values and importance of Svalbard's nature and its protection

b. [South Norway's Lista Landscape](#)

The Landscape of Lista is a protected area that resulted from dialogue processes facilitated by Frøland municipality. The characteristics of this area are its open agricultural landscape and long sandy beaches that attract tourists. The 'Lista Committee' was primarily set up to coordinate the conservation interests with other land-use interests. The outcome of the process was government-protected outdoor recreation areas with different kinds of officially protected areas. 'Sørnorsk kystnatur', as a part of 'Naturvern som verdieskaper' initialized the creation of the Visitor Centre Wetland Lista that provides education and nature experiences through nature conservation areas. The Lista Landscape case of stakeholder involvement, dialogue, and cooperation, resulting in a cluster of different types of protected areas, is an LT&C-Example, which could gain the attention of other municipalities or regions, particularly in Norway. It relates to both typical Norwegian policies and cultures as well as to international standards.

During my expedition to the Lista Landscape, I interviewed Pål Hals, the manager of [Lista Fyr AS](#), and the tourism manager of Lista Fyr. During these interviews, they stated that the education of the tourists play a vital role to raise support for the protection of the Lista Landscape. And together with the work of the local bird observatory, visitors are part of citizens science contributions. The contribution of tourism to nature conservation and environmental education at Lista walk hand in

hand. To be able to offer free educational events for tourists is only possible due to income through the tourist shop. Pal's advice for other areas in Norway, that want to become an LT&C-Example is:

- to identify the most vulnerable parts of the area
- to inform tourists about these spots
- to elaborate a tourist strategy on how to make this sustainable and to have alternatives.

6. Areas that could become Examples in the Future

a. Lofoten

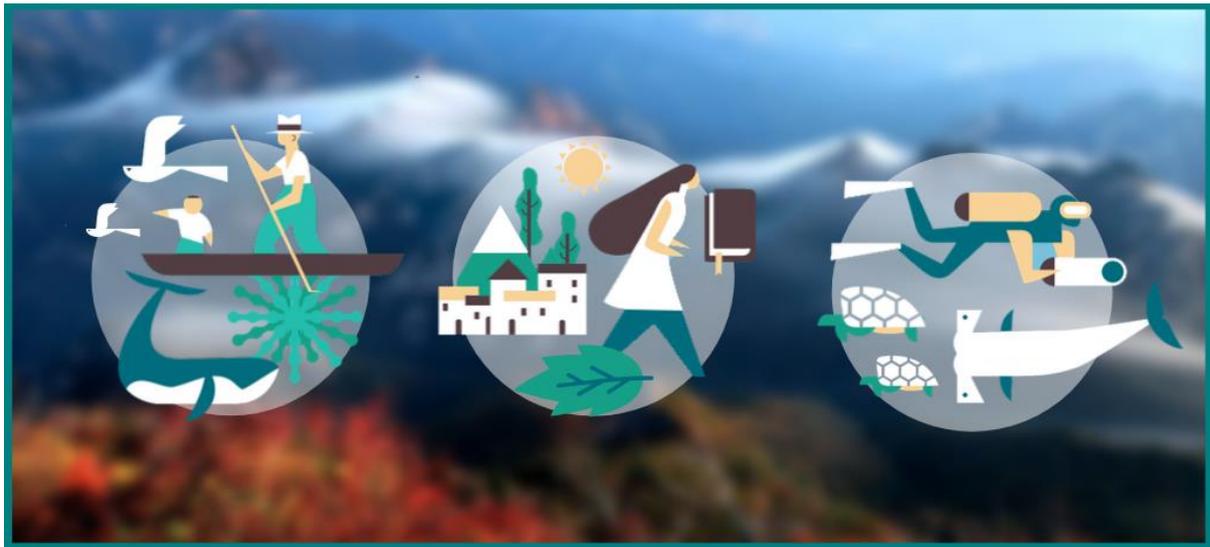


Figure 2: Man And the Biosphere (MAB) Programme. Source: UNESCO.

In the context of the '[Man And the Biosphere](#)' (MAB) Programme of the UN, the thought to establish a Biosphere Reserve (BR) in the Lofoten was present over the last decades. However, the project is still at the beginning, and only last year (2019) the first BR was established in Norway, The [Nordhordland Biosphere Reserve](#).

The focus of the MAB-Programme is the sustainable interaction of the inhabitants (and visitors) of this area with their environment. To be a part of the program is a commitment of the whole community to direct their future efforts in all sectors – nature conservation, industry, society, and so on – towards sustainability, and especially the SDGs. The strategic objectives of BR/the MAB-Programme are:

- Conserve biodiversity, restore and enhance ecosystem services, and foster the sustainable use of natural resources
- Contribute to building sustainable, healthy, and equitable societies, economies, and thriving human settlements in harmony with the biosphere
- Facilitate biodiversity and sustainability science, education for sustainable development (ESD), and capacity building
- Support mitigation and adaptation to climate change and other aspects of global environmental change

The geographical region of a BR should represent the norm, not the unique. The whole BR is not a protected area, but the core zones of this BR protect specific areas of the region that are of high importance for nature conservation. These core zones follow strict regulations and no (or very little)

human interference is allowed. Buffer zones surround the core zones and build some sort of protection for the core zones (e.g., no industry is allowed here to prevent water pollution etc.). In these zones, human small interference is allowed, and these areas shall especially be used for scientific research to evaluate BRs, improve them, and replicate them. The last zones are the transition zones, where the main activity takes place. That is the area where the inhabitants live, and you can find industry. The aspect of sustainable development is most important for the MaB programme, UNESCO calls BRs "Laboratories for the SDGs".

The Lofoten would be a good example for a BR due to its outstanding nature and the culture of the local people. The islands are important sites for many bird species, and it has a long tradition of fishing, deeply anchored in the history of Norway. There are already different stakeholders that are interested in this project ([Naturvernforbundet](#), [Lofoten Matpark](#), [Lofoten aktiv AS](#)). Important for the first steps of this project is, that it is a bottom-up process that involves local people. Many steps needed when writing the application for a BR to UNESCO. For instance, a map with proposed zones need to be drafted, and municipalities convinced for this project.

b. Raet-National Park

The [Raet-National Park](#) was established in 2016 and is the southernmost national park in Norway due today. It is named after the geological phenomena the end moraine (Raet) from the last ice age that now lays at the coast from Agut-Agder. One special character of this national park is that 90% of it is marine area.

The national park was established under two slogans. It should be 'verdens fineste nasjonalpark' (the world's most excellent national park) and 'vern gjennom bruk' (protection through use) should be practised. Use of natural areas is connected to Norwegian tradition and culture and therefore allowed in some form in all Norwegian national parks. In particular, hunting, fishing and grazing sheep, cattle or domestic reindeer is often permitted. In Raet-National Park one could, in fact, differ from these kinds of traditional practices, as special lobster research reserves in the area are demonstrating the advantages of no-take zones, recently reconfirmed in a study been made by [Thorbjørnsen et al. \(2018\)](#). Introducing a spatial zoning concept, which includes large no-fishing areas, could set a new standard for Norwegian national parks.

At least, wanting to achieve the world's finest national park by conservation through use is a contradiction, and can only to misunderstandings requests for all kind of other user interests, which are not compatible with a "real" national park.

Another point of discussion in the Raet-National Park are the shrub layers at the coast that are increasingly growing. A study performed by the [Norsk Institutt for Bioøkonomi \(NIBIO\)](#) has elaborated the consequences for the biodiversity of this area – for instance, fewer insects. Therefore, they consider using grazing sheep to cut these shrubs what would again be human interference contrary to the international standards. However, the second argument for this management-plan is the end moraine. The shrubs would cover this southernmost phenomenon of end moraine in Norway.



Picture 2: [Brochure](#) of the Raet-national park.
Source: Raet nasjonalpark.

To become an LT&C-Example the Raet-National Park needs to be improved towards international standards by allowing larger no-take zones, and representatives from the tourism sector need to come up promoting such development.

However, there are already initiatives to engage (local) tourists in this protected area. One of them is '[Hove Camping](#)' it is a camping site that offers activities for the tourists to experience the national park with as little disturbance as possible. One of these activities is for instance boats with transparent bottom to explore marine life. Another initiative is '[Våre Strender](#)', an organization to clean the beaches. These initiatives are already a good starting point

7. Conclusion

Protected areas are an important tool for the conservation of species, the biodiversity in general, the mitigation of climate change and much more. The entire world must be committed to reaching the already agreed or future goals of the UN biodiversity convention for a globally complete network of protected areas. Furthermore, I think it is very important to agree on international standards that provide effective management of these areas. This is even crucial to be able to monitor the protected areas and their progress.

One example where these standards are not always met are the national parks in Norway. The international standards of the IUCN imply as little human disturbance as possible in national parks. But in Norway, it is allowed to fish, hunt, and let cattle graze in national parks. It is more common than an exception. Most people think that hunting is necessary to manage the population size of reindeer. However, there are natural ways to handle these issues, for instance, the reintroduction of natural predators like wolves or wolverines. But again, this is often complicated because the Norwegian government focus strongly on supporting local farmers and rural development. Local interests, such as (highly subsidized) sheep grazing versus allowing for predators, are often in contradiction with conservation ideals. Thereby leaving even "national" parks up to local decisions can be a handicap of being a champion in reaching global goals. Norway is maybe pioneering in renewable energy and other important sectors regarding sustainable development. Still, there seems to be quite some way before Norway is doing best in the field of protected areas.

Tourism is an important tool to support and improve nature conservation and should become even more important in the future. But firstly, the tourism sector must recover in a sustainable way after the Corona-crisis – for nature and the people who depend on it as their source of income. And while recovering sustainably, the bad reputation of tourism as a huge polluter – due to waste and CO₂-emissions – can be laid off and improve the possibilities of tourism.

As the LT&C-Examples show, there are already a variety of methods to connect tourism and nature conservation in a productive way. The diversity of examples provides a lot of ideas and possibilities of how tourism can be used to support nature conservation. The knowledge exchange between these examples can lead to even further improvement and establishment of protected areas.

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