Nordic Biodiversity Framework

Supplementary material



Iceland Global Biodiversity Framework targets 1-8 detailed policy review

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Furthermore, this material connects to another project that Biodice is working on in collaboration with the <u>Ministry of Food in Iceland</u>.

Target 1. Plan and Manage all Areas to Reduce Biodiversity Loss

- <u>National planning act</u> (Skipulagslög: 123/2010)
 - . Biodiversity is not integrated.
 - . Goal b. of this law is: "to promote the rational and cost-effective use of land and land resources, ensure the protection of landscapes, nature, and cultural values, and prevent environmental damage and overexploitation, with sustainable development as a guiding principle".
- <u>Act on environmental assessment for projects and plans</u> (Lög um umhverfismat framkvæmda og áætlana: 111/2021)
 - . Biodiversity is integrated.
 - . Spatial planning and projects that can have effects on the environment require an environmental impact assessment with adequate stakeholder consultation before they are implemented.
- Act on marine and coastal planning (Lög um skipulag haf- og strandsvæða: 88/2018)
 - . Biodiversity is not integrated.
 - . Marine and coastal spatial planning should be done with nature conservation and sustainability in mind.
- Act on land reclamation (Lög um landgræðslu: 155/2018)
 - . Biodiversity is integrated.
 - . Spatial planning regarding forestry and land reclamation is required according to article 6.
- Act on forests and forestry (Lög um skóga og skógrækt: 33/2019)
 - . Biodiversity is integrated.
 - . Spatial planning regarding forestry and land reclamation is required according to article 4.
- Act on a national strategy regarding infrastructure for the conservation of natural and <u>historical monuments</u> (Lög um landsáætlun um uppbyggingu innviða til verndar náttúru og menningarsögulegum minjum: 20/2016)
 - . Biodiversity is not integrated.
 - . Spatial planning for tourist attractions is required where the conservation of natural and historical monuments is the main goal.
- <u>Nature Conservation Act</u> (Lög um náttúruvernd: 60/2013)
 - . Biodiversity is integrated and defined.
 - . Spatial planning is bound by the natural features database.
- <u>Act on the Plan for nature protection and energy utilisation</u> (Lög um verndar- og orkunýtingaráætlun: 48/2011)
 - . Biodiversity is not integrated.
 - . Spatial planning for areas where energy production (hydro, wind or geothermal energy) is allowed and areas that are to be protected.

- <u>Act on Mountain Pasture Matters, Mountain Grazing, etc.</u> (Lög um afréttamálefni, fjallskil o.fl.: 6/1986)
 - . Biodiversity is not integrated.
 - . Spatial planning mentioned in the context of protecting vegetation from sheep grazing.
- Act on Livestock Management (Lög um búfjárhald: 38/2013)
 - . Biodiversity is not integrated.
 - . Keepers of land can close it off from sheep grazing.
- Act on protection against diseases and pests of plants (Lög um varnir gegn sjúkdómum og meindýrum á plöntum: 51/1981)
 - . Biodiversity is not integrated.
 - . The respective minister can determine areas where certain plants are not to be grown to prevent the spread of diseases.
- <u>Act on aquaculture</u> (Lög um fiskeldi: 71/2008)
 - . Biodiversity is partially integrated with the prevention of genetic mixing between wild salmon and farmed salmon.
 - . Spatial planning mentioned in the context of conserving wild fish stocks.
- <u>Act on shellfish aquaculture</u> (Lög um skeldýrarækt: 90/2011)
 - . Biodiversity is integrated.
 - . Spatial planning mentioned in the context of conserving nature and biodiversity.
- <u>Act on fishing within Iceland's exclusive fishing zone</u> (Lög um veiðar í fiskveiðilandhelgi Íslands: 79/1997)
 - . Biodiversity is not integrated.
 - . Spatial planning on where fishing with bottom trawl, seine and pelagic trawl is allowed for the sustainable use of fish stocks.
- Act on whaling (Lög um hvalveiðar: 26/1949)
 - . Biodiversity is not integrated.
 - . The respective ministry can designate areas where whaling is not allowed with a regulation.
- <u>Act on the conservation of fishing grounds</u> (Lög um vísindalega verndun fiskimiða landgrunnsins: 44/1948)
 - . Biodiversity is not integrated.
 - . Spatial planning in the context of conserving fishing grounds, no mention of nature or biodiversity.
- <u>Regulation on environmental assessment for projects and plans</u> (Reglugerð um umhverfismat framkvæmda og áætlana: 1381/2021)
 - . Biodiversity is integrated.
 - . Spatial planning and projects that can have effects on the environment require an environmental impact assessment with adequate stakeholder consultation before they are implemented.
- <u>Regulation on aquaculture</u> (Reglugerð um fiskeldi 540/2020)
 - . Biodiversity is partially integrated.

- . Spatial planning mentioned in the context of conserving wild fish stocks.
- <u>Regulation on coastal planning</u> (Reglugerð um gerð strandsvæðaskipulags: 330/2020)
 - . Biodiversity is not integrated.
 - . Coastal planning includes protected areas, aquaculture zones, infrastructure and tourism where environmental effects are taken in consideration.
- Regulations regarding fishing area closures
 - . Multiple regulations of either permanent or temporary fishing restrictions within marine areas. Reasons for closure are sustainability of the fishing stock, not biodiversity conservation or enhancement.

- Action plan for land reclamation and forestry (Land og líf) 2022.
- Strategy and vision for the future in land reclamation and forestry until the year 2031.
- Action plan in land reclamation and forestry 2022-2026.
 - . Biodiversity is defined and integrated in this action plan.
- <u>Coastal plan for the East fjords</u> (Strandsvæðisskipulag Austfjarða 2022)
- . Biodiversity is defined and integrated.
- . Ecosystem approach is defined and integrated.
- <u>Coastal plan for the West fjords</u> (Strandsvæðisskipulag Vestfjarða 2022)
- . Biodiversity is defined and integrated.
- . Ecosystem approach is defined and integrated.
- <u>National Planning Strategy</u> (Landsskipulagsstefna 2024-2038)
 - . Biodiversity is integrated.
- . A special objective is the conservation of nature and other environmental matters.
- <u>Green paper on biodiversity 2022</u>. White paper on biodiversity is in progress.
 - . Recommendations on coastal and marine spatial plan (chapter 4.3.2).

Responsibility (ministries, institutions etc.)

- The Ministry of Infrastructure is in charge of all matters regarding spatial planning on land and sea with the exception of fisheries.
 - A national plan is created by the Ministry of Infrastructure every 15 years and approved by the parliament. The national plan contains the government's plans regarding urban and regional matters, transportation, resource use, nature conservation and other land use where sustainable development is the main goal.
- The municipalities are responsible for creating and updating a general plan, a secondary plan and a regional plan.
- The National Planning Agency is the institution responsible for spatial planning matters and is an advisor to the Ministry of Infrastructure and the municipalities when it comes to creating spatial plans.

- The Environmental Agency and nature conservation committees are to be consulted before a regional or general plan is created or changed (article 68, chapter XII of Act no. 60/2013).
- The Ministry of Environment, Energy and Climate, The Ministry of Food, Agriculture and Fisheries and the Ministry of Culture and Business Affairs, as well as their respective institutions, are advisory when it comes to creating spatial plans.
 - Fisheries do not fall under these spatial plans but are in the hands of the Ministry of Food, Agriculture and Fisheries.

How is the target being implemented?

- Spatial plans exist for most regions and municipalities. Some of them need to be updated as they expire in 2024.
- An environmental impact assessment is required before all spatial planning is accepted and implemented as is stated in article 12 of the National Planning Act (123/2010) and article 2 of the Act on environmental assessment for projects and plans (111/2021).
- Biodiversity is not integrated into laws on spatial planning such as the National Planning Act (123/2010) or the Act on marine and coastal planning (88/2018) but article 4 of the Act on environmental assessment for projects and plans (111/2021) states that biodiversity should be a part of the environmental impact assessment for spatial plans. Despite this, the National Plan 2024-2038, Coastal plan for the East and the West fjords and many of the regional and general plans have biodiversity defined and integrated into their spatial plan.
- As stated in article 1 of the National Planning Act (123/2010), local communities and stakeholders should be consulted and given the chance to influence spatial planning.
- Ecologically important areas are not a focus of the spatial planning laws and there is no existing goal to bring the loss of ecologically important areas to zero.

List of relevant projects/efforts

- Regional plans:
 - <u>Regional planning for Dalabyggð, Reykhólahreppur and Strandabyggð 2018-2030</u> (Svæðisskipulag Dalabyggðar, Reykhólahrepps og Strandabyggðar 2018-2030) biodiversity is integrated.
 - <u>Regional planning for the capital area 2015-2040</u> (Svæðisskipulag Höfuðborgarsvæðisins 2015-2040) - biodiversity is integrated.
 - <u>Regional planning for Snæfellsnes 2014-2026</u> (Svæðisskipulag Snæfellsness 2014-2026) biodiversity is integrated.
 - <u>Regional planning for Eyjafjörður 2012-2024</u> (Svæðisskipulag Eyjafjarðar 2012-2024) biodiversity is not integrated but nature conservation is integrated.

- <u>Regional planning for South Peninsula Region 2008-2024</u> (Svæðisskipulag Suðurnesja 2008-2024) - biodiversity is not integrated but nature conservation is integrated.
- <u>Regional planning for geothermal areas in Þingeyjarsýslur 2007-2025</u> (Svæðisskipulag háhitasvæða í Þingeyjarsýslum 2007-2025) - biodiversity is integrated.
- <u>Regional planning for East Iceland 2022-2044</u> (Svæðisskipulag Austurlands 2022-2044) biodiversity is integrated.
- General plans exist for most municipalities.
- Secondary plans exist for many areas within municipalities.
- Coastal plan exists for the East and West fjords.
- There is no plan for marine areas and most of the coastal areas yet.

Target 2. Restore 30% of all Degraded Ecosystems

- Act on land reclamation (Lög um landgræðslu: 155/2018)
 - . Biodiversity is integrated.
 - . Ecosystem restoration is defined and integrated.
- Act on forests and forestry (Lög um skóga og skógrækt: 33/2019)
 - . Biodiversity is integrated.
 - . Restoration of natural forest area is defined and integrated.
- <u>Nature Conservation Act</u> (Lög um náttúruvernd: 60/2013)
 - . Biodiversity is defined and integrated.
 - . Ecosystem restoration is one of the aims of this act, however it is only mentioned once.
- <u>Act on Vatnajökull National Park</u> (Lög um Vatnajökulsþjóðgarð: 60/2007)
 - . Biodiversity is not integrated.
 - . Land restoration in the national park is allowed (article 14).
- Act on the management of water (Lög um stjórn vatnamála : 36/2011)
 - . Biodiversity is not integrated.
 - . Restoration of water bodies is mentioned (article 12).
- <u>Regulation on sustainable land use</u>. (Reglugerð um sjálfbæra landnýtingu: 670/2024)
 - . Biodiversity is integrated.
 - . Ecosystem restoration is integrated.
- <u>Regulation on the management and use of public land</u> (Reglugerð um meðferð og nýtingu þjóðlendna 630/2023)

- . Biodiversity is not integrated.
- . Vegetation restoration is mentioned (article 8).

- Action plan for land reclamation and forestry (Land og líf) 2022.
 - Strategy and vision for the future in land reclamation and forestry until the year 2031.
 - Action plan in land reclamation and forestry 2022-2026.
 - . Biodiversity is defined and integrated.
 - . Wetland restoration, natural forest restoration and other ecosystem restoration is mentioned. The targets are 50,000 ha of restored terrestrial ecosystems and 5,300 ha of wetland restored in 2026.
- Action plan for Agricultural Policy (Aðgerðaráætlun landbúnaðarstefnu 2024)
 - . Biodiversity is defined and integrated.
 - . Ecosystem restoration is mentioned as a possible climate-friendly incentive in agriculture. Biodiversity restoration and the GBF is mentioned.
- <u>White paper on Nature Conservation</u> 2011 (Hvítbók um náttúruvernd)
 - . Biodiversity is defined and integrated.
 - Recommendations on wetland and natural forest restoration (chapter 5.7).
- <u>Action plan on Biodiversity</u> 2010 (Framkvæmdaáætlun um líffræðilega fjölbreytni)
 - . Recommendations on wetland and natural forest restoration (chapter 5.5).
- <u>Green paper on biodiversity 2022</u>. White paper on biodiversity is in progress.
 - . Recommendations on ecosystem restoration (chapter 4.3.1).

Responsibility (ministries, institutions etc.)

- Ecosystem restoration mainly falls under the Ministry of Food, Agriculture and Fisheries and its institution Land and Forest (Land og skógur) as stated in article 5 of the Act on land reclamation (155/2018).
- The Nature Conservation Act (60/2013) falls under the Ministry of Environment, Energy and Climate which has ecosystem restoration as one of the aims (article 1).

How is the target being implemented?

- The land reclamation policy and action plan (Land og líf) contains a plan for the active restoration of natural forest and wetland ecosystems. The plan is to restore 50,000 ha of terrestrial, 5,300 ha of wetland ecosystems and 2,500 ha of natural forest before 2026. These projects have proposed funding.
- The aim of these restoration projects should be restoring and enhancing biodiversity as stated in article 3 of the Act on land reclamation (155/2018). The action plan however,

mentions carbon sequestration and climate change action as the main goal with the restoration.

- Article 3 of the Act on land reclamation (155/2018) states that restoration should have the aim of enhancing the resilience of ecosystems. Increased connectivity and integrity of restored ecosystems is mentioned in the land reclamation policy.
- There are no plans for restoration of other ecosystems, such as marine and coastal ecosystems.

Allocated funding (yes/no/partially) Partially

Target 3. Conserve 30% of Land, Waters and Seas

- <u>Nature Conservation Act</u> (Lög um náttúruvernd: 60/2013)
 - . Biodiversity is defined and integrated.
 - . Protected areas are defined and integrated.
- Act on the conservation of Breiðafjörður (Lög um vernd Breiðafjarðar: 54/1995)
 - . Biodiversity is not integrated.
 - Breiðafjörður is a protected area.
- Act on Thingvellir National Park (Lög um þjóðgarðinn á Þingvöllum: 47/2004)
 - . Biodiversity is not integrated.
 - . Thingvellir is a protected area.
- <u>Act on Vatnajökull National Park</u> (Lög um Vatnajökulsþjóðgarð: 60/2007)
 - . Biodiversity is not integrated.
 - Vatnajökull National Park is a protected area.
- Act on the management of water (Lög um stjórn vatnamála : 36/2011)
 - . Biodiversity is not integrated.
 - . Protected areas (water bodies) are defined and integrated.
- Act on marine and coastal planning (Lög um skipulag haf- og strandsvæða: 88/2018)
 - . Biodiversity is not integrated.
 - Protected areas can be a part of the marine and coastal plans.
- <u>Regulation on the conservation of lake Mývatn and the river Laxá</u> (Reglugerð um verndun Mývatns og Laxár í Suður-Þingeyjarsýslu: 665/2012)
 - . Biodiversity is integrated.

- . Lake Mývatn and the river Laxá are protected areas.
- <u>Regulation on the conservation of Lake Thingvallavatn and its catchment area</u> (Reglugerð um framkvæmd verndunar vatnasviðs og lífríkis Þingvallavatns: 650/2006)
 - . Biodiversity is defined and integrated.
 - . Lake Thingvallavatn is a protected area.
- <u>Regulation on protective measures for fragile ecosystems</u> (Reglugerð um verndarráðstafanir vegna viðkvæmra hafsvæða og botnvistkerfa 188/2023)
 - . Biodiversity is integrated.
 - . Several marine areas are protected from certain fishing gear.
- <u>Regulation on nature conservation</u> (Reglugerð um náttúruvernd: 205/1973)
 - . Biodiversity is not integrated.
 - . Municipalities are responsible for monitoring and managing protected areas.
- <u>Regulation on coastal planning</u> (Reglugerð um gerð strandsvæðisskipulags: 330/2020)
 - . Biodiversity is not integrated.
 - . Classification of areas the nature and environment classification is not a formal protected area but could fall under OECM.

- Action plan for land reclamation and forestry (Land og líf) 2022.
 - e. <u>Strategy and vision for the future in land reclamation and forestry until the year 2031</u>.
 - e. Biodiversity is defined and integrated.
 - e. The importance of protecting ecosystems is mentioned but this is not followed with an action plan.
- <u>White paper on Nature Conservation</u> 2011 (Hvítbók um náttúruvernd)
 - Biodiversity is defined and integrated.
 - . Several recommendations on protected areas are made (chapter 6).
- <u>Action plan on Biodiversity</u> 2010, chapter 5.3 (Framkvæmdaáætlun um líffræðilega fjölbreytni)
 - . Recommendations on marine and terrestrial protected areas.
- <u>Green paper on biodiversity 2022</u>. White paper on biodiversity is in progress.
 - . Current extent of protected areas (page 62-64).

Responsibility (ministries, institutions etc.)

- The Minister of Environment, Energy and Climate is responsible for establishing protected areas (Act 60/2013, article 13).
 - The Minister of Food, Agriculture and Fisheries can establish marine areas that are closed off for fisheries these areas can become OECMs. If marine protected areas are to be established by the Minister of Environment, Energy and

Climate, the Minister of Food, Agriculture and Fisheries should be consulted (Act 60/2013, article 38).

- The Environmental Agency is responsible for the management and maintenance of the protected areas (Act 60/2013, article 13) as well as a nature conservation group which operates within each municipality (Regulation 205/1973)
- The Icelandic Institute of Natural History and the Nature Research Centres monitor vegetation and animals within protected areas (Act 60/2013, article 13).

How is the target being implemented?

- There are multiple types of protected areas in Iceland, with different levels of protection. The main aspect of the conservation is not always biodiversity, in many cases nature conservation in a more general sense is the main aim but biodiversity conservation is a byproduct of the protection (see for example Act on Thingvellir national park (47/2004) where biodiversity is not integrated).
- There are currently four marine protected areas (MPA) in Iceland, covering 0.07% of Iceland's exclusive economic zone (EEZ). In addition to these areas there are areas that are being considered for other effective area based conservation measures (OECM), bringing the number up to 1.6%.
 - o The MPAs consist of two hydrothermal vents and two strictly protected islands. They conserve unique biodiversity or geological formations.
 - o The OECMs are areas that are closed off from harmful fishing gear. They conserve vulnerable ecosystems such as coral and sponge beds and the biodiversity in those areas as well as relatively untouched areas.

Allocated funding (yes/no/partially)

Partially – national parks are funded by the government but there is no funding towards establishing new protected areas.

List of relevant projects/efforts

- Natural Heritage/Conservation Register (Náttúruminjaskrá).
- <u>Marine Protected Areas (Verndarsvæði í hafi)</u> June 2024 report from experts for the Ministry of Food, Agriculture and Fisheries.
 - A report with suggestions on marine protected areas and the need to establish more MPAs and OECMs to fulfil target 3 of the Kunming-Montreal GBF.

Target 4. Halt Species Extinction, Protect Genetic Diversity, and Manage Human-Wildlife Conflicts

- Directive on hunting in Iceland (Tilskipun um veiði á Íslandi: 29/1849)
 - . Biodiversity is not integrated.
 - Harbour seals cannot be killed closer than half a nautical mile from their haulout.
- <u>Nature Conservation Act</u> (Lög um náttúruvernd: 60/2013)
 - . Biodiversity is defined and integrated.
 - . Species conservation is integrated.
- Act on whale hunting (Lög um hvalveiðar: 26/1949)
 - . Biodiversity is not integrated.
 - . The Minister of Food, Agriculture and Fisheries can set a regulation where certain whale species are protected from hunting.
- Act on the conservation and hunting of wild birds and mammals (Lög um vernd, friðun og veiðar á villtum fuglum og villtum spendýrum: 64/1994)
 - . Biodiversity is partially integrated "The aim of this act is to ensure the maintenance and natural diversity of wild animals..." (article 2).
 - This act focuses on conservation of wild animals and human-wildlife conflict.
- Act on salmon, charr and trout fishing (Lög um lax- og silungsveiði: 61/2006)
 - . Biodiversity is partially integrated "Sustainable use of fish stocks: Use where fish stocks are not destroyed. After fishing, the spawning stock should be large enough to ensure normal recruitment and to maintain the diversity of the stock." (Article 3).
 - . Fish stocks can be protected according to article 24.
 - Act on agriculture (Búnaðarlög: 70/1998)
 - . Biodiversity is integrated.
 - . Article 16 is about a special committee with the aim to conserve genetic diversity in species used in agriculture.
- <u>Act on animal Importation</u> (Lög um innflutning dýra: 54/1990).
 - . Biodiversity is partially integrated in this law: "Minister may, after receiving a scientific opinion from the [Marine&Freshwater Research Institute], limit or prohibit the import of live salmonids, regardless of maturity level, incl. roe and smolts, if it can be clear that other protection and preservation measures stipulated in the law and government orders are not sufficient to prevent the genetic mixing of such salmon with local natural populations, which could threaten biological diversity and endanger natural populations."
 - A special focus on conserving the genetic diversity of sheep and wild salmon.
- Act on aquaculture (Lög um fiskeldi: 71/2008)
 - . Biodiversity is partially integrated with the prevention of genetic mixing between wild salmon and farmed salmon.
 - . Preventing damage to wild fish stocks and their habitat and conserving the genetic diversity of the wild salmon are aims of this act.
- Act on shellfish aquaculture (Lög um skeldýrarækt: 90/2011)

- . Biodiversity is integrated.
- . Protecting vulnerable habitats from damage caused by aquaculture is one of the aims of this act.
- Act on fish disease prevention (Lög um varnir gegn fisksjúkdómum: 60/2006)
 - . Biodiversity is not integrated.
 - . Protecting vulnerable fish species from fish disease is the main aim of this act.
- Act on fish breeding (Lög um fiskrækt: 58/2006)
 - . Biodiversity is not integrated.
 - . Conserving the genetic diversity of freshwater fish is the main aim of this act.
- <u>Regulation on the conservation of lake Mývatn and the river Laxá</u> (Reglugerð um verndun Mývatns og Laxár í Suður-Þingeyjarsýslu: 665/2012)
 - . Biodiversity is integrated.
 - . All duck species on the lake are protected.
- <u>Regulation on the conservation of Lake Thingvallavatn and its catchment area</u> (Reglugerð um framkvæmd verndunar vatnasviðs og lífríkis Þingvallavatns: 650/2006)
 - . Biodiversity is defined and integrated.
 - . The habitats of arctic charr and brown trout in the lake cannot be disturbed or destroyed.
- <u>Regulation on the conservation of wild bird species</u> (Reglugerð um friðun tiltekinna villtra fuglategunda, friðlýsingu æðavarps, fuglamerkingar, hamskurð o.fl.: 252/1996)
 - . Biodiversity is not integrated.
 - . Nests of some bird species are protected (*Somateria mollissima, Haliaeetus albicilla, Falco rusticolus, Bubo scandiacus, Alle alle, Rallus aquaticus and Phalaropus fulicarius*).
- <u>Regulation on the hunting of wild bird species</u> (Reglugerð um fuglaveiðar og nýtingu hlunninda af villtum fuglum: 456/1994)
 - . Biodiversity is not integrated.
 - . Using poison, snares, traps, dogs, lights or electricity to hunt for birds is forbidden. All bird species are protected with the exceptions of some geese, ducks and seabirds for a few months a year. *Larus marinus, Larus fuscus, Larus argentatus* and *Corvus corax* can be hunted all year-round.
- <u>Regulation on the hunting of arctic fox and mink</u> (Reglugerð um refa- og minkaveiðar: 437/1995)
 - . Biodiversity is not integrated.
 - . The arctic fox is protected except for August 1st to April 30th to prevent humanwildlife conflict. Their burrows cannot be destroyed.
- <u>Regulation on the management of reindeer-hunting</u> (Reglugerð um stjórn hreindýraveiða: 486/2003)
 - Biodiversity is not integrated.
 - . Reindeer can be hunted when the Minister of Environment, Energy and Climate deems the stock large enough for there to be no damage to it.
- <u>Regulation on whaling</u> (Reglugerð um hvalveiðar: 163/1973)

- . Biodiversity is not integrated.
- . Eubalaena glacialis, Balaena mysticetus, Megaptera novaeangliae, Balaenoptera musculus and Physeter macrocephalus as well as all female whales with calves and the calves are protected.
- <u>Regulation on a ban on seal hunting</u> (Reglugerð um bann við selveiðum: 1100/2019)
 - . Biodiversity is not integrated.
 - . All seal species are protected from hunting (with exceptions for private consumption with a permit from the Directorate of fisheries).
- Regulation on genetic resources (Reglugerð um varðveislu og nýtingu erfðaauðlinda í landbúnaði: 151/2005)
 - . Biodiversity is integrated.
 - . Conservation of genetic diversity of species used in agriculture is the main aim of this regulation.
- Regulation on breeding of the Icelandic horse (Reglugerð um uppruna og ræktun íslenska hestsins: 442/2011)
 - . Biodiversity is not integrated.
 - . The main aim of this regulation is to conserve the genetic makeup of the Icelandic horse but genetic diversity is not mentioned.
- Regulation on potatoes (Reglugerð um kartöfluútsæði: 455/2006)
 - . Biodiversity is not integrated.
 - . Genetic diversity is not mentioned but the aim of this regulation is to ensure healthy and homozygous seed potatoes.
- Regulation on agricultural support (Reglugerð um almennan stuðning í landbúnaði: 430/2021)
 - . Biodiversity is not integrated.
 - . Support is paid for the damage geese and swans have (or might have) on crops.
- Regulation on aquaculture (Reglugerð um fiskeldi: 540/2020)
 - . Biodiversity is partially integrated with the prevention of genetic mixing between wild salmon and farmed salmon.
 - Conserving the genetic diversity of the wild salmon is one aim of this regulation.
- Regulation on transferring and releasing salmonids (Reglugerð um flutning og sleppingar laxfiska og varnir gegn fisksjúkdómum og blöndun laxastofna: 105/2000)
 - . Biodiversity is not integrated.
 - . Conserving the genetic diversity of freshwater fish is the main aim of this regulation.
- Regulation on the ban of eel fishing (Reglugerð um bann við álaveiðum: 408/2019)
 - . Biodiversity is not integrated.
 - . European eel (*Anguilla anguilla*) is protected in Icelandic waters except for private consumption with a permit from the Directorate of fisheries.
- Regulation on Atlantic halibut (Reglugerð um veiðar á lúðu: 470/2012)
 - . Biodiversity is not integrated.

- . Atlantic halibut (*Hippoglossus hippoglossus*) is protected. A fishing permit can be given out if the stock is considered large enough for sustainable fishing.
- Regulation on spur dog, porbeagle and basking shark (Reglugerð um bann við veiðum á háfi, hámeri og beinhákarli: 456/2017)
 - . Biodiversity is not integrated.
 - . Squalus acanthias, Lamna nasus and Cetorhinus maximus are protected species in Icelandic waters.
- Regulation on deep-water species within NEAFC area (Reglugerð um stjórn veiða á djúpsjávartegundum á samningssvæði Norðaustur-Atlantshafsfiskveiðinefndarinnar (NEAFC): 431/2013)
 - . Biodiversity is not integrated.
 - . Icelandic ships cannot fish for 21 species in the NEAFC area. Additional 49 species cannot be fished for without a special permit.
- Regulation on bycatch of ships fishing for tuna (Reglugerð um meðafla skipa sem stunda veiðar á Austur-Atlantshafs bláuggatúnfiski: 807/2011)
 - . Biodiversity is not integrated.
 - . Sea turtles, hammerhead sharks (family Sphyrnidae), *Carcharhinus longimanus* and *Alopias superciliosus* are to be released alive if caught as bycatch.

- Action plan for land reclamation and forestry (Land og líf) 2022.
 - h. <u>Strategy and vision for the future in land reclamation and forestry until the year 2031</u>.
 - h. Biodiversity is defined and integrated.
 - h. Conservation of remaining natural forest is important to protect the genetic diversity of the birch tree.
- Action plan for agriculture policy 2024 (Aðgerðaáætlun landbúnaðarstefnu)
 - . Biodiversity is defined and integrated.
 - . Target 3 mentions the importance of protecting vulnerable species in agriculture as well as the genetic diversity of species used in agriculture.
- <u>White paper on Nature Conservation</u> 2011 (Hvítbók um náttúruvernd)
 - . Biodiversity is defined and integrated.
 - . Chapter 6.2.5 is about the importance of conserving species to conserve genetic diversity. Chapter 6.4 is about the conservation of wild animals using hunting or catch management.
- Action plan on Biodiversity 2010 (Framkvæmdaáætlun um líffræðilega fjölbreytni)
 - . Chapter 5.4 is about the conservation of wild species that are threatened with extinction. Human induced threats by fishing gear should be minimised.
- <u>Green paper on biodiversity 2022</u>. White paper on biodiversity is in progress.
 - . Page 53-55 is about current knowledge on species.

Responsibility (ministries, institutions etc.)

- The Wildlife act (Act no. 64/1994), which covers protection and hunting of wild birds and wild land mammals. This act falls under the Minister of Environment, Energy and Climate, as well as the Nature Conservation act (Act no. 60/2013).
- The Environmental Agency is in charge of management actions for wild birds and wild mammals (article 3 of Act no. 64/1994).
- The Icelandic Institute of Natural History monitors and researches wild birds and mammals and reccommends management actions to the Ministry of Environment, Energy and Climate (article 4 of Act no. 64/1994).
- When it comes to wild marine mammals, fish, marine invertebrates and algae, the Ministry of Food, Agriculture and Fisheries is responsible for setting management actions regarding hunting/fishing and protection (article 7 of Act no. 79/1997, article 3 of Act no. 116/2006, article 1 of Act no. 26/1949).
- The Directorate of Fisheries gives out fishing permits and monitors fishing (article 2 of Act no. 36/1992).
- The Marine and Freshwater Research Institute monitors fishing stocks, researches marine animals and recommends management actions to the Ministry of Food, Agriculture and Fisheries (article 5 of Act no. 112/2015).

How is the target being implemented?

- There is a management plan for some species such as the birch tree, salmonids, many domestic animals used in agriculture (sheep, horse, goat), many fish species and some marine mammals. Conservation is the main aim of these management plans.
- Regulations on fishing gear and the conservation of forests are ways in which human actions are managed to protect species. See for example action plan for land reclamation and forestry (Land og líf) and regulation no. 807/2011.
- Several known threatened species (on IUCN or national lists) are managed for conservation. The Icelandic goat is a threatened breed with a management plan (see <u>here</u>). North-Atlantic right whale (*Eubalaena glacialis*, CR), blue whale (*Balaenoptera musculus*, EN) and sperm whale (*Physeter macrocephalus*, VU) are protected species in Iceland. European eel (*Anguilla anguilla*, CR) and Atlantic halibut (*Hippoglossus hippoglossus*, EN) cannot be fished without a special permit. Spiny dogfish (*Squalus acanthias*, VU), Porbeagle (*Lamna nasus*, VU) and basking shark (*Cetorhinus maximus*, VU) are protected species.
- There are plans of restoring and conserving the genetic diversity of the downy birch (*Betula pubescens*) and several domestic species such as the Icelandic goat breed. The conservation of the genetic diversity of wild Atlantic salmon (*Salmo salar*) is important in aquaculture and fish breeding.
- Human-wildlife conflict is managed with funding to farmers that have had their crop ruined by the whooper swan (*Cygnus cygnus*). Marine areas have been closed and

certain fishing gear banned to prevent bycatch of marine mammals or fish species (regulation no. 430/2021, regulation no. 223/2024, regulation no. 186/2020).

List of relevant projects/efforts

- Protection, welfare and hunting of wild birds and wild mammals 2013 (Vernd, velferð og veiðar villtra fugla og villtra spendýra). Report on current legislative status and recommendations for the <u>Act on the conservation and hunting of wild birds and</u> <u>mammals</u> (64/1994).
 - o Suggestions on how to improve this legislation and the management of wild species of birds and mammals.
 - o The legislation has not been changed in accordance with these recommendations.

Headline indicators:

A.3 Red List Index

- <u>Birds</u>: A total of 91 species were assessed, and 41 are on the 2018 Red List of the Icelandic Institute of Natural History. One species is extinct worldwide, three species are extinct as breeding birds in Iceland, three species are critically endangered, 11 species are endangered, and 23 species are at moderate risk. Additionally, there are two species that are likely to be added to the Red List, but data is lacking to assess this with certainty. Finally, eight species are at imminent risk of being added to the Red List.
- <u>Plants</u>: The 2018 Red List of Vascular Plants is the latest assessment by the Icelandic Institute of Natural History on vascular plants according to the criteria of the International Union for Conservation of Nature (IUCN). A total of 56 species of vascular plants are on the 2018 Red List of the Icelandic Institute of Natural History, while 85 species were assessed. One species is extinct in Iceland, eight species are critically endangered, and seven species are endangered.
 - o <u>Mosses and Lichen</u> have not been assessed since 1996.
- <u>Mammals</u>: A total of 52 species of land and marine mammals are known to inhabit the natural environment of Iceland. When the 2018 Red List of the Icelandic Institute of Natural History was compiled, 20 of these species were assessed, while the others were not evaluated (NA). On the Red List of Icelandic mammals, two species are classified as extinct in Iceland (RE), one species is critically endangered (CR), one species is endangered (EN), and two species are at moderate risk (VU). Additionally, two species may possibly be added to the Red List, but there is insufficient data to assess this with certainty, so these species are classified as (DD), data deficient. Three species of migrants (NA) are on the global Red List. Twelve Icelandic species are not at risk (LC) according to IUCN criteria.

Target 5. Ensure Sustainable, Safe and Legal Harvesting and Trade of Wild Species

- Act on animal importation (Lög um innflutning dýra: 54/1990)
 - o Biodiversity is partially integrated when it comes to the conservation of salmonids (article 2).
 - o All importation of wild animals is banned, except for fish, crustaceans and molluscs that are to be used in aquaculture (with exceptions set by the Minister of Food, Agriculture and Fisheries for the conservation of wild salmonids).
- <u>Act on the implementation of CITES</u> (Lög um framkvæmd samnings um alþjóðaverslun með tegundir villtra dýra og plantna sem eru í útrýmingarhættu: 85/2000)
 - o Biodiversity is not integrated.
 - o Further instructions are in regulations.
- Nature Conservation Act (Lög um náttúruvernd: 60/2013)
 - o Biodiversity is integrated.
 - The Minister of Environment, Energy and Climate can set a regulation regarding the sustainable use of wild berries, mushrooms, herbs and other edible plants.
- <u>Act on the conservation and hunting of wild birds and mammals</u> (Lög um vernd, friðun og veiðar á villtum fuglum og villtum spendýrum: 64/1994)
 - Biodiversity is partially integrated "The aim of this act is to ensure the maintenance and natural diversity of wild animals..." (article 2).
 - O Sustainable use is partially integrated "The Icelandic Institute of Natural History monitors wild bird and mammal populations and suggests protection or hunting management based on the status of the population" (article 4).
- Act on aquaculture (Lög um fiskeldi: 71/2008)
 - o Biodiversity is partially integrated with the prevention of genetic mixing between wild salmon and farmed salmon.
 - o Aquaculture should never affect the sustainable use of fish stocks.
- Act on fish breeding (Lög um fiskrækt: 58/2006)
 - o Biodiversity is not integrated.
 - o Fish breeding should never affect the sustainable use of fish stocks.
- Act on fishing in Iceland's exclusive fishing zone (Lög um veiðar í fiskveiðilandhelgi Íslands: 79/1997)
 - o Biodiversity is not integrated.
 - o Sustainable use is partially integrated as "efficient use of fish stocks".
- Act on fishing outside Iceland's exclusive economic zone (Lög um fiskveiðar utan lögsögu Íslands: 151/1996)
 - o Biodiversity is not integrated.

- o Sustainable use is partially integrated as "conserving the living resources of the ocean".
- Act on the treatment of commercial marine stocks (Lög um umgengni um nytjastofna sjávar: 57/1996)
 - o Biodiversity is not integrated.
 - o Sustainable use of fish stocks is integrated.
- <u>Regulation on the implementation of CITES</u> (Reglugerð um framkvæmd samnings um alþjóðaverslun með tegundir villtra dýra og plantna sem eru í útrýmingarhættu: 993/2004 & 829/2005)
 - o Biodiversity is not integrated.
 - o Legal trade of wild species is the main aspect of this regulation.
- At least 34 regulations regarding fisheries management have sustainable use integrated.

- <u>Strategy and vision for the future in land reclamation and forestry until the year 2031</u> (Land og líf) 2022.
 - o Biodiversity is defined and integrated.
 - o Natural resources should be used sustainably.
- Strategy for agriculture until the year 2040 (Þingsályktunartillaga um landbúnaðarstefnu til ársins 2040)
 - o Biodiversity is integrated.
 - o Sheep grazing and other land use should be sustainable.
- Strategy and vision for the future of fisheries (Auðlindin okkar)
 - o Biodiversity is integrated.
 - o Sustainable use of marine resources is the main aspect of this work.

Responsibility (ministries, institutions etc.)

- The Ministry of Food, Agriculture and Fisheries deals with matters regarding sustainable fisheries in both marine and freshwater as well as sheep grazing and land use in agriculture (Act no. 57/1996 and Act no. 70/1998).
- The Directorate of Fisheries gives out fishing permits and monitors fishing (article 2 of Act no. 36/1992).
- The Marine and Freshwater Research Institute monitors fishing stocks, researches marine animals and recommends management actions to the Ministry of Food, Agriculture and Fisheries (article 5 of Act no. 112/2015).
- The Ministry of Environment, Energy and Climate deals with matters regarding sustainable hunting of wild birds and mammals as well as the use of wild berries, mushrooms, herbs and other edible plants (Act no. 64/1994 and Act no. 60/2013).

- The Environmental Agency is in charge of management actions for wild birds and wild mammals (article 3 of Act no. 64/1994).
- The Icelandic Institute of Natural History monitors and researches wild birds and mammals and recommends management actions to the Ministry of Environment, Energy and Climate (article 4 of Act no. 64/1994).

How is the target being implemented?

- Sustainable use of wild species is one of the aims in agriculture with sheep grazing and land use managed sustainably, within the limits of ecosystems (Strategy for agriculture to 2040).
- Sustainable use of fish stocks is the aim of fisheries management (Act no. 57/1996). Marine areas have been closed and certain fishing gear banned to prevent bycatch of marine mammals or fish species (regulation no. 430/2021, regulation no. 223/2024, regulation no. 186/2020).
- CITES
- Ecosystem approach is mentioned in relation to sustainable use of wild species in the Strategy and vision for the future of fisheries (Auðlindin okkar). It is not mentioned in other policies.
- Customary sustainable use is allowed with the personal use of some wild species such as seal and eel (regulation no. 1100/2019, regulation 408/2019). People are free to fish for personal consumption with a fishing rod.

Target 6. Reduce the Introduction of Invasive Alien Species by 50% and Minimize Their Impact

- Nature Conservation Act (Lög um náttúruvernd: 60/2013)
- . Exotic species can enter the country unintentionally, but in Article 65. act on nature conservation no. 60/2013 states "Anyone who engages in activities that may lead to the unintentional arrival of living alien organisms into the country, or that they spread into nature, must take measures that can reasonably be expected in order to prevent their importation and distribution."
 - . Biodiversity is integrated and defined in this law.
- Alien and alien invasive species are integrated and defined in this law.
 - . There is no regulation on alien invasive species.

- Act on animal Importation (Lög um innflutning dýra: 54/1990).
- . Biodiversity is partially integrated in this law: "Minister may, after receiving a scientific opinion from the [Marine&Freshwater Research Institute], limit or prohibit the import of live salmonids, regardless of maturity level, incl. roe and smolts, if it can be clear that other protection and preservation measures stipulated in the law and government orders are not sufficient to prevent the genetic mixing of such salmon with local natural populations, which could threaten biological diversity and endanger natural populations."
 - b. No mention of alien nor invasive species in the law.
- Act on aquaculture (Lög um fiskeldi: 71/2008)
 - . Biodiversity is partially integrated with the prevention of genetic mixing between wild salmon and farmed salmon.
 - . No mention of alien nor invasive species.
- <u>Regulation on aquaculture</u> (Reglugerð um fiskeldi: 540/2020)
 - . Biodiversity is partially integrated: "Sustainable fishing exploitation of a fish stock: The exploitation of a fish stock by fishing in such a way that the stock manages to maintain both its population size and its biological diversity"
 - No mention of alien nor invasive species.
- <u>Regulation on ballast water</u> (Reglugerð um kjölfestuvatn 515/2010) "The aim of this regulation is to prevent alien organisms and pathogens, such as viruses and germs, from being carried by ballast water to the sea areas and beaches around Iceland by limiting its discharge."
 - . Biodiversity is not integrated in this regulation.
- . No laws mention ballast water.
- <u>Regulation on the conservation of lake Mývatn and the river Laxá</u> (Reglugerð um verndun Mývatns og Laxár í Suður-Þingeyjarsýslu: 665/2012)
 - . Biodiversity is integrated.
 - . Alien invasive species are defined and integrated.
- <u>Regulation on the conservation of Lake Thingvallavatn and its catchment area</u> (Reglugerð um framkvæmd verndunar vatnasviðs og lífríkis Þingvallavatns: 650/2006)
 - . Biodiversity is defined and integrated.
 - . Alien invasive species are not mentioned but the release of organisms is not allowed in Lake Thingvallavatn.

Laws and regulations related to target 6 where biodiversity is not integrated and there is no mentioning of alien or alien invasive species:

- Act on protection against diseases and pests of plants (Lög um varnir gegn sjúkdómum og meindýrum á plöntum: 51/1981).
- Act on livestock management (Lög um búfjárhald: 38/2013). In this law, livestock means poultry, goats, horses, rabbits, fur animals, cattle, sheep and pigs.
- Act on veterinarians and animal health services (Lög um dýralækna og heilbrigðisþjónustu við dýr: 66/1998).
- Act on animal diseases and their prevention (Lög um dýrasjúkdóma og varnir gegn þeim: 25/1993)
- Act on protection against fish diseases (Lög um varnir gegn fisksjúkdómum: 60/2006)

- Regulation on the import and export of plants and plant products (Reglugerð um innflutning og útflutning á plöntum og plöntuafurðum: 189/1990).
- Regulation on rabbit farming (Reglugerð um kanínurækt: 557/1998)
- Regulation on the import of fur animals (Reglugerð um innflutning loðdýra: 859/2002)
- Regulation on measures to prevent the spread of plant diseases (Reglugerð um aðgerðir til að varna útbreiðslu plöntusjúkdóma: 933/2017)
- Regulation on the monitoring of zoonotic diseases (diseases that are transmitted between humans and animals) and zoonotic agents (Reglugerð um vöktun súna (sjúkdóma sem smitast á millimanna og dýra) og súnuvalda: 1048/2011)
- Regulation on animal welfare and disease prevention in aquaculture (Reglugerð um velferð lagardýra, varnir gegn sjúkdómum og heilbrigðiseftirlit með eldisstöðvum: 300/2018)
- Regulation on prevention of zoonotic diseases and infected produce being brought to the country (Reglugerð um varnir gegn því að dýrasjúkdómar og sýktar afurðir berist til landsins: 416/2002)

- <u>White paper on nature conservation 2011</u>. (Chapter 17. <u>Alien species</u>)
- <u>Green paper on biodiversity 2022</u>. White paper on biodiversity is in progress
- <u>Action plan on Biodiversity</u> 2010, chapter 5.7 (Framkvæmdaáætlun um líffræðilega fjölbreytni)
- Action plan for land reclamation and forestry (Land og líf) 2022.
 - . <u>Strategy and vision for the future in land reclamation and forestry until the year</u> 2031.
- Action plan in land reclamation and forestry 2022-2026.
 - . Biodiversity is defined and integrated in this action plan.
- . Alien and alien invasive species are defined and integrated in this action plan.

Responsibility (ministries, institutions etc.)

- The Ministry of the Environment, Energy and Climate as well as the Ministry of Food, Agriculture and Fisheries largely deal with the issue of alien organisms.
 - Many institutions play a role when it comes to biodiversity. Their roles are often closely related and in some cases there is an overlap in projects. Despite this number of institutions, it seems even unclear in terms of administration and responsibility regarding exotic species, who should do what. (page 82 Green paper on biodiversity 2022)
- The Minister of Environment, Energy and Climate can, according to article 7 of Act no. 64/1994, advocate for the extermination of animals that have been brought into the country by humans.

- The Environment Agency of Iceland and the Icelandic Food and Veterinary Authority handle applications for the import of exotic species according to Article 63 XI. chapter of the Nature Conservation Act no. 60/2013 and Article 2 Act on the import of animals no. 54/1990. It can also eradicate species that have become invasive per recommendations from specialists (article 67 of Act no. 60/2013).
- The Marine and Freshwater Research Institute and Land and Forest Iceland, are advisors in matters of exotic species and therefore play an important role when it comes to monitoring and reporting exotic species discovered in the country's natural environment.
- The Icelandic Institute of Natural History and nature research centres such as the Southwest Icelandic Nature Research Centre play a large role in monitoring invasive species. This is not a defined role of these institutions according to law (60/1992).
- Cooperation between ministries, their institutions and other parties is important to achieve this goal, as the responsibility lies with more than one party.

Complexities in the administration

- The laws in Iceland that deal with alien organisms are unclear when it comes to which parties are responsible for monitoring alien species that might become invasive.
- Meira

How is the target being implemented?

- Introduction pathways of alien species are known or planned to be mapped in forestry, agriculture (regarding pathogens), aquaculture (only for salmon) and for shipping routes.
- The introduction of invasive alien species is planned to be prevented in forestry with an assessment of possibly invasive tree species (action plan for land reclamation and forestry). In agriculture a quarantine or a risk assessment is needed when animals or plants are imported, this is mostly to prevent pathogens and genetic mixing (Act no. 54/1990, regulation 933/2017). In aquaculture pathogen spread is prevented by disinfecting all equipment imported and measures to prevent salmon from escaping net pens are required (Act no. 60/2006, regulation no. 540/2020). The release of ballast water within the pollution jurisdiction of Iceland is banned (regulation no. 515/2010). The importation of animals (except fish and invertebrates used in aquaculture) is banned without a special permit (Act no. 54/1990).
- If an alien species is introduced a plan to prevent it from being established exists only for pathogens in agriculture and aquaculture and for salmon that escapes net pens (regulation no. 665/2001, regulation no. 933/2017, regulation no. 1133/2021).
- When it comes to alien species that have become established and invasive in Icelandic nature it is the responsible party that should eradicate the species so that it does not cause biodiversity loss (article 65 of Act no. 60/2013, article 13 of Act no. 71/2008). The Environmental Agency can eradicate species that have become invasive (article 67 of

Act no. 60/2013). However, no response plan exists for when species have become invasive.

- •
- A collaboration group with representatives from MAST (Icelandic Food and Veterinary Authority), Tilraunastöð Háskóla Íslands í meinafræði að Keldum (The Institute for Experimental Pathology), Náttúrufræðistofnun (Icelandic Institute of Natural History), Umhverfisstofnun (the Environment Agency of Iceland) and Hafrannsóknastofnu (Marine & Freshwater Research Institute) has issued a <u>Response Plan for when nonnative wild animals are found</u>. This refers to vertebrates of species that are not part of the wild Icelandic animal population, but it does not apply to whales and birds.

Allocated funding from the government (yes/no/partially)

• NO

List of projects/efforts

- Nootka lupine (*Lupinus nootkatensis*), Cow Parsley (*Anthriscus sylvestris*) and *Heracleum* sp.
 - Several municipalities in Iceland have made efforts to eradicate these invasive alien plant species. For example: Akureyri, Bolungarvík, Reykjavík and Stykkishólmur.
 - Large companies such as Landsnet and Landsvirkjun and environmental NGO's such as Landvernd have made efforts to eradicate lupine.
- Mink (Neogale vison former Neovison vison)
 - Mink has been hunted in Iceland since the late 1930's and several eradication efforts have been made.
- Marine alien species
 - The Southwest Icelandic Nature Research Centre and the University of Iceland have been monitoring several alien marine species since 2006, when the rock crab (*Cancer irroratus*) was first found in Icelandic waters.
- Soil Regulations?

Target 7. Reduce Pollution to Levels That Are Not Harmful to Biodiversity

- Act on sanitation and pollution prevention (Lög um hollustuhætti og mengunarvarnir: 7/1998).
 - . Biodiversity is not integrated.
 - Pollution and its effect on humans and the environment is integrated.
- Act on hazardous chemicals (Efnalög: 61/2013)
 - . Biodiversity is not integrated.
 - Pollution and its effect on living organisms and the environment is integrated.
- <u>Act on coastal and marine pollution prevention</u> (Lög um varnir gegn mengun hafs og stranda: 33/2004)
 - . Biodiversity is not integrated.
 - Pollution and its effects on the marine
 - a. <u>Act on the control of feed, fertilizers and seed products</u> (22/1994 Lög um eftirlit með fóðri, áburði og sáðvöru)
 - . Biodiversity is not integrated.
 - . Pollution is only mentioned in the context of additional control on products.
- Act on aquaculture (Lög um fiskeldi: 71/2008)
 - . Biodiversity is not integrated in this act.
- . Pollution is only mentioned in the context of Act on sanitation and pollution prevention (Lög um hollustuhætti og mengunarvarnir: 7/1998).
- <u>Act on single-use drink containers</u> (Lög um ráðstafanir gegn umhverfismengun af völdum einnota umbúða fyrir drykkjarvörur: 52/1989)
 - . Biodiversity is not integrated.
 - . The aim of this act is better resource use but plastic pollution and its effects on the environment is not mentioned.
- Act on the management of water (Lög um stjórn vatnamála : 36/2011)
 - . Biodiversity is not integrated.
 - . Pollution and its effect on freshwater and marine ecosystems are mentioned but only in the context of conserving water.
- <u>Act on environmental responsibility</u> (Lög um umhverfisábyrgð: 55/2012)
 - . Biodiversity is integrated.
 - Pollution and its effect on the environment and biodiversity is integrated.
- <u>Act on sewerage systems</u> (Lög um uppbyggingu og rekstur fráveitna: 9/2009)
 - . Biodiversity is not integrated.
 - . Pollution and its effects on the environment is mentioned.
- Act on waste treatment (Lög um meðhöndlun úrgangs: 55/2003)
 - . Biodiversity is not integrated.

- . Waste treatment and reduction, including sewerage is integrated.
- Act on water (Vatnalög: 15/1923)
 - . Biodiversity is not integrated.
 - . Pollution and its effect on freshwater ecosystems are mentioned but only in the context of conserving water.
- Act on ban on the release of hazardous chemicals into the ocean (Lög um bann við losun hættulegra efna í sjó: 20/1972)
 - . Biodiversity is not integrated.
 - Pollution and its effect on marine life is mentioned.
- <u>Act on the Conservation of Lake Thingvallavatn and its Catchment Area</u> (Lög um verndun Þingvallavatns og vatnasviðs þess: 85/2005)
 - . Biodiversity is integrated.
 - Pollution and its effect on the biodiversity of the lake is mentioned.
- Regulation on poultry, fur and pig farms. (Reglugerð um eldishús alifugla, loðdýra og svína: 520/2015)
 - . Biodiversity is not integrated.
 - Prevention of water pollution is integrated.
- b. <u>Regulation on sustainable land use</u>. (Reglugerð um sjálfbæra landnýtingu: 670/2024)
 - Biodiversity is integrated.
 - . Pollution is defined and integrated. "Soil contamination must be prevented and minimized... Water pollution is not allowed."
- <u>Regulation on prevention of water pollution</u>. (Reglugerð um varnir gegn mengun vatns: 796/1999).
 - . Biodiversity is not integrated.
- . Water pollution is defined and integrated.
- <u>Regulation on prevention of groundwater pollution</u> (Reglugerð um varnir gegn mengun grunnvatns: 797/1999)
 - . Biodiversity is not integrated.
 - Water pollution is defined and integrated.
- <u>Regulation on soil pollution</u> (Reglugerð um mengaðan jarðveg: 1400/2020)
 - . Biodiversity is not integrated.
 - . Pollution is defined and integrated.
- <u>Regulation on the response to acute marine or coastal pollution</u> (Reglugerð um viðbrögð við bráðamengun hafs og stranda: 1010/2012)
 - . Biodiversity is not integrated.
 - . Pollution is defined and integrated.
- <u>Regulation on oil exchange on the open sea</u> (Reglugerð um umskipun olíu á rúmsjó: 800/2004)
 - . Biodiversity is not integrated.
 - Pollution is defined and integrated.
- <u>Regulation on oil pollution prevention on land</u> (Reglugerð um varnir gegn olíumengun frá starfsemi á landi: 884/2017)

- . Biodiversity is not integrated.
- . Pollution is integrated but not defined and not in the context of the environment.
- <u>Regulation on oil waste</u> (Reglugerð um olíuúrgang: 809/1999)
 - Biodiversity is not integrated.
 - . Pollution is defined and integrated.
- <u>Regulation on toxic waste</u> (Reglugerð um spilliefni: 806/1999)
 - . Biodiversity is not integrated.
 - . Pollution is defined and integrated.
- <u>Regulation on sludge treatment</u> (Reglugerð um meðhöndlun seyru: 799/1999)
 - . Biodiversity is not integrated.
 - . Pollution is defined and integrated and its effects on the environment are mentioned.
- Regulation on sewage systems (Reglugerð um fráveitur og skólp: 798/1999)
 - . Biodiversity is not integrated.
 - . Pollution is defined and integrated and its effects on the environment are mentioned.
- <u>Regulation on pollution from businesses</u> (Reglugerð um losun frá atvinnurekstri og mengunarvarnaeftirlit: 550/2018)
 - Biodiversity is not integrated.
 - . Pollution is defined and integrated and its effects on the environment are mentioned.
- <u>Regulation on the use of pesticide</u> (Reglugerð um meðferð plöntuverndarvara og útrýmingarefna: 677/2021)
 - . Biodiversity is not integrated.
 - . Pesticide is defined and its effect on the environment is mentioned.
- Regulation on green accounting (Reglugerð um grænt bókhald: 851/2002)
 - . Biodiversity is not integrated.
 - . Pollution is integrated.
- <u>Regulation on waste recycling</u> (Reglugerð um endurnýtingu úrgangs: 1078/2015)
 - Biodiversity is not integrated.
 - Waste pollution and its effects on the environment and organisms is mentioned.
- <u>Regulation on waste treatment</u> (Reglugerð um meðhöndlun úrgangs: 803/2023)
 - . Biodiversity is not integrated.
 - . Waste pollution and its effects on the environment and organisms is mentioned.
- Regulation on waste deposition (Reglugerð um urðun úrgangs: 738/2003)
 - . Biodiversity is not integrated.
 - . Waste pollution and its effects on the environment and organisms is defined and integrated.
- <u>Regulation on nature conservation</u> (Reglugerð um náttúruvernd: 205/1973)
 - . Biodiversity is not integrated.
 - . Pollution and its effects on the environment and organisms is mentioned.
- <u>Regulation on noise pollution</u> (Reglugerð um hávaða: 724/2008)

- . Biodiversity is not integrated.
- . Noise pollution is only mentioned in the context of human health.
- <u>Regulation on the conservation of Lake Thingvallavatn and its catchment area</u> (Reglugerð um framkvæmd verndunar vatnasviðs og lífríkis Þingvallavatns: 650/2006)
 - . Biodiversity is defined and integrated.
 - . Pollution is defined and integrated.

Laws and regulations related to target 7 where biodiversity is not integrated and there is no mentioning of pollution:

• <u>Regulation on fertilizers and soil improvers</u> (Reglugerð um áburð og jarðvegsbætandi efni: 398/1995)

Action plans, green papers and white papers that are relevant to this topic

- Action plan for land reclamation and forestry (Land og líf) 2022.
 - . <u>Strategy and vision for the future in land reclamation and forestry until the year</u> <u>2031</u>.
 - Action plan in land reclamation and forestry 2022-2026.
 - Biodiversity is defined and integrated in this action plan.
 - . This action plan states that "the protection and restoration of ecosystems must be integrated with the utilization of organic waste," but no further goals related to this, or other issues related to pollution, can be found in the action plan.
- Action plan for Agricultural Policy (Aðgerðaráætlun landbúnaðarstefnu 2024)
- . Biodiversity is defined and integrated in this action plan.
- . This action plan states that "In the coming years and decades, it is imperative to make much better use of the biodegradable materials available in this country for fertiliser. It will prevent negative climate effects and pollution due to their disposal, but will also reduce the need to import fertilizers and feed. The latter also affects the country's food security. These goals are expressed in the policy of the Minister of Environment and Natural Resources "Towards a circular economy" from 2021, the government's current action plan in climate matters and the Ministry of Food's position document on the improved use of biodegradable materials in land reclamation and agriculture from 2023." No further goals related to this, or other issues related to pollution, can be found in the action plan.
- <u>Action plan for waste management and circular economy</u> (Í átt að hringrásarhagkerfi)
 2021
 - . Biodiversity is not defined nor integrated. Biodiversity is mentioned once in the context of the UN Sustainable Development Goals.
 - . Pollution and waste is the main aspect of this action plan but the focus is more on waste as a resource rather than the effects it can have on the environment.
- Action plan for waste reduction (Saman gegn sóun) 2016
 - . Biodiversity is not mentioned.
 - . Pollution and waste is the main aspect of this action plan but the focus is more on waste as a resource rather than the effects it can have on the environment.

- Action plan for climate change (Aðgerðaáætlun í loftslagsmálum) 2024
 - . Biodiversity is mentioned as an important part of climate change action.
 - . Pollution and its effect on the environment is mentioned and there are a few action points related to pollution such as banning organic waste deposition and investing in better sewage systems. The focus here is on reducing carbon emissions rather than pollution and its effects on the environment.
- Action plan on plastic pollution (Úr viðjum plastsins) 2020
 - . Biodiversity is not integrated.
 - . Plastic pollution and its effect on the environment and organisms is integrated.
- Action plan for the use of pesticides (Aðgerðaráætlun um notkun varnarefna) 2016-2031
 - . Biodiversity is integrated.
 - . Reducing the use of pesticides in certain areas is one of the aims.
- Tillögur að aðgerðaáætlun gegn útbreiðslu sýklalyfjaónæmis

Responsibility (ministries, institutions etc.)

- The Ministry of Environment, Energy and Climate deals with pollution matters.
 - The Ministry that deals with infrastructure and the Ministry that deals with fisheries are advisory when it comes to matters related to marine and coastal pollution.
- The Environment Agency is responsible for monitoring and educating the public on pollution as well as giving out permits for the use of chemicals in agriculture, industry etc.
 - Public health committees and the Public Health Authority work closely with the Environment Agency on education, pollution control and monitoring within the municipalities.
- Institutions such as the Icelandic Institute of Natural History, the Icelandic Met Office and the Marine and Freshwater Research Institute are advisory when it comes to pollution.
- Fire departments are the responders to water, marine and soil pollution accidents.
- According to article 7 of the Act on coastal and marine pollution prevention (33/2004) and the Act on environmental responsibility (55/2012) the responsibility of the damage caused by pollution lies with the polluter.
- The Icelandic Recycling Fund is responsible for reducing waste generation (article 15 of act no. 162/2002).
- The municipalities create a plan regarding waste management which is then monitored by the Environmental Agency (article 6 of act no. 55/2003).

How is the target being implemented?

- Many acts and regulations exist regarding pollution in agriculture, aquaculture, forestry and land reclamation, shipping and water and sewage matters. Reducing the negative effects pollution has on biodiversity is not the aim of these laws but in some of them the aim is conserving ecosystems or the environment (Act no. 7/1998, Act no. 61/2013, Act no. 33/2004).
- Reduction of the loss of excessive nutrients into the environment is mentioned in the action plan for agricultural policy (page 23). Some organic chemicals cannot be released into water according to regulation no. 796/1999.
- Cautious use of pesticides and other hazardous chemicals is mentioned for agriculture and aquaculture (regulation no. 670/2024, regulation no. 300/2018). The action plan for the use of pesticides has a target of reducing pesticide use in urban areas, along roads, in water and when used for invasive species (page 14). Article 21 of regulation no. 677/2021 states that reduction and sustainable use of pesticides should be the aim of the action plan for the use of pesticides.
- Reducing the use of plastic is one of the aims of the action plan on plastic pollution. Plastic recycling, monitoring microplastics in the ocean, reducing microplastic pollution with for example better sewage treatment, coastal cleanups and bringing all fishing gear back to shore are other aims of this action plan.
 - o Three step sewage treatment facilities have only been established in one municipality.
- Light pollution is not mentioned in Icelandic laws or policies (<u>see response from the</u> <u>Minister of Environment in 2004</u>).
- Heavy metal accumulation from industry is monitored by the Environmental Agency according to article 54 of Act no. 7/1998.

List of projects

- ICP vegetation international research project carried out by the Icelandic Institute of Natural History every five years in Iceland. Heavy metal accumulation in moss is monitored.
- The Icelandic Met office monitors heavy metals in rainwater and particle pollution.
- The Environmental Agency is in charge of the effort to reduce the use of single-use plastic.

Target 8. Minimize the Impacts of Climate Change on Biodiversity and Build Resilience

Laws, regulations, directives, decrees that are relevant to this topic

- Act on land reclamation (Lög um landgræðslu: 155/2018)
 - . Biodiversity is integrated.
 - . Climate change resistance and resilience of ecosystems is mentioned.
- Act on forests and forestry (Lög um skóga og skógrækt: 33/2019)
 - . Biodiversity is integrated.
 - . Adaptation of forests to climate change is mentioned.
- <u>Climate Act</u> (Lög um loftslagsmál: 70/2012)
 - . Biodiversity is not integrated.
 - . The effects of climate change and climate change action on ecosystems or biodiversity is not integrated. Article 5 mentions a report that is to be published every few years where climate change effects on nature should be integrated.
- <u>Act on environmental assessment for projects and plans</u> (Lög um umhverfismat framkvæmda og áætlana: 111/2021)
 - . Biodiversity is integrated.
 - . The effects of projects on climate should be assessed.
- <u>Regulation on environmental assessment for projects and plans</u> (Reglugerð um umhverfismat framkvæmda og áætlana: 1381/2021)
 - . Biodiversity is integrated.
 - . The effects of projects on climate and adaptation to climate change should be assessed.

Action plans, green papers and white papers that are relevant to this topic

- Action plan for land reclamation and forestry (Land og líf) 2022.
 - b. Strategy and vision for the future in land reclamation and forestry until the year 2031.
 - b. Action plan in land reclamation and forestry 2022-2026.
- . Biodiversity is defined and integrated in this action plan.
- . The conservation and restoration of ecosystems should be integrated with climate action.
- <u>Action plan for Agricultural Policy</u> (Aðgerðaráætlun landbúnaðarstefnu 2024)
- . Biodiversity is defined and integrated in this action plan.
- . Incentives for farmers to reduce emissions and increase carbon capture of vegetation and soil (action point 2.3).
- <u>Green paper on biodiversity 2022</u>. White paper on biodiversity is in progress
 - . The importance of monitoring the effects of climate change on ecosystems is mentioned.

- Action plan for climate change (Aðgerðaáætlun í loftslagsmálum) 2024
 - . Biodiversity is mentioned as an important part of climate change action.
- Action plan for Regional Development 2022-2026 (Aðgerðaáætlun byggðaáætlunar)
 - . Biodiversity is not integrated but one of the action points is nature conservation within municipalities.
 - . Climate change adaptation for four municipalities is one of the action points.

Responsibility (ministries, institutions etc.)

- The Ministry of Environment, Energy and Climate is responsible for climate matters (Act no. 70/2012). The Minister of Environment, Energy and Climate is responsible for creating a climate action plan every four years (article 5 of Act no. 70/2012).
- Other ministries take part in the creation of a climate action plan and are responsible (along with their institutions) for the action points that relate to the matters the respective ministry is responsible for (article 5 of Act no. 70/2012).
- The climate committee is advisory to the government about climate change matters. It is independent and in it are people from the business sector, universities, municipalities and environmental organisations (article 5 of Act no. 70/2012).
- The Environmental Agency is responsible for accounting for all emissions and carbon capture (article 6 of Act no. 70/2012).

How is the target being implemented?

- Increasing the resilience of ecosystems to climate changes (Act no. 155/2018) and the adaptation of forests to climate change (Act no. 33/2019) are action points in land reclamation and forestry that have climate change effects on biodiversity integrated.
- Ecosystem restoration and better land use as a method for lowering emissions in agriculture is mentioned (target 2.3 of the action plan for agriculture).
- The effects of climate actions on biodiversity are planned to be mapped and monitored in land reclamation and forestry (Action plan for land reclamation and forestry). These actions include the effects of ecosystem restoration and forestry on biodiversity and that carbon credits in forestry take biodiversity into account.
- Most of these actions have not begun yet (except adaptation of forests to climate change) and only have a proposed budget but no secured funding.