

# CSD 16 - Iceland's national report

## Desertification, drought and land care

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### International agreements

Presently, Iceland is a party to over 20 conventions in the field of environmental affairs. Some of these agreements are international while others are regional. Among the most important global conventions are the UN Framework Convention on Climate Change, the UN Convention on Biological Diversity, the UN Convention to Combat Desertification, the Ramsar Convention on Wetlands and the Bern Convention on the Conservation of European Wildlife and Natural Habitats.

## Inter-ministerial coordination

Ministry for the Environment is in charge of affairs relating to sustainable development in Iceland. The ministry supervises issues pertaining to nature in Iceland, conservation and outdoor recreation, the protection of animals, the hunting of wild animals, pollution prevention, hygiene and food, planning and settlement affairs, fire prevention, avalanches, surveying and cartography, environmental studies and surveillance, training and information activities in the field of environmental affairs.

Ministry of Agriculture is in charge of matters relating to agriculture, land use, soil conservation and forestry in Iceland.

The Soil Conservation Service, under the coordination of the Ministry of Agriculture, is mainly responsible for anti-desertification measures. The institute was first established in 1907 as the Sand Reclamation Service to battle encroaching sand. The Soil Conservation Law (1965) grants authorities the means to combat land degradation and desertification. Furthermore, the Ministry of Agriculture has prepared a national Soil Conservation Strategy (1991) and a committee appointed by the ministry completed a new soil conservation policy in 1999 based on extensive consultations. NGOs participate in a number of anti-desertification activities and reclamation projects. Women and youth participate in specific projects at all levels (national, district and field).

In 2001, The Farmers Association formed a grass-root movement "*Lifandi landbúnaður*" or "*Active Agriculture*" that aims to empower women-farmers to be more active and more visible in the society, to promote agriculture in a positive and a different way, and to encourage equal rights within the Farmers Association.

The Government aims at bringing soil erosion under control and achieving sustainable land use as soon as possible. Landowners, institutions and enterprises, as well as the society as a whole, share the responsibility for implementation. According to a national survey completed in 1996, about 40% of Iceland, or 40.000 km<sup>2</sup>, is characterized by severe soil erosion. Due to the subarctic and oceanic climate, vegetation in Iceland does not experience conditions of extreme drought. Desertification is mainly caused by the interaction of grazing effects, both past and present, along with sensitive volcanic soils and sensitive vegetation having a very short growing season, in addition to harsh climate. Grazing has in some cases been identified as having serious consequences.

Measures are being planned to restrict livestock grazing to areas where it does not cause deterioration in the quality of the land. The government has encouraged a more conservative use of land by providing financial assistance and guidance.

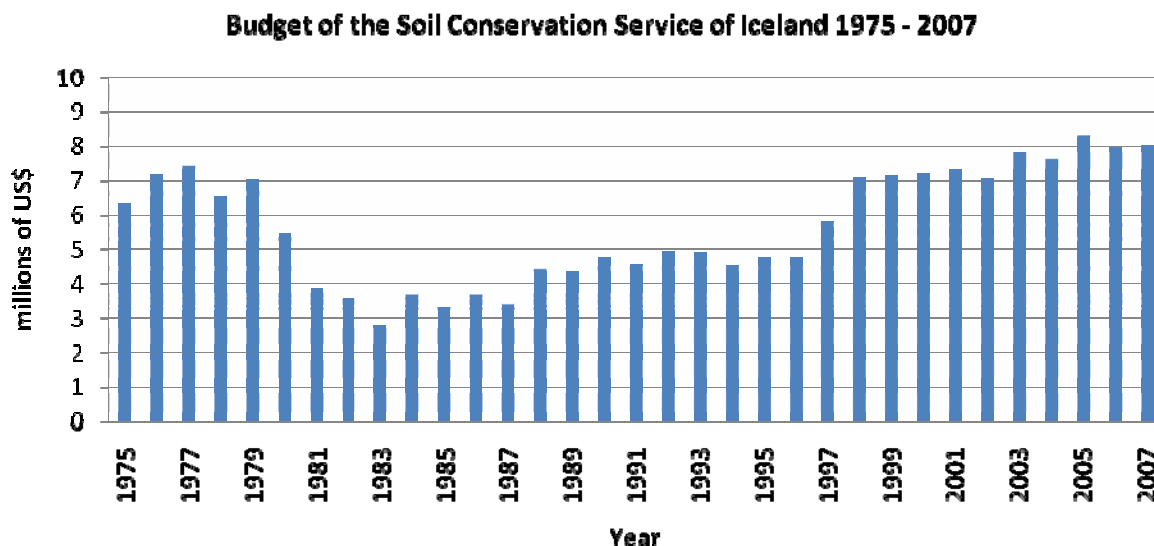
**Capacity-building, Education, Training and Awareness-Raising:** In addition to policy and legal instruments, efforts to improve environmental knowledge and education at

all levels of the school system have begun. Special emphasis has been put on land care. Media has been an important means to increase public awareness on this issue.

The Agricultural University of Iceland has recently increased emphasis in its curricula on sustainable land use, soil conservation, revegetation and afforestation.

**Research and Technologies:** Actions have been taken to improve preventive measures and the effectiveness of reclamation and restoration of eroded and severely degraded areas. These include research into the processes of land degradation and soil erosion, reclamation methods, the use of native species for revegetation and processes of community and ecosystem recovery.

**Financing:** Awareness of the problems of land degradation, desertification and the need for reclamation has greatly increased in recent years, especially as research has confirmed the severity of land condition. However, the budget of the Soil Conservation Service has remained fairly constant despite increased and more varied responsibilities.



**Figure.** Budget of the Soil Conservation Service of Iceland 1975-2007. Budget cost adjusted to current date 2007.

### Long-term soil conservation strategy, 2003-2014:

The Soil Conservation Programme for 2002-2013 was approved by the Icelandic Parliament (Althingi) on April 30<sup>th</sup> 2002

(<http://www.land.is/landbunadur/wglgr.nsf/key2/landgraedsluaaetlun.html>). This 12-year planning is the first long-term strategy of its kind. It forms a framework for land improvement and the protection of land quality, and is Iceland's equivalence of a National Action Plan for Combating Desertification. This programme emphasizes

mitigating land degradation and desertification, reclamation, sustainable land use, research, extension and awareness-raising. It includes provisions for strengthening cooperation with NGOs, land users and other interest groups. The strategy envisions increased efforts for revegetation. Measures will be taken so that soil conservation will be in line with policy on development and nature conservation. The strategy also aims to fulfill international agreements on desertification and nature conservation that Iceland is a party to.

Reference:

Farmers Association

<http://www.bondi.is/landbunadur/wgbi.nsf/199a414bd98db66c00256ab1004967c2/2f87cc10e2d6850a00257123005eb169?OpenDocument&Highlight=0,landgr%C3%A6%C3%B0slu%C3%A1%C3%A6tlun>)

<http://www.landbunadur.is/landbunadur/wgbi.nsf/key2/bosn6melew.html>

National Association of Sheep Farmers

<http://landbunadur.rala.is/landbunadur/wgbi.nsf/key2/ls-fundargerdir09112005>

## **Policies and practices to arrest land degradation and to restore land and soil quality**

### **Farmers Heal the Land - “Bændur græða landið”.**

The Soil Conservation Service of Iceland co-operates with 25% of Icelandic farmers in the programme Farmers Heal the Land. The purpose of this rehabilitation project is to assist farmers to revegetate degraded land, to halt erosion, and to reclaim land so that it is again available for sustainable agricultural use or other land uses. This project started in 1990 and has now about 650 participants. The Soil Conservation of Iceland provides consultation and seeds (if needed) and refunds partially the price of fertilizer, whereas farmers take care of seeding, fertilizing and transport costs.

### **Sustainable utilization of both common and private grazing land:**

#### **Quality management in sheep farming - the land use factor**

In the year 2000 the Icelandic government and sheep farmers signed a contract on agricultural support which has partial cross-compliance, i.e. about a third of the support is dependent on quality of land use. The subsidy agreement was then revised and renewed in 2007. The criteria for quality management include good animal treatment, controlled use of chemicals and medicine, and participation in a national breeding program. Sustainable land use is also a part of the quality management. The main

criteria on the use of land for grazing is that it shall be sustainable, the condition of the land acceptable and the state of vegetation stable or improving.

Participation is on a voluntary basis, farmers that meet the quality criteria receive up to 22.5% more subsidies in government support. Farmers that apply for participation in quality managed sheep farming must produce confirmation that they have access to grazing land that is in an acceptable condition and that the grazing is sustainable. Barren and eroded areas should not be utilized for grazing and plans of implementation must be produced for land improvement.

Regulations on quality management in sheep farming: [http://www.landbunadarraduneyti.is/log-og-reglugerdir/Reglugerdir/Allar\\_reglugerdir/nr/102](http://www.landbunadarraduneyti.is/log-og-reglugerdir/Reglugerdir/Allar_reglugerdir/nr/102)

Information: <http://www.land.is/landbunadur/wglgr.nsf/key2/gaedastyings.html>

### **Quality management in horse breeding - the land use factor**

The Horse Breeders Association of Iceland (Félag hrossabænda) and the Soil Conservation Service of Iceland established a voluntary action where horse breeders can take part in quality management for utilization of land. The purpose of this annual certification of land use is to ensure sustainable land use of grazing and range land, and to ensure animal welfare.

More information in Icelandic :

<http://land.is/landbunadur/wglgr.nsf/key2/gaedastyringh.html>

<http://landbunadur.rala.is/landbunadur/wglgr.nsf/key2/lann6zxhky.html>

### **Increased forest farming:**

Governmental policy encourages afforestation projects. Regional forestry projects have been established in all regions of the country, which provide funds to farmers and other landowners for this purpose. The forests that are being planted are designed for multiple uses. They are intended for outdoor activities, as habitats for other organisms and as soil protection from erosion. In some cases they are also intended to produce timber. It is important that the forests are maintained in harmony with the landscape and that afforestation will not disturb important habitats, natural phenomena or archaeological sites. Afforestation projects larger than 200ha in size are requested by law to undergo environmental assessment, whereas smaller project under 200 ha are exempt from that requirement.

The NGO Forestry Association of Iceland administers a special project for Afforestation for Soil Conservation and Reclamation, funded by the Ministry of Agriculture.

Recently a project on restoration of natural birch forests started on a 100 000 ha area in the vicinity of the volcano Hekla in South Iceland. This project, *Hekluskógar* or the *Forests of Hekla*, is both funded by governmental and private funds.

### **Land Improvement Fund, “Landbótasjóður”;**

The Land Improvement Fund „Landbótasjóður“, was established in 2003, its purpose is to move responsibility, initiative and execution of soil conservation projects to local authorities, to land owners, local governments, communities and non-governmental organizations, by providing funding for soil conservation projects. The Soil Conservation Service of Iceland provides consultation, funding and supervision of projects. Projects that conform to aims and focal points of long-term soil conservation strategy planning for 2003-2014 are given priority.

The long-term soil conservation strategy planning for 2003-2014 was accepted by the parliament in 2002.

Reference:

<http://landbunadur.rala.is/landbunadur/wgbi.nsf/199a414bd98db66c00256ab1004967c2/2f87cc10e2d6850a00257123005eb169?OpenDocument&Highlight=0,landgr%C3%A6%C3%B0slu%C3%A1%C3%A6tlun>

### **Capacity building for developing countries**

An international training program in soil conservation and land restoration is being developed as a 3-year experimental project, 2007-2009. This project is funded by the Icelandic government and developed by the Soil Conservation Service of Iceland and the Agricultural University of Iceland. This training program will provide about 20-25 students from developing countries a six month training period in Iceland to study to learn about soil conservation, desertification, and sustainable development. The first students will arrive in the summer of 2007. The Soil Conservation Training Program is under consideration to become a part of UNU Training Programs. Two such programs are already operated in Iceland, the UNU Geothermal Training Programme and the UNU Fisheries Training Programme.

### **International Forum on Soils, Society and Global Change, september 2007**

On the occasion of the centenary of state organized soil conservation and land restoration in Iceland, the Icelandic Soil Conservation Service in co-operation with several Icelandic and international organizations is holding an *International Forum on Soils, Society and Global Change* in september 2007. This Forum focuses on the synergistic roles of soil conservation and vegetation restoration in meeting local, regional and global environmental and social challenges, bringing together key stakeholders and specialists from around the world, representing a broad spectrum of disciplines and interests.

Land degradation, manifesting in the form of soil erosion and desertification is a global problem of major proportions, affecting climate and biological diversity, reducing environmental security, destabilizing societies, worsening food security, and increasing poverty. The Forum highlights innovative thinking to collectively tackle the inter-related facets of these problems through sustainable land management (SLM).

The Forum will emphasize the importance of ethics and good practice of soil stewardship in creating an enabling environment for land care; discuss the crucial role of soil as a common denominator for the successful implementation of key Multilateral Environmental Agreements (MEAs) and how improvements of their implementation can be encouraged; debate on carbon sequestration and land restoration, with a particular focus on promoting equitable and ethical carbon trading; and discuss knowledge management and indicators for SLM

## Databases on land use

### Soil erosion map of Iceland

A program to assess soil erosion in Iceland was started in 1990 and completed in 1997. Erosion has now been surveyed in all of Iceland. The information is stored in a readily accessible database, consisting of about 18 000 polygons with information about erosion type and severity in addition to other digital land use related information. The project to assess erosion and desertification in Iceland was awarded the Nordic Council "Nature and Environmental Award" in 1998. This work has been published in a book in Icelandic, and translated into English and German. Currently, no further monitoring of soil erosion on a country scale is in place.

More information: <http://www.rala.is/desert/>

### Support for land improvement plans for farmers

The Agricultural Research Institute, the Farmers Association of Iceland, the Soil Conservation Service (SCS) and the Ministry of Agriculture collaborate on a project called *Icelandic Farmland Database, or "Nytjaland"*. It is meant to be a comprehensive record of landholding in Iceland. Amongst other things, it will gather basic data on the size of individual properties in Iceland together with vegetation details and will provide a basis for assessing whether there is sufficient vegetation for grazing. The project improves the database that certification of sustainable utilization must be based on. *Better Farms, "Betra Bú"*, is a collaborative project of the Agricultural College, the Farmers Association of Iceland and the SCS on revegetation and land use in cooperation with farmers. Emphasis is put on farmers making their own plans, but they receive education and advice on how to do so. Data from *Icelandic Farmland Database* is used as a basis. Farmers, who need land improvement plans for quality

certification in sheep farming, can produce plans in relation to the project for verification, as can horse farmers.

More information in Icelandic:

Nytjaland or the *Icelandic Farmland Database*: <http://www.nytjaland.is>

Betra bú or Better Farms: <http://www.land.is/landbunadur/wglgr.nsf/key2/betrabu.html>

## References

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<http://www.un.org/esa/agenda21/natlinfo/wssd/iceland.pdf>