Introduction

The issue of soil erosion dates back to settlement around 1,100 years ago. The loss of vegetation due to deforestation and grazing exposes the land to the effects of wind, water, and other devastating elements, leading it to erode away. The Soil Conservation Service of Iceland (SCSI) was developed to combat this issue over 100 years ago with efforts including planting trees, promoting safe farming practices, and replenishing the land.

Soil Erosion

The organic world of the soil ecosystem takes a tremendous amount of time to recover if its resources are eroded or lost. Soil conservation includes protecting soil from erosion and its characteristics, such as fertility and its ability to store and deliver water (Arnalds, 2001).

Fertilization

Barren land caused by soil erosion has left vegetation struggling. For instance, “field observations of afforestation on barren land have often revealed growth stagnation and poor survival of seedlings, with mortality ranging from 50 to 100%” (Öskarsson, 2001).

Methodology

A method triangulation was utilized in this study. The three methods of data collection used include interviews, artifacts, and literary review.

Interviews

Four interviews were conducted during the expedition in Iceland.
- Icelandic Tour Guide
- Chef at Hotel in Blöndusí
- Mushroom Farmer in Flúðir
- Expert at Soil Conservation Service Museum

Artifacts

Observations of the land were collected while driving the main highway.

Literary Review

Online Icelandic news and magazine sources were used to corroborate findings.

Findings

Alaskan Lupine

The SCSI introduced the Alaskan Lupine, a purple flower, to help fertilize the soil. It’s main objective is to take nitrogen from the air and redistribute it into the soil. This added nitrogen counteracts the effects soil erosion has had and allows for other plants to overtake and replace the flower. But there is great controversy over the use of this purple flower. Since native plants in Iceland are mostly low growing, they can’t overcome the flower. This leads to spreading out of control and preventing the growth of native plants. The Icelandic public is split between keeping the Lupine or ridding it of the land. Those interviewed had the following opinions:
- Tour Guide: Positive
- Chef: Positive
- Farmer: Negative
- Expert: Neutral

Grazing

The sheep industry in Iceland has become a staple of its economy. One farm can have up to 500 sheep on average. With all of this livestock, they will need a place to graze. This practice was never regulated and it grew out of control, being a major contributor to soil erosion. According to the expert at the SCSI, a “quality sustainable” stamp was developed to allow farmers to prove they were sustainable, but farmers never went through the program and the SCSI never followed up. In addition, it was stated that the current grazing areas need to be reorganized.

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References


As of now, the soil conservation efforts have been adequate, but there is a long way to go. There have been two major dilemmas facing soil conservation, the Alaskan Lupine and grazing. The soil in the southern region has regained back some of its fertility, but at a cost. The Alaskan Lupine has taken control of the land and is preventing anything from growing. This is not beneficial in regards to revegetation efforts. Overgrazing has caused the land to become barren and continues to be a huge problem. The programs currently in place to regulate grazing were found to be ineffective. More research is needed to evaluate the organization of grazing areas and determine the actions needed to mitigate it.