

SOIL CONSERVATION IN ICELAND: CELEBRATING A CENTURY & LOOKING FORWARD

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1907 - 2007
Landgræðsla í 100 ár

**THE DOUBLE CHALLENGE
FOR SOIL CONSERVATION:
NATURAL FORCES & HUMAN
ACTIVITY**

THE RAVAGES OF NATURE: VOLCANOES





Eruptions



New mountains

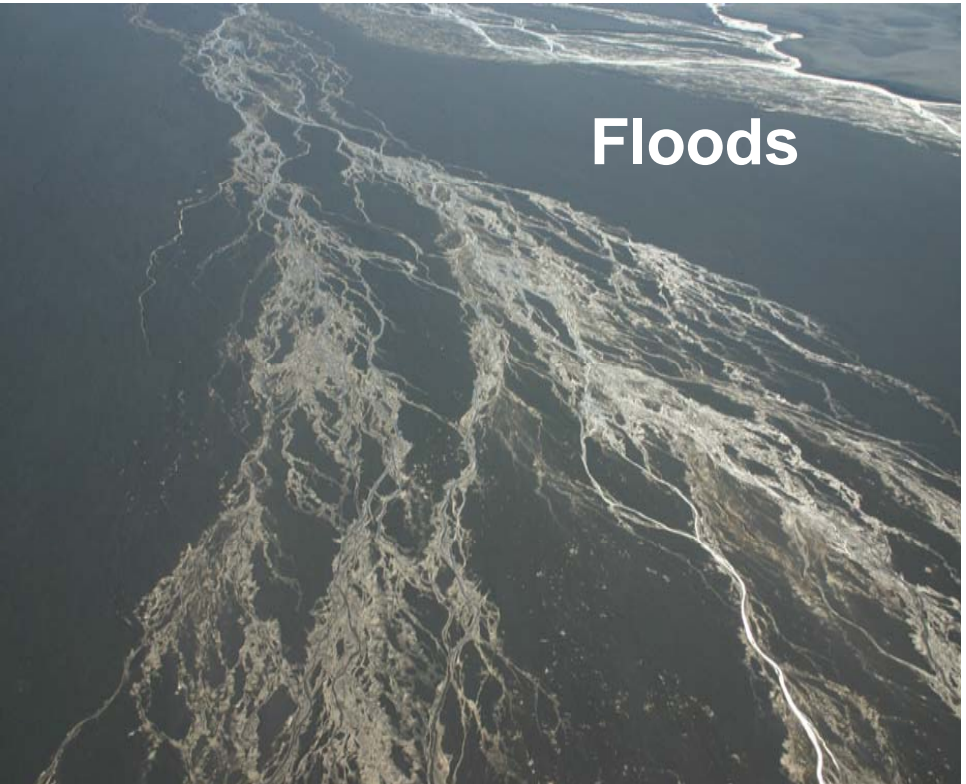


Ash

Canyons of erosion power



Floods



Wind

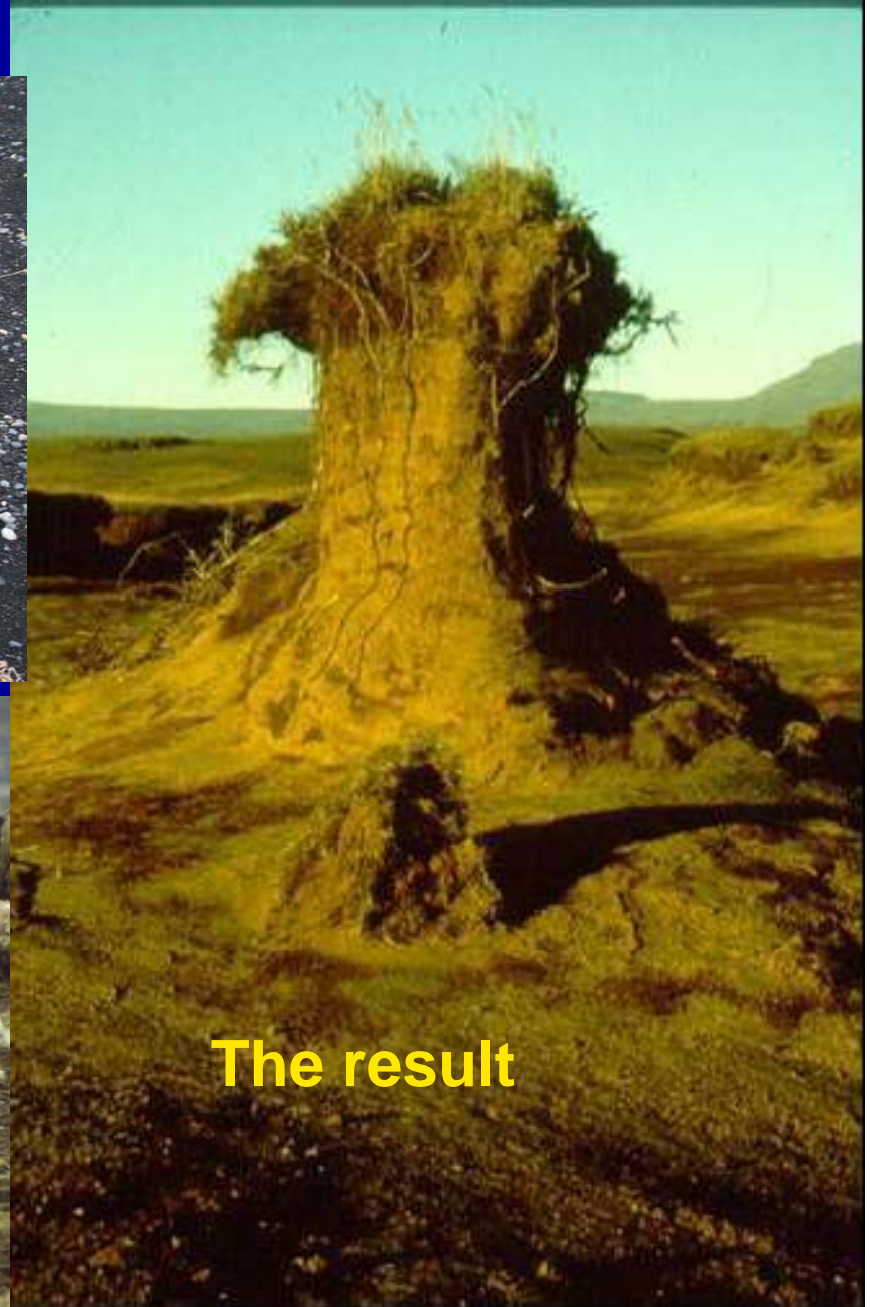


And human devastation

Tree removal



The result



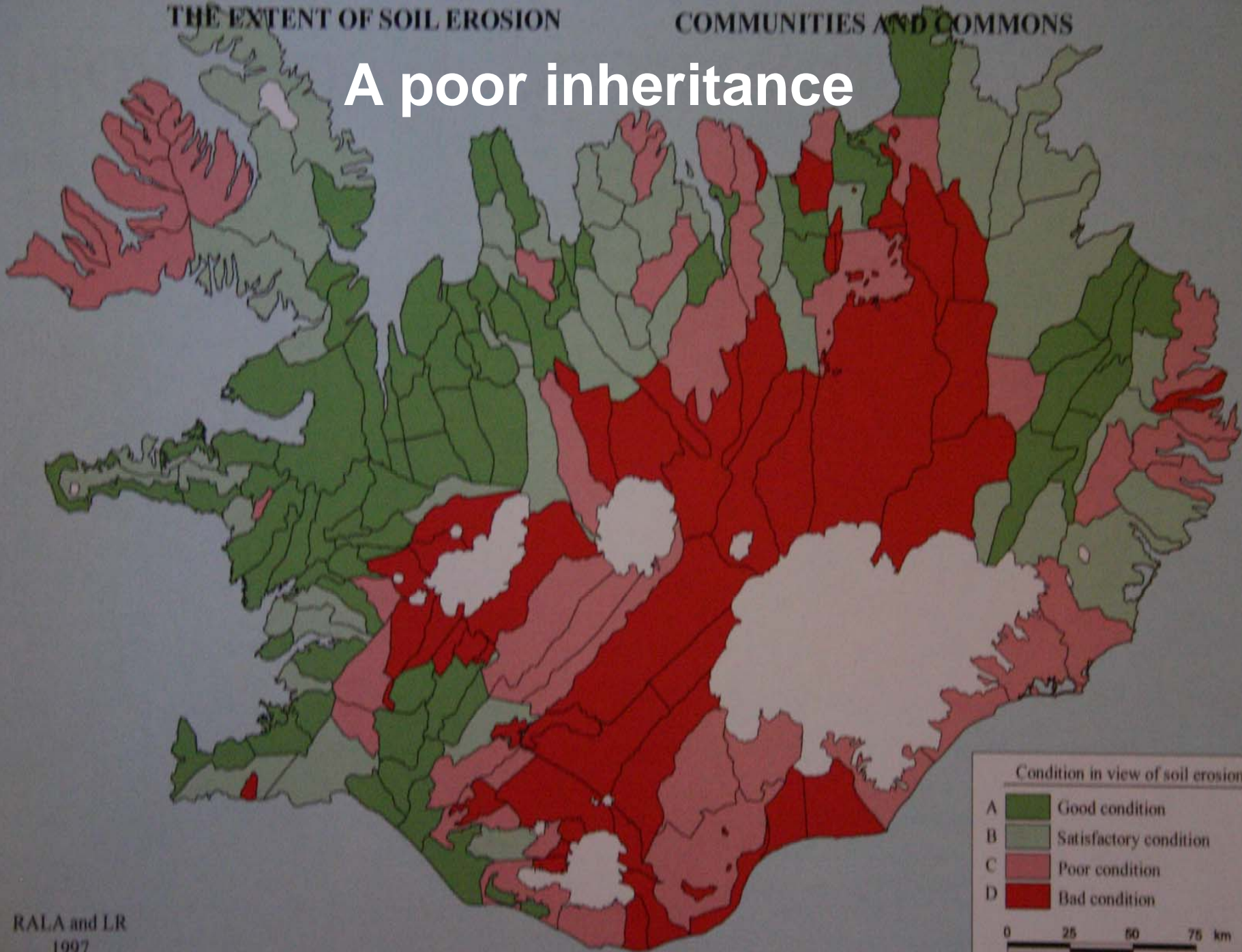
Overgrazing by sheep & horses



THE EXTENT OF SOIL EROSION

COMMUNITIES AND COMMONS

A poor inheritance



BUT MANY THINGS TO CELEBRATE

Moving dunes stabilised



Nitrogen fixed



New lava colonised



Farmland created



And erosion overcome



AND A FEW LESSONS LEARNED



Working from the air without the farmers



Using non native species



INGREDIENTS OF SUCCESS

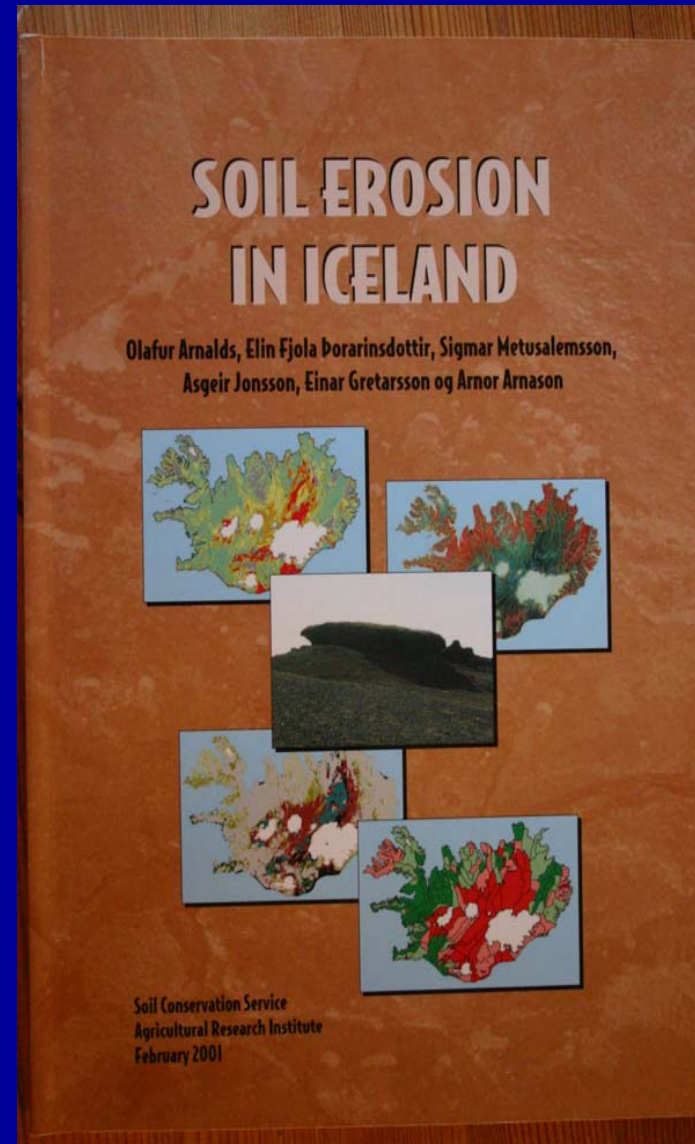
- ✓ **Inventory & assessment**
- ✓ **Experiment & demonstration**
- ✓ **Technical fixes in factory and field**
- ✓ **Engaging the right people**

Assessing the problem



Infrared satellite image (Landsat) of West Iceland. Satellite images served as base maps and were also used in the field for mapping.

The strategic overview



A winning combination of techniques

Experimental plots



Stabilising native grasses



Laboratory testing



Hardware design



And a winning combination of people

Working with farmers families



Advisors around the country



Top class science



Field inspections



Leading the flock and galvanising action: The Four Shepherds

Gunnlaugur Kristmundsson
1908 - 1946



Sveinn Runólfsson 1972 -

Runólfur Sveinsson
1947-1954



Páll Sveinsson
1954-1972



THE OUTCOME

- ✓ Public knowledge & support
- ✓ More resources & improved legislation
- ✓ Farmers providing the local solution
- ✓ Reduction in sheep flock
- ✓ Soil conservation agency widely known

THE FUTURE: INNOVATION & OUTREACH

(1) At home

- ✓ Multiple objectives
- Capture and storage
- Biodiversity gain
- Building resilience
- ✓ Engaging young people

(2) International outreach

- ✓ Demonstrating successes & failures
- ✓ Building capacity globally



**CONGRATULATIONS TO
GOVERNMENT OF ICELAND FOR ITS COMMITMENT
ICELAND'S INTERNATIONALLY RENOWNED SOIL CONSERVATIONISTS**

