

A Secure Future – Powered by the Land

Albert Einstein once said “insanity is doing the same thing over and over again and expecting different results”.

That is exactly how the world manages its natural resources. We extract and degrade, we abandon and then we migrate to extract and degrade all over again. Our natural resource infrastructure is at breaking point.

24% of the world’s usable lands are already either moderately or severely degraded. 24 billion tons of soil are eroded every year. 75% of the genetic diversity of agricultural crops has been lost. 10-30% of mammal, bird and amphibian species face extinction as a result of human activity. And, over a thousand hectares of forest are cleared every hour.

Insanity seems to be the order of the day.

In that context, the history of vegetation and soils in Iceland since human settlement, between 1100 and 1200 years ago, is a

lesson the whole world should be paying attention to - for the worst and best of reasons. Across Iceland, the processes of land degradation led by deforestation, over-grazing and soil erosion - rendered fragile ecosystems barren (i.e. deserts). By the end of the 19th century, up to an amazing 95 % of the tree cover was lost. Over one third of Iceland's one hundred and three thousand square kilometre (103,000 km²) total area became severely degraded. Iceland has Europe's largest deserts. And large areas, damaged by earlier human activity, have limited productivity.

It is a tragic tale that is has been – is being – repeated over and over again in every ecosystem and every climatic zone.

Because just like this earlier Icelandic experience, we are failing to recognize the carrying capacity of the land and the soil - and extract whatever we can; land degradation and desertification is gathering pace across Africa, in Asia and in the Americas. In the dryland regions alone, we are losing 10-12 million hectares of productive land each year - that is enough to grow 20 million tonnes of grain. At least a billion people worldwide are living and depending on degraded land to build their future.

In Europe, though the European Commission attempted to put a common Soil Directive in place over many years, it has been consistently rejected by EU Member States. Short-sighted when more than 1,000 square kilometres are lost every year for housing, industry or infrastructure and about half of this surface is actually 'sealed'. And short-sighted when, in many regions, European soil is irreversibly eroded, or has lost all its supportive functions. I am thinking in particular here of the natural buffer zones that would normally absorb some of the shocks caused by natural disasters like floods or droughts - not to speak about the loss of fertile land for agricultural production.

To complete the viscous cycle, European consumption patterns are driving degradation in other parts of the world too. An appetite for products that require large areas of land for production - such as meat, dairy, timber and other forestry products - means Europe's land footprint is now around 640 million hectares a year. That is an area equivalent to 1.5 times the size of Europe itself. Nearly 60% of the land used to meet Europe's demand for agricultural and forestry products comes from outside the continent - often from the most vulnerable dryland environments.

From my perspective, there is a fundamental misunderstanding about the nature of the services land provides to us. Like ecosystems themselves; degradation does not respect borders. Few countries have so far recognized that soil is a finite global resource (at least in human terms). Or that the choices about how we manage land and other natural resources globally have an impact far from the site of the degradation itself.

We can certainly expect that under a situation of climate change and a rapidly growing global population, competition and conflict over scarce resources – food, energy and water – will intensify worldwide.

By 2050, with a growing population, the demand for agricultural products alone is expected to double from current levels. Doubling food production may not sound so tough - it has been done in the past. However, with population growth it means producing more food calories within the next 50 years than during the last 10,000 years combined.

Yet, the IPPC is warning us to expect a 2 percent drop in agricultural output, per decade – as a result of climate change. The area’s most seriously affected are already home to 20 per cent of the global population - the very poorest in our global society. In places like Mali, the unholy alliance between climate change and degradation could mean as much as a 30% loss in agricultural gross domestic product.

Desperate people have little choice but flight or fight. The projected scale of forced migration in the coming decades will exceed anything previously experienced. Estimates suggest that between 2006 and 2020, 60 million people could have moved from degraded parts of sub-Saharan Africa towards Europe and North Africa. Slow onset disasters, such as drought and famine as a result of poorly managed natural resources, have already been a major contributing factor for forced migration flows and conflict. Is Europe; is Iceland, even, ready for that?

For human dignity and for our survival - it is time to stop the madness.

That is where I think I would like to turn back to the Iceland experience. You seem to have a unique national talent for this. As an outsider, it is difficult to know whether you would call it realism or just a stubborn refusal to ever give up. But as with your remarkable emergence after the recent financial crisis, Icelanders seem to be very good at saying – enough. Not content, like the majority of countries, to be a part of the herd and ignore the problem – you have taken control of your own destiny.

In particular I want to recall that – perhaps by happy coincidence - your national day also falls on World Day to Combat Desertification. So I hope, when you celebrate 70 years of your independence from Denmark in a few weeks on the 17th of June, when you call upon the spirit of *Fjallkonan* - the "Lady of the Mountain" – you keep this in mind.

Healthy and productive land is a real path to food, water and energy independence; it is adaptation to climate change and freedom from its impacts. All powered by nature.

Land degradation continues to be one of the most severe environmental problems in Iceland. But, inspired by the first of its kind “Act on Forestry and Protection against Soil Erosion” from 1907, the Soil Conservation Service of Iceland (SCSI) is leading the fight against land degradation. Under the Ministry for the Environment, they have a comprehensive plan for combating desertification, sand encroachment and other soil erosion, promotion of sustainable land use and reclamation and restoration of degraded land.

By making land users, particularly the agricultural community, true custodians or stewards of the land, your participatory programmes *Farmers heals the Land*, launched in 1990, and the *Land Improvement Fund* aimed at larger projects, have hit the nail on the head. You can see that one of the defining characteristics, of successful land management and restoration projects, is that they are initiated at the local level. They then have to be nurtured by individuals and communities.

The strength of the model is the feeling of ‘ownership’ you have managed to generate. I understand 30% of Iceland’s sheep

farmers are now engaged in the *Farmers Heal the Land* programme.

There is evidence that land cover and productivity is returning.

Now you are doing some amazing work sharing this experience and information with the rest of the world. The United Nations University-Land Restoration Training Programme (UNU-LRT) provides an annual six-month postgraduate training for specialists from developing countries here in Iceland. There is course work, practical training and a bespoke individual project. Having seen the wonderful Icelandic landscape yesterday – I am also very jealous about the opportunity fellows have to work in the field here also.

Hopefully, the fellows will help adapt and replicate the Icelandic participatory model within their own countries - and around the world – when they go home. It is not always easy though to secure the political support or level of engagement of the population that you have been able to deliver here. But the UNCCD strongly supports participatory approaches in caring for the land, and has strong ties with the Landcare (NGO) movement.

So to my mind, there a couple of other take-away messages from the Icelandic model we can take to the world:

Firstly, we need to **appreciate the real scale of the challenge**. In particular, recognizing that the use of land is nearly always a trade-off between various social, economic and environmental needs; we need a system to manage land in a way that optimizes the delivery of nature's service among competing demands.

Then, we need a **practical plan to put it right**. It isn't a revolution or rocket science. We need to progressively reduce the population adversely affected by land degradation. And progressively increase the area under sustainable land management.

This will mean addressing the **enabling factors**: cooperation among stakeholders; policy driven by science; good governance and strong institutions; land tenure and resource rights; a framework for negotiating trade-offs; public-private partnerships; and a realigning of financial incentives and investment flows.

Unfortunately, not all countries in the world have the democratic or governance credentials of Iceland. Weak or unprotected resource and land rights will in particular need to be strengthened. In many places, giving women the same access men have to agricultural resources. In developing countries, for example, this could raise farm production by 20-30% and increase total agricultural production by up to 4% in some countries.

We don't need to dictate exactly what it will look like but what is clear is that we need ownership – sustainable land management needs to start locally and be context-specific. It is then the adaptation and replication - with individual farmers seeing and learning good or best practice - that has the potential for large-scale impact.

And the potential is huge.

Worldwide:

- There are 500 million small scale farmers who could be our potential champions. 2014 Marks the Year of Family Farms

where small-scale and family farms are highlighted as a means to eradicate worldwide hunger and improve food security.

- There are nearly 500 million hectares of degraded agricultural land available out there that could be rehabilitated.

But to capitalize on that potential at the global scale, for ownership and impact, we need to create rallying points.

That is why we came to the concept of **land degradation neutrality**. It means that every time, everywhere you degrade one hectare of land you have to restore the same amount. It is proxy for progress, I know. But, it is clear and simple. We don't need a complex international protocol to start implementing it. Every country, every community, every farmer even, can assess their own challenges and priorities and develop their plan to put it right accordingly.

In making the case for land, Iceland is leading the way. Iceland's Permanent Mission to the United Nations in New York is, along with Namibia, a cofounding member of the Group of Friends on Desertification, Land Degradation and Drought. The group is making

sure that issues of soil and land management are firmly part of the global debate.

A target aimed at preventing future ecosystems degradation, “scaling up and out” good practices, rehabilitating abandoned land and restoring natural ecosystems is universal and should - and will - find a home within the Sustainable Development Goals for post 2015 global development.

Land management could also offer a globally acceptable and actionable response to a range of other climate change related challenges – particularly food and water security. For future climate agreements, mitigation targets alone will be an insufficient response. Land management could form the basis of a technologically easy and low cost climate change strategy encompassing mitigation – where the soil can sequester up to 3 billion tonnes of carbon a year (equivalent to 30 % of emissions each year) - and adaptation. By reducing the climate-induced pressure on natural resources, a secure, resilient future - where the worst threats are reduced – is within our grasp.

Conclusion

Let us adopt Iceland's pragmatic and determined approach. It is time to stop the madness and for us all to focus on land to provide for our needs.

I take the opportunity to wish you my best for your national - independence - day and for World Day to Combat Desertification on the 17th of June.