

## **PROMOTING AND IMPROVING ICELAND'S ENVIRONMENT: ROGER CROFTS**

Following a number of visits to Iceland and many discussions with colleagues and friends in the Ministries of Environment and of Agriculture and key government agencies dealing with the environment (Umhverfisstofnun) and land reclamation (Landgraedsla) and with the current and immediate past President's of Iceland, I have taken the liberty to set out some suggestions which I think would help to benefit Iceland's environment. I do this because Iceland as a nation is not good at recognising and celebrating its successes. The nation tends to 'hide its light under a bushel', rather than recognise that it punches well above its weight for such a small country in a northerly latitude.

### **Overarching Framework**

When I returned from visits in 1999, I considered there was a need for a strategy for sustainable development. This would have the overall aim of improving the status and standing of the environment in Iceland by celebrating success to-date and planning for further successes in the future which will capture social and economic, as well as environmental, benefits to the nation and its people. I argued that the best way to proceed would be through the production of an overarching framework document, if this has not already been done. 'Welfare for the Future: Iceland's National Strategy for Sustainable Development 2002-2020' meets the need I identified extremely well. The Strategy is an exemplar: comprehensive, forward looking, challenging, integrated and has clarity of purpose, action and means of measuring achievement.

What is now needed is a mechanism for involving all parts of civic society in the action and its evaluation. This is all the more necessary in the light of concerns expressed by many Icelanders to me that there is perceived to be a lack of democracy in decision-making in Iceland. The processes leading to the decision on Karahnjuka has been criticised as being an example of this democratic deficit. In Scotland we have established some informal, non-decision making mechanisms to involve civil society in debate about key issues and decisions: a Youth Parliament, and a Civic Forum. My suggestion for Iceland is therefore as follows.

**Suggestion 1: For the Government to establish new mechanisms for the effective involvement of civic society in the action on and monitoring of the 'Welfare for the Future' strategy, particularly involving all sectors and ages of society.**

## **Promoting Awareness and Understanding of Iceland's Environment**

Iceland has one of the most dynamic environments in the world, particularly the juxtaposition of volcanic activity and ice caps. I know of nowhere else where one can, for example, see the effects of magma-chamber heat plumes on the size and the smell of a glacial river or where one can have, literally, one foot on one continental plate and the other foot quite comfortably on the other plate. Whilst recognising the enduring problems associated with soil loss due to wind, tephra deposition and jökulhlaup, Iceland has many positive features to promote. There are many points which could be taken forward and I suggest a few below.

### **(1) Promoting Sustainable Use of Natural Resources**

Iceland has a long and very successful history of promoting the sustainable use of its natural resources, particularly during the twentieth century. It has taken action to conserve its marine fish stocks. It has utilised geothermal energy and the naturally friable soils to produce substantial quantities of vegetables, fruits and flowers for home consumption. It has brought about a very substantial reduction in sheep numbers which, allied to an extensive programme of soil conservation and land reclamation, has brought degraded areas back into productive use. It has carefully encouraged tourists to see and experience some of the natural wonders of the country. All of these activities, and perhaps more which I am not aware, have had environmental and economic benefits and, presumably, social spin-offs. These successes are well worth celebrating and are excellent examples of 'sustainable use' in the strict meaning of the Convention on Biological Diversity.

**Suggestion 2: Produce a promotional report of all sustainable natural resource use projects in Iceland to celebrate successes and to encourage further participation.**

Connecting jobs with the use of the natural environment is an important issue in many countries. Often the number of jobs created directly and indirectly are substantially higher than most people would imagine; this was certainly true in Scotland from the analyses which we undertook and the material which we eventually published. A simple piece of analysis of all of the key sectors relating to the environment, including geothermal energy, freshwater and marine fisheries, protection of nature sites, environmental tourism, soil conservation, and forestry development, would be worthwhile.

**Suggestion 3: Undertake analysis of jobs created by the environment and publish this to stimulate interest in environmentally related jobs and to promote the environmental sector.**

I have always been amazed by the large quantities of vegetables, fruit and flowers produced within Iceland with the help of geothermal energy and the special characteristics of the soils. I wonder if there is capacity to expand this so that it could provide another export market for the country (especially given the dependency on fish exports). Certainly many countries in Western Europe have become highly dependent for their vegetables, fruit and flowers to be available through all seasons from developing countries, particularly in East Africa. I wonder therefore if there is a market in Western Europe which Iceland could develop.

**Suggestion 4: Consider expansion of geothermally based vegetable, fruit and flower production for export to Western Europe.**

Many environmental projects are best accomplished if they are undertaken by local interests, either at their own hand or in partnership with government organisations. Projects which have clear environmental benefits, such as planting trees and other plants, ensuring rivers are managed effectively for native fish stocks, ensuring that soil conservation measures are maintained once the initial planting of appropriate mixes has been achieved, are all worth considering. The establishment of a challenge fund into which local communities or groups of farmers could bid to undertake local projects should be considered. Projects could be vetted by a government established sustainable use organisation (this could, for example, be an off-shoot of Landgraedsla).

**Suggestion 5: Consider the establishment of a challenge fund to stimulate locally-based projects for sustainable use of natural resources.**

There has been tremendous success in the sand stabilisation and soil development programme in Iceland as a result of cutting edge science being applied in practice, active engagement of farmers and local stakeholders, and clear analysis of the areas where there are problems. However, the job is far from finished. There is much work still to do in areas where stabilisation has not been undertaken and it is needed and also to ensure that the gains made elsewhere are maintained in the longer term. Returning to high levels of sheep grazing or the lack of management of soil stabilisation and soil development will undermine the gains achieved. It is also important to pursue arguments within the context of the Kyoto Agreement on climate

change that the development of soils in Iceland has benefits for carbon sequestration. I understand that this is being undertaken on behalf of the Department of Agriculture in its Research Institute (RALA). I wonder if Iceland has sought to get more international money for the programme of soil conservation, particularly from the Global Environmental Facility or indeed from the World Bank and the UN Development Programme.

**Suggestion 6: Establish long term support through Landgraedsla for Landcare type measures for farmers' engagement in soil conservation.**

**Suggestion 7: Undertake a major international promotion of Iceland's work especially to celebrate the centenary of the Soil Conservation Service in 2007, seeking financial assistance from major international sources, particularly the GEF.**

**Suggestion 8: Seek formal scientific linkage with soil research interests in relevant institutions, particularly in North America and North Western Europe.**

## **(2) Improving Decision Making**

On many of my visits to Iceland, I have had discussions with the three principal agencies dealing with environmental improvement: Landraedsla, Natturaverd (now merged into Umhverfisstofnun) and Skograekt separately and collectively. Whilst I applaud the working liaison between the agencies and the very positive approach which Landgraedsla gives to these activities, clearly there is room for considerable improvement. It has been suggested that restructuring of the organisations, including mergers, is the way forward. However, it is often the culture of organisations and their leadership which are the most critical issues rather than the precise structure and functions. It seems to me that the way forward for Natturaverd and Landgraedsla is to have more productive working relationships. These need to be stimulated from government Ministers acting collectively, especially given that the organisations are sponsored by separate Ministers and separate government departments.

**Suggestion 9: Landgraedsla and Umhverfisstofnun to be invited jointly by their Ministers to agree a working concordat of common aims and purposes.**

There ought to be a more integrated approach to advice on the environment, and particularly on nature conservation, to improve decision-making in the government. The current separation of nature conservation policy advice and protected` area management in Umhverfisstofnun from the data collection and advice on natural history by Natturufraedistofnun does not make any sense. The Ministry sometimes formally consults one and not the other agency on a proposed action. Also one of the agencies can work on contract for semi-government and non-government organisations and at the same time give advice to the government on the proposals coming from the organization which it is contracted to and paid by.

**Suggestion 10: the nature conservation part of Umhverfisstofnun and the Natturufraedistofnun should be merged into one agency reporting to the Minister for the Environment.**

Also, there ought to be much closer synergy between soil conservation and forestry and the two relevant government organisations, especially as they report to the same Minister and the same government department. Their aims are very similar and the Forestry Service (Skograek) can make a much greater contribution to sand stabilisation and soil development. Also, I can see little point in the two organisations remaining separate. Ideally, the work in RALA relevant to these two organisations should also be brought together with them, but this has just been overtaken by the Minister of Agriculture's decision to merge RALA with the Agricultural University at Hvanneryi.

**Suggestion 11: Government considers seriously the merging of Landgraedsla and Skograek to form one agency dealing with land reclamation.**

If the government wishes to take seriously the targets set in the sustainable development strategy, then it should set up a Cabinet level Committee or at least a Committee chaired by a Cabinet Minister to drive the process forward and to oversee the delivery of results.

**Suggestion 12: Establishment of a Cabinet level committee to oversee implementation of the National Agenda 21 plan and, in particular, to agree joint targets for the environmental sector to be delivered by the key organisations, particularly Landgraedsla and Umhverfisstofnun.**

The debates about the establishment of an aluminium smelter in the Eastern Fjords and the associated Karahnukar hydroelectric power schemes, and the hydro scheme

extension at Pjorsarvar have raised very serious questions about the decision making system which is available to consider such high profile and highly emotive subjects in Iceland. That said, the position is no different from many other countries, especially in North America and North Western Europe. All too often major projects are seen as either entirely positive or entirely negative and objective analysis of all of the costs and all of the benefits is frequently not undertaken.

Environmental economists are now getting to grips with these issues by addressing not only the more traditional financial costs and benefits but also at the wider environmental and social costs and benefits and are attempting to put relative values on them. Work underway, for instance, in Scotland on a whole range of environmental projects and programmes is now looking extremely helpful. It is not so much the establishment of the methodology but the need to ensure that the methodology is part of the formal decision making process that is required now.

In addition, there is a great deal of experience from other countries about large-scale projects in remote areas on the basis of their economic regenerative capacity for those areas. The literature on smelters, dam projects, pulp mills, paper mills from Canada and Scotland is quite extensive and lessons can be learned from these analyses particularly from economic and social points of view. Suffice to say, that the projects are often in the control of multi-national corporations, despite brave efforts by governments, are controlled by global market considerations and therefore are subject to price fluctuations at the global level (a particular problem with aluminium) and are therefore of very doubtful economic viability in the medium term. In addition, the number of jobs created for the local population or those returning is often also very limited. Jobs in the construction phase, which is short-lived, tend to be high and these tend to be filled by itinerant labourers, whereas the more highly skilled but smaller permanent workforce is not usually available in the local labour market and therefore it has to be imported. As a result of such large incoming construction labour and also incoming highly skilled production labour, there is usually considerable disruption to local society and certainly local values change considerably.

From an environmental point of view, such large-scale developments in naturally pristine areas are what many countries are seeking to avoid, although not always successfully. The issue is not just about the impact on the habitats of protected bird species, such as the geese in this case, and on the hydrology of highly dynamic

glacial river systems. Just as important is the attitude of the wider public, in the country itself and in the wider world, as many see such developments as an attack on fundamental environmental values.

Also the decision-making approaches used are outmoded. It is no longer defensible for the developer to commission and be the recipient of the report on the environmental impact of the development which they are proposing, even though it is subject to scrutiny by others. There is a need to have independent commissioning of impact assessments and formal, non-political decision making to determine the outcome. Many countries are now also considering the use of evaluation methods for strategies and plans, rather than just for individual projects. This approach, termed Strategic Environmental Assessment, should be adopted in Iceland and the appropriate legislation passed by the Althingi.

**Suggestion 13: Develop and have approved formal decision making processes for large-scale projects which include formal environmental assessments using the best methodology available to cover social, cultural, environmental and economic aspects.**

**Suggestion 14: develop procedures and pass legislation to adopt Strategic Environmental Assessment.**

**Suggestion 15: Have formal reviews of experience of large-scale projects in remote areas from other countries, particularly Canada and Scotland, undertaken by relevant objective experts.**

**Suggestion 16: Employ an environmental economist of international standing to help devise appropriate methodology.**

### **(3) Developing eco-tourism**

Eco-tourism is a fast developing part of the tourism market based on the key natural visitor attractions of Iceland. It is defined as nature-based tourism that involves interpretation, education and enjoyment of nature, and is managed to achieve ecologically sustainable use of nature and bring benefits to local communities and to visitors. It is perfectly right and proper that commercial interests should take the lead but given competition from other destinations where there are strict quality controls

on operators and guides and where tourism and environmental interests are working closely together, then I have some further suggestions for Iceland.

**Suggestion 17: Promote eco-tourism by obtaining Cabinet level commitment given that environmental and tourism functions are responsibilities of different Departments and Ministers. A special eco-tourism task force (or Icelandic Eco-tourism Association) involving government environmental and tourism bodies, commercial tourism operators and economic development groups should be established. It should develop projects in different parts of Iceland and for the country as a whole. Specifically it should focus on promoting Iceland's environment and on how local people can gain jobs and income from tourism.**

**Suggestion 18: Obtain the agreement of the relevant Government Ministry and the Icelandic Tourist Association for 'approved' eco-tourism operators who subscribe to a Code of Practice. In addition, develop proper training for eco-tourism guides with a certification process which allows them to operate officially and to market their qualifications. There are schemes operating in other countries, such as Australia and Cuba, which are very successful.**

**Suggestion 19: Encourage joint working between Local Tourist Associations and Umhverfisstofnun (and where appropriate Landgraedsla) local staff. One of the ways to do this is to ensure that staff employed by the tourist association and on a seasonable basis by Umhverfisstofnun are located in the same buildings.**

**Suggestion 20: Hold a workshop on eco-tourism and invite experts from other countries to provide their knowledge and experience.**

#### **(4) Extending environmental education**

Environmental education, as part of the formal school curriculum, is a vital component in increasing understanding and awareness of the environment for future generations. Undoubtedly, much will already be done in Icelandic schools but there are a number of other suggestions which might help to take this forward in the light of our own experience in Scotland and experience elsewhere.



**Suggestion 21: Provide web-based materials for schools on key environmental themes. Seek funding from private companies and major NGOs, such as WWF and Birdlife International.**

**Suggestion 22: In parallel, provide assistance to teachers by the appointment of environmental education advisors or co-ordinators. One way to do this might be to employ those who are summer wardens on nature reserves to undertake this activity during the winter months.**

#### **(5) Promoting understanding of the environment**

There is a limited amount of accessible and affordable information about the environment which can be bought in Iceland. There is very limited interpretation at key sites, such as Dimmuborgir and the Jökulsárgljúfur National Park. However, the interpretation centre in Skaftafell is exceptionally good. The work being developed by Landgrædsla under its 'Telling the story of soil conserving' programme should be implemented to benefit environmental tourism and the soil conservation programme.

**Suggestion 23: Stimulate joint working between Umhverfisstofnun and the Geological Institute to produce brochures on the geology of Iceland.**

**Suggestion 24: Produce more up-to-date and comprehensive interpretation at key sites explaining the history, describing the management action and celebrates successes. This should be lead by Landgrædsla for land reclamation sites and by Umhverfisstofnun for nature sites.**

**Suggestion 25: Encourage the production of high-quality videos with appropriate explanatory commentary.**

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#### **Conclusions**

The above commentary and suggestions are made in the hope of stimulating further debate and action to benefit not only Iceland's environment but also its economy and

its people. I recognise that work is already underway in relation to some of the suggestions, that resources are in short supply, particularly of finance and people, and that Iceland has already a very good track record in the sustainable use of its natural resources and its increasingly successful attempts to reduce degradation from the past and restore and improve its environmental assets.

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