

## CARING FOR THE ENVIRONMENT: RETROSPECT AND PROSPECT

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It is all too easy to be pessimistic following the failure of the FCCC parties at COP26 to agree a deal on emissions reduction to achieve net zero and the failure of the CBD to meet the key targets on biodiversity. If this is not bad enough, remember the increasing inequality of access to environmental resources through commercial exploitation and global trade patterns. The prescient words of HM The Queen, reinforced by Sir David Attenborough and Barack Obama, to put national interests to one side and play statesmen's roles are, unfortunately, not heeded by national political leaders.

#### What needs to be done?

Sack cloth and ashes will not do. We need to rise to the challenges: experts, businesses, citizens and government. Here are some ideas to stimulate debate.

For the **scientists and technical experts** there are many challenges. We hear so much about the need to stop use of fossil fuels immediately. But, do the alternatives to hydrocarbons exist, for example to replace plastics which all households and commercial organisations use in abundance? And how is the transition from fossil use for heating and transport to be delivered quickly and affordably? Targets by governments act as a stimulus, but are there sufficient incentives and investment to develop and implement the replacement technologies at the pace needed? And, we need improved decision support mechanisms, including transparent and independent verifiable ways of calculating and communicating the whole life time costs and benefits of existing and new technologies.

We also need greater honesty in communication. Nuclear energy is a good example. To categorically state that electricity produced by nuclear fission is carbon free is not accurate given the carbon intensity of construction of reactor vessel and containment vessel. Nuclear fusion holds out hope, and the technological advances now being made need political encouragement and massive financial investment.

The learned societies, like the RSGS and the Royal Society of Edinburgh, have important roles to play in facilitating communication and improving the discourse within society about what we know, what we don't know and what are the levels of uncertainty.

Second, the **business community** needs to take its environmental and societal responsibilities more seriously. There are many good initiatives, such as the World Business Forum on Sustainable Development and the appointment of Mark Carney as the UN special envoy for climate action and finance. But, shareholder value remains a core principle, and avoids the wider responsibilities that businesses have of adopting the circular economy and using triple bottom line accounting mechanisms, both of which imbue a broader based ethical approach into business.

More fundamental is the wise use of the world's natural resources, especially its soil, water and minerals. The twentieth century exploitative approach is no longer tenable, yet bad practice remains in all parts of the world according to official UN agency statistics, meaning that soil erosion, loss and productivity continues to decline, and the world's oceans are overfished. Incentives, codes of practices, regulations all need to be refreshed and new mind sets to rid entrenched approaches adopted.

Third, **citizens** cannot avoid the challenges. The headline changes needed are very difficult, but essential: changing behaviours and reducing impact on the environment and on poorer societies. Personal consumption patterns need to recognise that short life spans and throw away approaches are outmoded. Purchasing local products, challenging the purchase of products reliant on global supply chains, using packaging from non-renewable resources are all issues which citizens as consumers should continue to argue for, while demonstrating their changing behaviour.

The two elephants in the room are increasing levels of consumption globally and increasing population. Measured debate is essential, despite how contentious these issues, especially population control, are. The voice of women in these debates is most crucial, as shown in Africa when they have a leadership role.

The final challenge is to **governments** to move from rhetoric to realistic delivery. The ask is simple: to deliver more effective, integrated policy and resources based on a long-term vision. The operative word is *delivery*. It is easy to announce new targets. All too often the path to full achievement in practice is neither thought through nor are all of the elements needed set out in a deliverable action plan:

For the environment, the essential element is for ethical requirements to be embedded in all policies, programmes and funding schemes. The prime Scottish requirement is the radical revision of agricultural support. One example is the current failure to implement integrated programmes for flood protection founded in nature-based solutions and whole catchment management, rather than allowing engineering led projects to build more barriers without working with nature, as in the recent flood protection schemes in Selkirk, Hawick and Musselburgh.

Engaging all generations is vital. Education in the formal primary, secondary and tertiary sectors is crucial. Why is every child and every student not taught the basics of how the environment works, what humans have done and are doing to it and what type of behaviours and ethics are needed for the future?

Geography is at the core of this, so surely should be a compulsory subject at all primary and secondary levels with urgent changes to the outdated curriculum put in place as a matter of urgency.