# ENVIRONMENTAL SUSTAINABILITY

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**Environmental Sustainability**

Anthropogenic Climate Change is now recognised as a fact. That it will impact on humankind through changes in the environment is also well-established. The scale and nature of these changes will be profound, but the consequences are less certain, as is the means by which mankind will respond.

In addition there are challenges in relation to energy supply. These include our reliance on depleting non-renewable fuel sources, availability and security of supply; we are a net energy importer, and there are ethical issues associated with many of these sources, for example deep water drilling, imports from countries with oppressive regimes and the need for military action to protect supplies.

Most of our basic needs – food, water, transport, materials, etc, rely almost entirely on these sources of energy.

The costs of energy consumption are rising, and will continue to do so, due to global restrictions and competition for supply, costs of decarbonisation and development costs of alternative solutions.

How should mankind respond? We may do nothing and let nature take its course. The catastrophic effects of climate change on human civilisation will eventually reduce population to an extent that the natural environment will recover.

We may eventually adapt as a species through migration, changes in culture and civilisation and a re-ordering of society. Industrialised societies are those with the most to lose. Those societies with nothing, upon whom we depend, have the most to gain. Civilisations have come and gone before.

Either of these courses will have major impacts on the planet and consequently humankind. The pace of change is such that effects on the population will be severe. To accept either of these positions would be to adopt an ethical and moral standpoint that would be the equivalent of accepting the holocaust as an inevitability that we cannot change as it would inconvenience us.

The only morally tenable course of action is therefore one of mitigation, that is, to reduce the effects of consumption to a point where it becomes sustainable.

The question therefore is how we can ensure that our lives, culture and society can be made sustainable. What stops an organisation like the GSA from acting sustainably?

In his book 'The Collapse of Complex Societies' Joseph Tainter rejected the possibility that collapses might be due to environmental mismanagement because it seemed so unlikely to him. But it is apparent that some societies did make woeful mistakes.

Take the Easter Islanders, a Polynesian people who settled on an island that was originally forested, including the world's largest palm tree. Over centuries, they gradually chopped down that forest to use the wood for canoes, firewood, transporting statues, raising statues and carving, and also to protect against soil erosion.

Eventually they chopped down all the forests, which meant they ran out of canoes, they could no longer erect statues, there were no longer trees to protect the topsoil against erosion, and their society collapsed in an epidemic of cannibalism that left 90% of the islanders dead.

How could a society make such an obviously disastrous decision to cut down all the trees on which they depend? What did Easter Islanders say as they were cutting down the last palm tree?

"Don't worry, technology will solve our problems by helping us find a substitute for wood"

"This tree is my private property, I can do with it what I please. Government has no right to tell me what to do with my own tree"

"I need this tree for fuel and if I don't cut down this tree someone else will"

"Denying me access to the tree will stifle my creative practice"

"The science of deforestation is still up in the air; we need more research before we transition to a low-wood economy"

"Switching to a low-wood economy will cost jobs. Are a few trees worth the cost to our tree-cutting and statue-dragging industries?"

"I'm ok, I will be one of the 10%"

Tainter identified an intriguing phenomenon: the failure of group decision-making by whole societies, or governments, or smaller groups or businesses.

What are these failures and how might they be useful in determining a strategy? First, a group may fail to anticipate the arrival of a problem. Second, the group may fail to perceive it when it arrives. Third, having recognised it, they fail to try to find a solution. Finally, they may try to solve the problem but ultimately fail. Do these apply to us?

**The first instance, failure to anticipate a problem before it arrives** occurs if an organisation has no prior experience of such problems, and is therefore ignorant of the potential threat. Widespread awareness and acceptance of climate change is a relatively new phenomenon which may be applicable, but to use this as a reason for inaction is to mask knowledge of well-established issues such as rising fuel costs, fossil fuel supply, consumption and pollution. With the current awareness of the problems, and increasing legislative requirements to address them, this cannot apply to the GSA.

**The second instance occurs when organisations fail to perceive that a problem has actually arrived.** This may be because its origins are literally imperceptible, or it may be a slow trend that is hidden by wide fluctuations, of which global warming is a prime example. But we now know that temperatures around the world have been slowly rising for decades, due in large part to changes in the atmosphere caused by humans. We know fuel costs are rising and our budgets are being squeezed.

**The third type of failure is the most common, the most surprising and the most relevant to us: failure to make any attempt at solving a problem once it has been recognised.**

Such failures frequently arise because of what economists term 'rational behaviour'; they stem from clashes of interest between people. Some people may reason, quite correctly, that they can advance their own interests by behaviour that they know is harmful to other people. Economists term such behaviour 'rational', even while acknowledging that it may be morally wrong. This type of behaviour applies to both institutions and individuals.

The beneficiaries of immediate advantages from a bad status quo are likely to get away with their rational bad behaviour because they are typically a small group, highly motivated by the immediate benefits, and distanced from the net losers either geographically or temporally.

This **'tragedy of commons'** occurs where individuals or organisations acting independently and rationally, consulting their own self-interest, will ultimately deplete a shared limited resource, even when it is clear that it is not in anyone's long-term interest for this to happen. Common examples include overfishing or deforestation. An example for us is occupants undertaking wasteful actions such as leaving heaters on and opening windows to achieve their own comfort, even though they know it contributes to running costs and climate change. An individual may correctly perceive their self-interest to be opposed to the interest of the majority, but the immediate benefits outweigh the longer-term and less tangible disadvantages.

Contributors to this behaviour include both the individual, and the organisation where it manages some aspects of the 'commons'. Both the individual in terms of the immediate behaviour, and the organisation through ownership of systems which engender such behaviour, accept the short-term benefits.

A further possible and perhaps related cause of failure to attempt to solve a problem can be found in a particular human trait: psychological denial. Something that arouses a painful emotion or guilt may be subconsciously suppressed in order to avoid the guilt – even though the practical results of ignoring the perception may prove ultimately disastrous. The effects of climate change are so large that denial can lead to unsustainable behaviours, as the consequences are not immediately or obviously bad.

**Finally, there is failure to succeed in solving a problem that a society actually tries to solve.** The problems may be too large, too difficult or require more resources than a society can allocate.

As a publically-funded body we have limited resources, only made available in short-term tranches, and there are clearly limitations in what we are capable of economically. But that is no reason not to act at all. Often we fail to solve a problem because our efforts are too little and begun too late. Investments with small benefits begun early can be more effective than large interventions that are undertaken too late.

These descriptions may sound pessimistic, as if failure is the rule in human decision-making. But this is not the case, and many human societies have survived and prospered against huge odds because they have anticipated, perceived, innovated and solved their environmental problems.

The principal threat to sustainability at GSA is the 'tragedy of the commons' – an inability to trade between short-term and long-term benefits and to recognise the moral and ethical value of sustainability. It is this position that a strategy for sustainability should therefore have at its core.

Research into this phenomenon has resulted in a few common solutions (Van Vugt 2009). These include:

**Information:** The more information a person has, the more secure they feel in making rational decisions that may impact the environment they live in. Knowing what effects our behaviour has in energy terms is part of that. Such clear, simple messages can change consumer behaviour. Making information available about consumption and its impacts is a key part of that.

**Identity:** Humans have a deep need to belong to social groups. We are inherently social creatures and crave group acceptance and group belonging. Using our identity, social networks, and including key features such as schools and studio culture, contributes to this.

Belonging to a group also means being more concerned about your reputation within that group. Knowing where you stand within a group – your energy usage, or waste compared to that of your neighbours' – can change individual behaviour.

**Institutions:** We may imagine that if we simply policed the commons that would be sufficient to ensure fair use of the shared resource. However, policing is only as good as the institution charged with it. If it cannot demonstrate its own commitment and performance, policing becomes part of the problem, not the solution.

Authorities gain users' trust by employing fair decision-making rules and procedures. "Regardless of whether people receive bad or good outcomes, they want to be treated fairly and respectfully" (Van Vugt). Authorities can often encourage feelings of trust in their users or citizens by simply listening to them, and providing accurate, unbiased information about the resources.

Rules and procedures need to be underpinned by support for a given activity. So, for any requirement, there needs to be an effective means of achieving it. For example, requirements for recycling when there are recycling bins; green transport when there are facilities for cyclists.

**Incentives:** Humans can be motivated by a marketplace that rewards positive behaviour and punishes unwanted, harmful behaviour. This enables an institution to negate the short-term rational benefits of unsustainable behaviour.

Financial (or other) incentives are not always needed when other factors, such as a strong group identity, are in place. In fact, incentive schemes can be counterproductive if they directly undermine other core needs, such as information, identity or institutions. Charging more for printing, for instance, while well-intentioned, might undermine a person's trust in the authority (because they're suggesting printing is more of a problem than it really is, compared with, say, energy consumption), or transform it in our minds from an ethical issue or one of helping the environment, to an economic issue (it's a way of raising money). We need to be clear about policies that have ethical and financial benefits.

Our position in 12 years' time should be that unsustainable activity, at any level, is not acceptable. We should treat it as we treat smoking today. Looking forward to 2025 must surely give us the opportunity to think beyond the short-term rational approaches. By 2025 we should not have a 'sustainability strategy': sustainability should be the norm.

External requirements for environmental sustainability are clearly going to increase in scale and significance over the next 12 years. Existing requirements in terms of the UK and Scottish governments' Climate Change Acts, and EU legislation is already in place, with increasingly stringent requirements including Buildings Standards, Climate Change Levy and Carbon Reduction Commitment. It is apparent that infrastructural investment is required for both decarbonisation and security of energy supply and the likelihood is that this will come from additional forms of indirect taxation on consumption and carbon production. These changes will be particularly significant in respect of existing buildings, which have the worst performance and provide the majority of stock that will exist in 2025 and 2050. A great deal of the onus for performance in these areas will rely on public bodies, in terms of both compliance but also leadership. Competition for energy supplies will mean that energy prices will increase significantly. At the same time, changes in the nature of funding of Higher Education will mean that demands for high-quality learning environments will also increase.

The carbon foot-printing exercise undertaken in the GSA in 2010 established that the biggest single aspect was energy consumption through the estate. Two issues are paramount – the poor performance of the estate, and the behaviours that this engenders. Investment in improvements in the efficiency of the estate would bring their own benefits, but would also demonstrate a commitment by the institution, which would then underpin more rigorous requirements and incentives for sustainable behaviour by individuals.

This paper has addressed environmental sustainability primarily in terms of energy consumption, on the assumption that it is inconceivable that our context, future students, content, curriculum, impact and influence would not recognise the need to embed sustainability in any long-term strategy.

But a vision for sustainability applies to both operational and intellectual activities. Operational in the sense of the day-to-day activities of the School, in which sustainable practice must become normalised into everyday life, from induction to the degree show; and intellectual activity in the sense of the purpose of this institution. It is not tenable for an organisation whose existence is predicated on knowledge, intellectual capital, design and creative thinking not to adopt a position that addresses sustainability. The subject must make an impact on 'surface learning' but it also demands to be rigorously applied in a genuinely, reflective, academic or 'deep' learning sense that avoids gestural and tokenistic exercises.

In terms of our intellectual endeavour, our response to these challenges should be proactive rather than reactive. Often the discussion around sustainability produces dystopic responses to climate change predictions, or focuses on the negative aspects of change. In strategic terms it's the equivalent of saying we're going on a journey and the objective is not to crash, rather than to get somewhere.

Whilst scientific observation tells us what the problems are, creativity enables us to imagine what solutions might be. Part of the role of a creative institution should be to imagine a better future and to think of ways to get there. Just as much of society in the 50s and 60s was stimulated by science fiction, which imagined a future, better world, could the role of a creative institution be to produce inspirational and aspirational visions of an ecotopian future? Might our contribution to the Anthropocene era in which we now live be ideas that inspire dreams of a transformational, innovative, low-energy, healthy future and that contribute knowledge and understanding to these disciplines? We do this as a generator of knowledge, as a generator of future generators of knowledge.

Change is possible and brings great benefits. Major changes in society have been driven by the moral and ethical arguments. Look at attitudes to slavery, emancipation of women, smoking: all went through processes of being the status quo, with a few detractors; the emergence of bodies of opinion identifying their moral and social iniquities; resisted at first by vested interests defending their positions; growing bodies of knowledge, opinion and action; eventually leading to culture change, legislation and normalisation.

To achieve this we need to adopt an ethical position on sustainability. Up until now it has been at the edge of what we do – it now needs to be at the heart. Requirements to address sustainability will need to become higher in priority as the external drivers and measures increase, with increased corporate responsibility to ensure that behavioural change can be effected. Bottom-up approaches need to be matched by top-down leadership and investment.

We need to send a stronger message about sustainability to our staff and students, but also our future students, our partners, our clients and our society, and clearly demonstrate that the GSA is a positive force in the fight against the impacts of climate change.

If we had a stronger sustainability strategy what would we lose? And what would we gain? And what would need to change to keep the things we value most?

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