



Sustainability (Is) Central

Graham H. Pyke

Sustainability is central to humanity. The existence of humanity, and all its associated activities, relies on the life support systems provided by the environment in which we all live. We exchange goods and services amongst us, with economic systems guiding the processes involved. Our health, including mental and physical, is vitally important to each of us. We are social animals, living in groups, with complex interactions amongst us, and social systems providing structure to these interactions. Thus there are four pillars of sustainability: environment; economics; health; social. Humanity relies on continuance of such sustainability.

Sustainability is also a *legacy*, something we potentially ‘hand down’ to our kids, grandkids and subsequent generations. The rhetorical question, famously posed by Groucho Marx, ‘Why should I care about future generations? What have they ever done for me?’, surely misses the point. It is obvious that we care about future generations, especially our kids and grandkids, who most of us will know as individuals. They, as well as our future generations, are our biological contribution to the future.

Environmental Sustainability is under increasing threat, because planet earth, our only home, is finite and our impacts upon it are large and growing. Each one of us uses environmental resources, such as food, relies on environmental services, such as provision of clean water and air, and produces waste products, some of which act as pollutants. Such impacts must therefore increase as our *population* grows. These impacts also tend to increase with our increasing *affluence*, as affluence is generally associated with levels of resource consumption and waste production that are high, sometimes ‘conspicuously’ so. Finally, our environmental impacts depend on the *technology* we employ, generally increasing through time as, for example, we seek resources that are increasingly difficult to obtain as we have already collected ‘the low-hanging fruit’. Hence, our environmental impacts (I) continue to increase through a combination of growth in population size (P), per capita consumption and waste production (i.e., affluence - A), and the impact of adopted technology (T), as encapsulated by the equation $I = PAT$, developed long ago by Paul Ehrlich and John Holdren.

The other three pillars of sustainability are also under threat. Present economic systems rely on perpetual growth in resource acquisition and consumption, and in waste production, but such never-ending growth is, of course, impossible. Environmental constraints will necessarily restrict such economic growth, and some major resources, such as food and water, are already becoming increasingly in short supply. Economic sustainability is therefore under threat. Despite all the obvious medical advances, there are growing signs of overall deterioration in human health. Worldwide, for example, billions of people are under- or malnourished and millions dying of starvation. Health Sustainability is therefore under threat. Decreasing availabilities of resources such as food and water, and increasing gaps in wellbeing between relatively rich and poor, are leading to increasing conflicts between people over access to resources. Social sustainability is therefore also under threat.

From our perspective, these threats to sustainability are not being adequately dealt with. An obvious example is the lack of sufficient response to the looming threat posed by climate disruption, which is resulting almost entirely from human activities. In this case, we have known about the threat for over 30 years, have become increasingly aware that it is we humans who have created the problem and are making it worse, and have become increasingly alerted to the horrific circumstances likely to result from a ‘business as usual’ approach. Yet significant mitigation of the problem has not occurred.

Dealing with these threats to sustainability requires government action, and hence ‘political will’, and cannot be otherwise achieved. What each individual does may affect us all, but generally through accumulated impacts and at significant distance. If people are left to their own devices, there is little incentive to ‘do the right thing’, thus alleviating any broad-scale threat, and often much reason to ignore the threat altogether. A laissez-fair market-based economic system deals poorly with the threats because they are ‘external’ to the system. Avoiding the ‘tragedy of the commons’, where each individual benefits to the extent that the community loses out, therefore requires government intervention to limit, or otherwise control, what individuals can do to limit what economists call “free riding.” Such intervention by government, whether elected or not, obviously requires associated political will, otherwise other priorities will dictate behaviour.

For there to be sufficient political will for the threats to sustainability to be properly addressed and mitigated, those who are effectively in control must be motivated to take appropriate action, and this can only happen if they are properly informed. In a democracy, voters can elect, as people to represent them, those who will take steps, including through regulation and other legal pathways, to mitigate the threats. Shareholders in companies can similarly limit their approval to actions designed to reduce adverse impacts on sustainability. But people will surely only do such things if they are convinced of their merits, and this requires that they be well informed.

Because sustainability is central to humanity, should be our legacy to future generations, and will only be achieved if those in control are well informed, we are establishing *Sustainability Central (SC)*. This program will be based at the University of Technology Sydney (UTS), in partnership with Paul Ehrlich and the *Millennium Alliance for*

Humanity & the Biosphere (MAHB), based at Stanford University. It will initially focus on the following projects:

- Provision of multi-disciplinary training to people who are likely to be making significant decisions regarding sustainability.
- Provision of assistance to sustainability leaders, potential or existing, to improve their abilities and performance as such.
- Promotion and defence of scientific research and researchers in general and, in particular, “sustainability science”, which underpins the determination and mitigation of all sustainability issues.

Though these projects will initially be UTS-based, we shall target the subsequent spread of successful models to other institutions.

In parallel MAHB will also address sustainability, but will focus on slightly different projects such as the following:

- Finding ways to address sustainability issues through approaches that simultaneously address multiple factors.
- Encouraging the development of “foresight intelligence”, especially amongst those acting as leaders or otherwise making decisions that affect sustainability.
- Developing and implementing ways to provide information regarding sustainability to the general community so that the greatest possible positive impact is achieved.

Through working together, MAHB and SC aim to become a ‘one stop shop’ for those interested in obtaining information concerning sustainability and in joining with us in promoting its pursuit and achievement.

MAHB-UTS Blogs are a joint venture between the University of Technology Sydney and the Millennium Alliance for Humanity and the Biosphere. Questions should be directed to joan@mahbonline.org

MAHB Blog: <http://mahb.stanford.edu/whats-happening/sustainability-is-central/>