

THE SUSTAINABILITY-PROMOTING FIRM: *an essential player in the politics of sustainability*

Philip Sutton

Director, Policy & Strategy

Green Innovations Inc.

195 Wingrove Street, Fairfield (Melbourne) VIC 3078, Australia

Telephone & Fax: (03) 9486 4799

Email: Philip.Sutton@green-innovations.asn.au

<http://www.green-innovations.asn.au/spf.htm>

**This paper is a revised version of the one presented to:
Ecopolitics Conference XI
at the University of Melbourne
4th-5th October 1997**

Version 1.k. 4/05/01

Contents

The nature of this paper.....	1
The challenge.....	1
The role of the state.....	2
Scenarios for consensus.....	3
The sustainability-promoting firm.....	3
• Three stances.....	4
• Guiding principles for a sustainability-promoting firm.....	4
Motivations for firms to become sustainability-promoting.....	5
Change agents.....	9
Imagining the future.....	12
Getting it started - the campaign.....	12
The role of political parties.....	13
References.....	13

The nature of this paper

This is not an academic paper. It is a strategic discussion by a participant.

The paper begins with a challenge that the author believes will need to be resolved through the process of ecopolitics if ecological sustainability is to be achieved. The challenge itself is not defended by highly detailed argument since its validity is assumed to be intuitively obvious. The paper instead focuses on what can be done to meet the challenge.

The challenge

Unmanaged markets cannot deliver ecological sustainability because of (a) the way that institutional structures generate an inappropriate price structure (Sutton, 1995a)¹ and (b) the way that the prevailing culture and dynamics of entrepreneurialism lead firms to actively ignore the social and ecological costs

¹ See also: <http://www.green-innovations.asn.au/ecotax.htm> and <http://www.green-innovations.asn.au/environmental-levies-overview.rtf>

of the side-effects of their activities (externalisation). A democratic form of market management (Sutton, 1995b, 1996) cannot be carried out without government action².

However the process of the globalisation of the economy and the concentration of economic power in the hands of 100 or so of the currently 37,000 multinationals has so strengthened the collective power of private corporations and so weakened civic governance (technically and more important ideologically) that radical market management to foster the public good is politically impossible and the situation is virtually irretrievable unless strategic sections of the private sector support strong government action and these section of the private sector, in concert with other sectors of society, take action to rebuild the effectiveness of civic governance.

So, if ecological sustainability is to be achieved, a strategically significant number of firms will have to become active partners in seeking the institutional reform to make effective market management possible. This sort of self-limiting behaviour by firms is at present rare but is not impossible nor necessarily disadvantageous to the firms (Lloyd, 1990; Collins & Porras, 1994).

Because both ecological problems and the economy have very strong global elements, the institution building for a managed market and the political pressure to create it will need to have a global dimension. This means that ecological sustainability will not be achievable unless at least some multinational corporations become genuinely sustainability-promoting. Greenwash is not what is needed here (Greer & Bruno, 1996).

The role of the state

It is commonly believed by social and environmental activists that major system-changes will normally only occur if governments take the lead after some initial prompting from citizens' movements. The state is considered to be the only force strong enough to significantly redirect private capital and it is considered to be the only force that can represent the public as opposed to the private good. But will government action lead to anything more than modest changes?

The pressures that the economic system is placing on the environment are massive, and they are rapidly increasing. To solve these problems will require nothing less than a radical transformation of what the economy does if ecological sustainability is to be achieved. The economy must change very significantly due to the fact that:

- oil has been depleted to such a degree that global production is expected to reach its final production peak within the next 15 years (Campbell & Laherrere, 1995; Fleay 1995)³, and
- to achieve ecological sustainability, atmospheric CO₂ levels will need to be stabilised at or below 300 parts per million by volume⁴ and that this will require industrial emissions of CO₂ to be reduced (on a net basis) to zero and for CO₂ to be actually taken out of the atmosphere on a net basis⁵

Changes of this dimension will not occur unless governments, acting both singly and where necessary collectively, play a very active role using legal, taxation and credit creation powers and their capabilities for coordination/planning, investment and service provision. But if major corporations are not prepared to acquiesce, governments can find themselves faced with very effective pressure of all sorts (eg., public relations barrages, legal challenges and compensation claims, support for political opponents, threats of or actual capital strikes, etc.) The upshot is that governments, almost universally, do not use their legal or fiscal powers to take decisive action to force corporations to contribute significantly to the achievement of ecological sustainability if business is substantially united in its opposition.

Broadly the role of the state can be summed up in this way: in the absence of democratic and effective global governance, governments will not provide highly radical **driving leadership**⁶ because of their structural weakness relative to the world's largest firms. But once sufficiently powerful business blocs

² Private financial and standards institutions can, and do, manage the market to a significant degree. But it is rare for their activities to take into account the public good in a thorough-going way unless governments provide a motivating framework for their activities.

³ See <http://www.hubbertpeak.com/laherrere/>

⁴ The preindustrial level was 280 ppmv.

⁵ This argument is spelled out in full in:

<http://www.green-innovations.asn.au/how-far-how-fast-greenhouse-case.htm>

For the implications of stabilisation at 350 ppmv. see Enting et al., 1994.

⁶ Where governments act against the current expressed preferences of business.

have decided that radical action is needed, governments can and indeed are expected to facilitate change through **supportive leadership** and the use of their powers and capabilities.

Governments might play an early leading role in helping to build the consensus among businesses that radical action is needed. This might be done through the generation and dissemination of information and by engaging firms in the facilitation of a consensus view. That is, governments might provide **consensus-building leadership**. Other actors, from the business or community sectors might play this role too, in parallel with or in the absence of government action.

Since nothing very radical will happen in either the private or public sector until key sections of business form a consensus that radical change is needed, it is crucial that consensus-building leadership is provided by someone. There is no need to have a predetermined view about where this leadership will come from. In democracies the first contributions are more likely but not certain to come from the community sector. Whether it is the government or business groups that make the next contribution to consensus-building leadership depends very much on the particular circumstances of each area.

Scenarios for consensus

What is an appropriate vision of a radical transformation of an economy like Australia's? Two images come to mind. One is formed by taking the current economy, dominated by resource exports, and imagining a very green version of it (*the green resource exports economy*). Another is formed by imagining a dematerialised, closed-cycle economy that has gone a long way toward achieving its stretch goal of zero extinctions and that is contributing actively toward the emergence of a similar economic orientation elsewhere around the globe and then identifying the aspects of the current economy that could be grown up to match this future economy (*the sustainable service economy*).

The first scenario, being based on the *current* stereotypic characterisation of the economy, runs the risk of failing to be sufficiently green and falling back into the status quo. But its advantage is it is based on current perceived economic strengths. The second scenario builds on strengths in the domestic economy in the services and manufacturing areas. Transforming these domestic strengths into export strengths is a major challenge for this scenario.

Under the first scenario the greening of exports is the defining change. Forest production might shift to the truly sustainable management of native forests or better still environmentally sound production from plantations and agroforestry operations. Fishing might shift to environmentally-sound open-seas aquaculture and agriculture might adopt truly sustainable land management practices. Mining might adopt very environmentally sensitive techniques for exploration mining and rehabilitation and it might get involved in 'reverse mining' - eg. the return of stable, toxic or ecologically damaging materials to the earth's crust. Minerals processing might shift towards a predominance of recycling. Services and manufacturing exports might be built up on the basis of green resource production skills. The trap with this scenario is that unless the resource firms can tap large, high-value-added, non-commodity markets they are locked into expanding resource production which inevitably places increasing stress on biodiversity and the planet's life support systems.

In scenario two, the changes are driven partly by tapping the immediate green export potential of the services sector (education, R&D, multimedia, ecotourism, etc.) and partly by radically greening the domestic economy, with the later possibility that new export opportunities will open up based on the new capabilities developed in the services sector and the complex-products manufacturing sector.

The two scenarios have major implications for the change strategies outlined below, especially in terms of choosing which firms to target first. Under the first scenario, resource extraction and processing firms and their allies would be the target, and under the second scenario a rather different mix of services and manufacturing firms and their allies would be the early target. Firms likely to be targeted in the second scenario tend, at the moment, to be less engaged with environmental issues, although their responses (when they have them) tend to be less defensive.

The final outcome in the real world is likely to be a mix of changes from both scenarios.

The sustainability-promoting firm

The key to unleashing the power of government is the sustainability-promoting firm. If such firms proliferated and they joined with other elements in society they might create a coalition strong enough to counter the businesses that are currently blocking adequate environmental responses.

Three stances

Sustainability-promoting firms can exhibit a number of different orientations towards environmental issues. The three stances of most interest are:

- **ethical opportunist:** where the organisation generally tries to ‘do the right thing’ on environmental issues as long as action is clearly economically viable and does not involve significant risk.
- **catalyst:** where the organisation identifies environmental problems or opportunities that need action and it triggers other organisations to pioneer the solution or to take the necessary action
- **pioneer:** where the organisation works to make desirable environmental outcomes technically, organisationally and economically feasible. Pioneering can be directed at incremental or leapfrog movements towards inspirational goals⁷.

The *ethical opportunist* firm encourages a general improvement in the environmental performance of all its products and all its processes. Ethical opportunist firms need to have well developed search skills for finding the best available methods and product ideas and they need to be adept at taking on new methods and technologies.

Many firms that eventually adopt an ethical opportunist stance, may start out as ‘cynical opportunists’⁸. For example, successful experience with ‘green’ niche marketing or with the application of an environmental management system (EMS) may create a positive climate in which a shift can occur.

The *catalyst* stance is reflected in the cultural or policy influence that an organisation attempts to achieve in order to promote sustainability. Advertising, customer and employee education programs, sponsorships and policy advocacy are some of the channels for achieving such influence. They are often used, at present, to promote the self-interest of firms rather than the public good. However this need not be the case if firms are actively repositioning themselves to make a living by pursuing the public good. This catalyst stance is relevant for all organisations but sometimes it might be the only one that can be pursued actively if it is not possible, at a particular point in time, to make rapid progress in developing or improving products or production processes.

The *pioneering* stance is likely to be most successful where complete management units are involved. This allows all the management structures and processes to be aligned with the stance. Such an alignment is necessary if the organisation is to have the sticking power to make the necessary breakthroughs. Pioneering management units can exist within an organisation that is opportunistic overall.

The catalyst stance would almost always be found in combination ie. with ethical opportunism or pioneering. Because of the risk and cost associated with pioneering, it would be rare for an organisation to pioneer in everything it did, even where pioneering is a core strategy.

Guiding principles for a sustainability-promoting firm

There are five essential actions that sustainability-promoting firm needs to take. Such a firm needs to:

1. Declare the goal:

publicly declare that it aims to be a sustainability-promoting firm

2. Foster society's sustainability through products

⁷ See <http://www.green-innovations.asn.au/bis-pioneering-initiative-grin.rtf>

⁸ A *cynical opportunist* organisation is interested in environmental issues *only* as a source of commercial opportunities and for no other reason. Cynical opportunist firms add ‘green’ products to the range as market research shows that there is demand. However, products with poor environmental performance are offered to the market for as long as demand exists. Cynical opportunist companies are more likely to perform well in the ‘green’ market if their product development and production staff servicing ‘green’ niches personally have ethical opportunist or pioneer orientations. A team made up entirely of cynics will find it hard to identify ‘green’ opportunities and is unlikely to have the commitment or insights necessary to make ‘green’ initiatives work well.

strive to ensure that its entire product range, including the core business, helps *society* to achieve sustainability (instead of just aiming to reduce the negative impact of the existing products)

3. Promote society's 'sustainability take-off'

take action to help society and the economy (locally and globally) to reach a condition of 'sustainability take-off'

4. Urge governments to be proactive

press governments to take action to favour the achievement of sustainability

5. Promote large scale, urgent action

make sure its actions match the scale and pace of change needed if society is to achieve sustainability in a desirable timeframe.

There are six additional actions that a sustainability-promoting firm should take if it wants to magnify its effectiveness. The sustainability-promoting firm should:

1. Customer service:

ensure that when products (including services) and production processes are developed or modified to meet the needs of the active users that they are also designed to serve the needs of the local community, people globally, future generations and nature.

2. Management:

implement an environmental management system that enables the organisation to help *society* achieve sustainability in a timely fashion, for example, through the use of leapfrog pioneering strategies (Sutton, 1997b).

3. Market:

take action to maximise the market for products that contribute to sustainability and as far as possible favour the servicing of other firms and final users that are making a strong positive contribution to the achievement of sustainability (Sutton, 1997a).

4. Operations:

change the way activities are carried out or the way production is undertaken - to foster sustainability.

5. Proliferation:

promote the spread of the sustainability-promoting approach generally: through the private, public and community sectors and up and down the supply chain.

6. Cooperation:

cooperate with other sustainability-promoting organisations.

If sustainability-promoting organisations proliferate, then the chance of achieving sustainability will switch from 'vanishingly small' to 'virtually certain'.

Motivations for firms to become sustainability-promoting

The probability that firms will become sustainability-promoting will be substantially improved if:

- **scientific information** on the seriousness, scale and urgency of key environmental issues spreads
- R&D to create robust **win-win economic strategies** for an ecologically sustainable society at macro, industry sector/infrastructure and micro levels is undertaken
- **visions** of an ecologically sustainable economy and of key product and infrastructure innovations are built
- **management tools** for the sustainability-promoting organisation are created and spread
- **transformative technologies** are developed, promoted and adopted
- action is taken to **facilitate** the adoption of key products, infrastructure developments, etc.
- **micro-market reform** to foster the uptake of transformative technologies is undertaken
- community-based **lifestyle program** to help people develop and live lifestyles that are sustainability promoting are initiated

- **media interest** is boosted
- appropriate **institutions of government** are established
- **macro-economic reform** to introduce a new dynamic pattern of factor prices (physical resource and environmental impact costs to rise continually relative to labour costs) and to significantly increase the savings and investments rates (to boost productivity and economic output⁹) is undertaken
- **structural adjustment programs** for communities and industries are put in place.

Each of these points is discussed in turn.

Scientific information

People are unlikely to want to make difficult adjustments unless they know the stakes are high. Information such as the recent scientific consensus conclusion of the Intergovernmental Panel on Climate Change that “the balance of evidence suggests a discernible human influence on global climate” (IPCC, 1996) is an important motivator. The information about the required degree of CO₂ reduction and the imminent peaking of world oil supply referred to above is relevant here too.

Win-win economic strategies

There will not be much corporate or community enthusiasm for the pursuit of ecological sustainability as long as most people think the economy will contract as a result. But there is increasing awareness that win-win economic strategies based on ecotaxes and responsiveness-boosting investment and reform of market institutions can be developed to deliver superior environmental and employment results without a growth penalty. This awareness springs from the practical experience of the countries of northern Europe and from the results of econometric modelling studies (DRI, 1994). The European Union is leading these developments, but interest is being generated elsewhere in the world (Roodman, 1997). Win-win macroeconomic outcomes mean that resource use no longer grows in step with growth in Gross Domestic Product (GDP) and that contractions in the sections of the economy responsible for high environmental impacts are offset by growth in other sections of the economy. In fact with GDP continuing to grow, winners would outnumber losers. The new growth sectors would become very exciting targets for entrepreneurial companies and major focuses for the deployment of transformative technologies.

Vision building

The scale of many environmental problems and the urgency with which they need to be tackled are so great that a very rapid movement to a desired future is essential. So change processes based entirely on small incremental improvements will not be enough. Leapfrog change is impossible however if potential innovators have no idea what futures that are both desirable and viable might look like. So visions need to be constructed, of ecologically sustainable economies and key product and infrastructure innovations, that give a concrete sense of what is necessary and possible. Useful ideas for immediate action can then be derived from this process.

But longer term futures cannot be *predicted*. They can only be speculated about, with what turns out with hind sight to be more or less accuracy. So what’s the use of vision building?

Futures are created by what each actor does and the interactions between the actors and their actions. Vision building can enable actions to be conceptualised that have a higher than normal probability of being key drivers in the evolution of the future. Vision building can help identify, for example, transformative technologies, key infrastructure projects and institutional reforms. These initiatives can then form a framework around which other actions can fit. Social forces with incompatible visions compete with each other through their ability to activate key drivers. It should be remembered that in a complex world, brute power is not necessarily the final determinant of the outcome, as any practitioner of aikido¹⁰ knows.

Vision building also has a rather prosaic application too. Having a clear picture of where you want to be in the future allows backwards planning (back casting) to determine what actions must be initiated if the final goal is have a reasonable chance of being achieved. This is outcome-driven project planning writ large.

⁹ **Economic** output needs boosting, not physical output. Indeed physical output and more particularly throughput (from the earth back to the earth) needs to fall substantially.

¹⁰ The peaceful ‘martial’ art of Aikido is based on the principle of turning the often superior power of an aggressor into a force to block their own threatening action.

Management tools

Businesses and other organisations will not be able to become proactive in their pursuit of sustainability until tools are readily available to help them manage themselves viably as sustainability-promoting organisations. Although they are not yet widely used, many of these tools already exist. For example, the use of inspirational stretch goals (eg. zero waste, zero extinctions) to drive R&D and other innovations processes; organisational structures and processes that allow organisations to simultaneously operate in the present and plan for highly divergent futures (tools for “living in multiple realities”); whole-system design and industrial ecology principles; problem-solving and opportunity-creation techniques that aim for no major trade offs between society’s top environmental, social and economic goals; and scenario development and backcasting methods¹¹ Many of these tools are described in Sutton (1997a & 1997b).

Transformative technologies

Transformative technologies¹² are valuable because they can trigger very large economic changes, in terms of product and corporate growth rates and money flows. These technologies can change the relative influence of firms and indeed whole industry sectors. Ultimately the huge changes they trigger can change public perceptions of what is possible, making some commercial and public policy initiatives feasible where previously they would have been successfully resisted by the defenders of the status quo.

The hypercar is a dramatic example of a transformative technology. Cars are causing massive releases of CO₂ with serious greenhouse implications and they are the major factor leading to the massive depletion of oil¹³. Motivated by concern about this, an environmental policy and technology institute in the US, the Rocky Mountain Institute, developed the vision of a super efficient car to help overcome these problems. The concept was for a car with a carbon fibre body, electric motors driving the wheels and a small liquid fuel engine or fuel cell to generate electricity. Prototypes showed that these features plus other refinements result in car that is 75-90% more fuel efficient than the conventional car for the same level of service. Production cost estimates indicated that, when in mass production, the car would cost no more than conventional cars. If all cars on the road were of this type it would save as much oil as the OPEC countries produce and would reduce world steel demand by one eighth (Lovins et al., 1996).

Another example of a transformative technology is plantation grown softwood. In New Zealand in the 1970s and 1980s plantation softwood completely changed the economics of wood production and the supply picture. So dramatic was the shift that the conservation movement and the wood products industry were able to reach a formal accord, supported by government, that led to an almost complete cessation of native forests logging in New Zealand. The same potential exists in Australia (Clark, 1992).

Facilitated action

Great visions do not guarantee implementation. The inertia of habit and vested interest is enormous. So there is a need to actively facilitate action in desired directions.

The example of the hyper-car should suffice. The existing car companies were not keen to scrap their existing investments and to abandon well-honed skills. The oil and steel industries and the makers of conventional components and production machinery were not keen on the change. So the scene was set for inaction. The Rocky Mountain Institute responded by putting the fundamentals of hypercar design into the public domain so that the idea could not be suppressed. It then encouraged the aerospace industry to produce hypercars knowing that the sector already worked with many of the main technologies used in the hypercar. Now that competition was assured, the Institute redoubled its efforts to get the existing car makers to move into hypercars as well. The end result was that none of the

¹¹ A number of organisations are developing just such tools. For example, European Partners for the Environment/SustainAbility/Wuppertal Institute in Europe, and the Natural Step Environmental Institute, the International Institute for Sustainable Development, the Rocky Mountain Institute and ZERI internationally are developing sustainability orientated management tools for business. In Australia work is being done by many organisations including Green Innovations.

¹² Transformative technologies are technologies that have the power to dramatically change the environmental impact of business within the current price structure. They may be originated for environmental reasons or for commercial reasons, but once they take off the profit motive alone is enough to ensure that they succeed.

¹³ Recent estimates suggest that global oil production will peak in a little over a decade - due to the failure of oil exploration since 1980 to yield any super-large oil fields (Fleay, 1995 & Chris Mardon, personal communication, Melbourne, 1997)

major car firms could afford to ignore the technology for fear that a traditional or novel competitor would get there first. At least US \$2.5 billion has now been committed to develop hypercars. Product announcements have now been made by GM, Toyota, Ford, Daimler-Benz and Mercedes. Toyota was the first to market in November 1997 with a hypercar, minus the carbon fibre body. This car reduced fuel use by 50% and pollution emissions by 90%. This was not bad as a warm up!

Making cars super fuel efficient and reducing their air pollution emissions by 90% does not eliminate all the problems that they cause¹⁴. But this case study does demonstrate rather dramatically what can be achieved by good strategies to facilitate visionary concepts.

Micro-market reform

Micro-market reform is often needed to ensure that currently profitable green options are not blocked by inappropriate market structures. For example, transformative technologies might arise from spectacular scientific discoveries but it is much more likely that they will emerge from the design of new systems, that is, better ways of putting pre-existing elements together. With system innovations in particular, many parties will usually need to be involved in bringing the product to market. However, under the influence of prevailing institutional and commercial arrangements, the potential financial gains available from an innovation will often not be distributed evenly between the parties. If just one link in the delivery chain gains no benefit or suffers as a result of the innovation, that will be enough to stop the whole change process. For example, office buildings can easily be designed to use 75% less energy and be cheaper to build than conventional designs. But if the designers are paid, as is the norm in most countries, a fee based on the cost of the building they specify then they have a strong incentive to design a more expensive building with inferior performance (von Weizsäcker, 1997). So, more often than not, transformative technologies that are very profitable, on a whole-system basis under prevailing labour and resource prices, will nevertheless need to be accompanied by market reform to ensure that the distribution of benefits favours action. Clever alliance-building will usually be needed to gain support the reform process.

Lifestyle programs

If people lead sustainability-promoting lifestyles this will help to shape the services and goods that are offered. Programs that help householders to review their consumption patterns and environmental impacts can therefore play an important part in changing the market. An example of such a program is the Global Action Plan which is spreading through Europe, North America and beyond (Gershon & Gilman, 1992). This is a household version of an environmental management system with participants assessing and modifying their use and disposal of resources and other elements of lifestyle impacting the environment. The results from individual households are aggregated and fed back to participants so they can see the progress they are making collectively.

There are limits to how far householders can go in greening their way of life because the services and products needed to support lifestyles with even lower impact are not available. Community lifestyle programs need to go one step further than the approach used for example by the Global Action Plan and, in an open and ethical way, feed information about these unmet needs back to businesses so that new generations of services and products can be developed.

Media interest

It is rare for major shifts in public, corporate or government thinking to occur until the issues are picked up by the media for intensive treatment. Large-scale media coverage will spread the ideas and create a sense of reality and momentum, the very conditions that make it highly probable that the transformation will occur¹⁵.

Institutions of government

Institutions of government need to have sufficient research capability, administrative resources and influence across government to ensure that ecological sustainability is a central consideration in all policies and programs that bear on the direction of the economy. Business, educational institutions and community groups, well-resourced where appropriate by government, should develop similar arrangements. A government program to promote sustainability will be greatly enhanced if, after some momentum has been established, a core piece of legislation is passed to lock in and give effect to the community's commitment to create an ecologically sustainable economy.

¹⁴ Eg. excessive use of land, accidents, dispersed urban form, erosion of local communities.

¹⁵ The globalisation of the media has gone so far that local media outlets often only treat an issue as newsworthy after the international news networks have picked it up in what they see as the trend-setting countries.

Macro-economic reform

Micro-market reform by itself is however not enough. Over the last hundred years and almost certainly for a lot longer, the cost of resource intensive products has fallen steadily relative to the price of labour intensive products (Grilli & Yang, 1988; Barnett & Morse, 1963). This makes high physical resource consumption and, therefore high environmental impact, an increasingly economically-advantageous strategy, everything else being equal. In the face of the long-run relative price trends it is no wonder that society has moved to a throwaway structure and it is no wonder that recycling continues to be undermined by the low cost of virgin resource production - especially during the troughs of the business cycle.

The principal institutional cause of the relative fall in prices of virgin resources is the way that society was structured in the transition from feudalism to capitalism, with wage payments by individual firms emerging as the way that most people earned their incomes¹⁶. When employer-paid wages, as the dominant income source, combine with:

- economic growth
- a non-declining share of income going to labour compared to the owners of capital
- the greater technical ease of reducing the labour intensity of the resources sector compared to the other economic sectors

then the historically described long-run reduction in relative resource prices is generated. (Sutton, 1995a)

So there is something about the basic structure of the market which, until it is changed, makes it hard to have an environmentally sustainable economy. If firms want to help bring about ecological sustainability they need to not only produce the 'greenest' products that are possible at any particular point in time, but they need to contribute to the restructuring of the market itself to favour sustainability eg. through ecotaxes, eco-investment strategies and institutional changes. (Sutton 1996, Sutton 1995b).

Structural adjustment programs

Compassion and equity, first and foremost, and political pragmatism make it mandatory to assist communities and industries that could be adversely affected by dramatic shifts to a green economy.

Change agents

The motivating factors described above will not become major forces unless they are triggered by effective change agents. Eight key change agents appear to be necessary:

- **a sustainable economy movement** to catalyse the emergence of an ecologically sustainable economy
- **radical solutions catalysts** to develop and broker action
- non-threatening **business sustainability programs** and **consultants**
- **transformative funds** that can foster highly strategic catalytic investments on both a commercial and a non-commercial basis
- a coalition of interests in a sustainable future (**sustainable economy coalition**) that is powerful enough to successfully challenge the vested interests in the unsustainable present
- fierce **ultra-green competitors** that put pressure on the rest of the market
- **governments** to mobilise their powers and resources to foster a sustainable economy
- **deliberation councils** to mobilise forces for greening across the whole economy and to foster consensus for action.

Each of the change agents is described in turn.

¹⁶ An alternative arrangement might have been a mixture of an employer-paid subsistence wage and a social dividend that provided discretionary purchasing power.

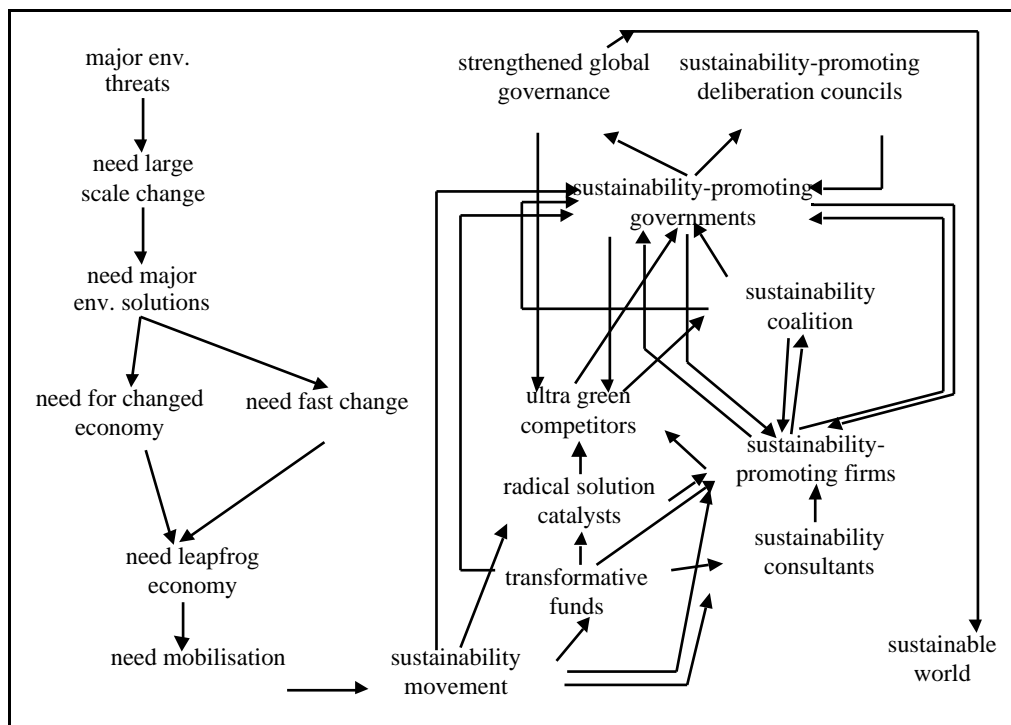


Figure 1 - The role of change agents in creating a sustainable world - (V. 1.e)

A sustainable economy movement

Around the world different classes of organisation seem to be contributing leadership to the task of creating an ecologically sustainable economy. Community groups, specialist institutes or programs, professional associations, local councils, corporations, unions, state and national governments are all involved. But there seems to be a missing element and that is a grass roots movement aimed at the business community, with the charter to *encourage* every business to become a sustainability-promoting organisation. Such a movement would operate bottom up, would have strong links to the environmental movement, and would be uncompromised (but reasonable) in its approach and free ranging in its style. Specifically its functions would be to:

- introduce ideas to business, the community, government and the media on sustainability-promoting organisations and what such organisations could do to effectively address the real scale and urgency of environmental problems
- identify existing and prospective sustainability-promoting organisations and encourage them to become active
- promote an uncompromised standard of performance for sustainability-promoting organisations and encourage sustainability-promoting organisations to lift their sights
- help spread and exchange ideas on sustainability-promoting between and beyond businesses.

The Natural Step professional and business networks in Sweden do something of this but there is probably an advantage in not having the movement auspiced by an organisation that has to be acceptable to big, mainstream corporations on a day-to-day basis. Many other organisations could perform some of the functions of the network in a complementary way eg. the Global Action Plan.

Radical solutions catalysts

The strength of movements is that they can involve everyone, no matter what their level of skill. But there is a need for a range of expert organisations that can play the role of radical solution catalyst. Examples of such organisations are the Rocky Mountain Institute (US), Wuppertal Institute (Germany), ZERI (Japan) and in Australia, the Institute for Science and Technology Policy (WA), the Institute for Sustainable Futures (NSW), EcoDesign Foundation (NSW), etc. Environmental organisations can also play an important role. For example, Greenpeace on the Sydney Olympics and the Australian Conservation Foundation on water sector adjustments.

It is these sorts of institution that can deploy the expertise needed to come up with and facilitate the adoption of transformative technologies or policies.

Related functions that need to be performed also are those of sustainability educator and technical or business systems consultant.

Non-threatening business sustainability programs and consultants

A range of organisations is now offering green business management systems and consulting services to business eg. Natural Step, SustainAbility, WWF, GEMI (Global Environmental Management Initiative), ISO 14000 consultants, Forest Stewardship Council, etc. These organisations provide the methods and help develop skills once there is interest from a firm.

Some specifically Australian initiatives with close links to the environment movement have been the Sustainable Industries Office of the Australian Conservation Foundation (ACF), Environment Victoria's work on energy efficiency products with a range of manufacturers and distributors, and the Green Jobs Unit initiated jointly by the ACF and the Australian Council of Trade Unions (ACTU).

Transformative funds

Governments and private firms that depend on the approval of the electorate or finance markets cannot easily take on transformative leadership until the need is glaringly obvious (such as during a war or a natural disaster). So we need vehicles for fostering the dramatic transformation of the economy to achieve a sustainability-promoting structure - that can be highly strategic, can avoid watering down their objectives and yet can mobilise very significant resources to catalyse on the ground change through new ideas and concrete action. This need could be met through a new form of ethical investment that is targeted at highly strategic catalytic investments. Transformative funds would foster key R&D projects and the large scale roll-out of breakthrough innovations. They would also support policy and advocacy work and educational projects. Transformative funds would be involved in both commercial and non-commercial financing. These funds could become 'economic planning agencies' for the transition to a sustainable economy. (Sutton, P., 2001)

Sustainable economy coalition

Once sustainability-promoting businesses emerge they need to band together with other sustainability-promoting organisations such as community groups and government environment agencies to form a powerful force for sustainability leadership and advocacy. Such a coalition would be a leading advocate of both macroeconomic and micro market reform that would ensure that all businesses and other organisations behaved in an environmentally sound fashion. The coalition would also assist member organisations to implement sustainability-promoting practices.

Ultra-green competitors

Nothing concentrates the mind of businesses quite so much as fear of their competitors. A key group of change agents will be companies that decide to make serious money by actively marketing sustainability-promoting products. Fear of effective green competitors is likely to be one of the most effective motivators to get poorly performing companies to lift their environmental performance.

Green competitors will range from conventional companies with one or two very good products in their range (eg Bosch washing machines, Southcorp dishwashers) to companies that specialise in being ultra-green across their whole product range. An indicator of progress in this direction will be when one or two larger multinational companies emerge that have the pursuit of the public good as their principal strategy for gaining competitive advantage. The laser printer manufacturer Kyocera and Interface which makes carpet tiles are moving towards this.

Governments

There is intense debate at the moment about the frequent failure of governments to take the lead on the greening of the economy. Many argue that governments have lost a lot of their capacity to regulate or guide corporations due to the globalisation of the economy and the absence of any effective global environmental governance. Others argue that governments can use new strategies and that they do not have to be powerless, for example many governments in northern Europe are very proactive on the environment.

Regardless of who is right, there is no doubt that governments have unique powers that must be used and roles that must be fulfilled if an ecologically sustainable economy is to be created eg. law-making, taxation, and redistributive powers and investment in for example education, infrastructure and R&D. Governments that lag are unlikely to remain that way for long if they are faced with an effective sustainable economy movement and sustainable economy coalition, an array of radical solutions catalysts and ultra-green and competitive businesses.

Deliberation councils

Once the leading sectors and organisations are operating effectively and key economic and market reforms such as ecotaxation have occurred, then mechanisms need to be put in place to engage the rest of industry. One practical way to do this is to set up representative deliberation councils¹⁷ to identify a plan of action for their particular focus. The deliberation councils would be made up of business, community, union and government representatives. The plans would be based on preferred options drawn out of a scenario building process. Clear attention would be paid to the needs of likely winners and losers with the aim of boosting community benefit from the success of the winners and reducing community detriment arising from the fate of potential losers.

Imagining the future

The speed and scale of change required to achieve ecological sustainability is at least an order of magnitude greater than people tend to imagine. Change like this cannot be achieved in a timely fashion purely through the aggregation of a myriad incremental changes. Micro changes will need to be accompanied by a great many big leap changes. One of the major sources of these changes will be whole-system design, an area that has historically been massively underdeveloped because so many people and organisations find it hard to deal with complexity.

To maintain public support for leapfrog changes, it will be necessary to produce win-win outcomes where major environmental improvements come at an affordable cost and without the need to sacrifice the satisfaction of other human needs. Traditionally economists have said that it is not possible to maximise several needs at once. Certainly it is true that as you try to maximise an increasing number of objectives, the proportion of any fixed set of options that meets the multiple criteria will fall. But in reality the chance of finding a suitable win-win solution can be kept high by significantly improving our knowledge of the world and society and then vastly increasing the number of options that are generated and tested. To be affordable most of this option generation and testing has to be done in the mind or in the computer because it is prohibitively expensive to create huge numbers of real prototypes or models.

So leapfrog change requires people to be able to imagine society and technology as it has never been, that is, to be able to think 'out of the box'. Whole-system design requires people to have the ability to conceptualise and use complex models depicting how things are now and how they might be. And the creation of win-win solutions requires 'design profligacy' that is only possible when whole system design skills are ubiquitous and computer-aided-design can be applied widely. So for all these reasons sophisticated simulation modelling capacity will have to be widespread throughout society.

A powerful way to spread modelling skills throughout society and to generate awareness of how the economy might be transformed into an ecological sustainable state would be to create and extensively disseminate a modelling 'game' that was like a combined version of the popular simulation games: SimCity and SimEarth. To maximise the potential for learning, the game should allow advanced users to modify the rules and knowledge-bases that drive the model and to create new simulated technologies and public policies. If very large numbers of people could play the game together on-line, as is being done with the game Ultima Online, where 60,000 people have logged on at once, then the opportunities for learning how to handle the real complexity of social and technical change would be magnified many fold. This complexity is to be tapped deliberately in a new on-line game, Asheron's call, being developed by Microsoft. (Herz, 1998) A sustainability game as is envisaged here could provide a medium for complex networking in society between business and the community and could become a major vehicle for mobilising to proliferate sustainability-promoting firms.

Getting it started - the campaign

Promoting the public good in a way that is clearly independent of their own *existing* interests is not a traditional role for most private corporations and it implies a major cultural shift in the private sector. At least initially it requires a risky leap of faith by the businesses that realign¹⁸. Such a leap by business has to rely on the vision and will-power of the top management of corporations - otherwise the leap cannot be made corporately or effectively.

¹⁷ A council could be created for each of (a) the key transformative technologies, (b) the industry sectors, and (c) the key regions and communities and (d) the macroeconomy as a whole.

¹⁸ ... and by those in the community sceptical of business and its agendas.

The program of action described above, once it is operating, can switch the risk from that of being involved in sustainability-promotion to the risk of not being involved. But the crucial thing is to get the whole process moving. The sustainable economy campaign is the key to this.

In the past community campaigns have often been aimed at getting governments to control the private sector or they have been aimed at specific corporations to get them to reduce their direct negative environmental or social impact. The campaign to create sustainability-promoting firms and a sustainability coalition needs to do something quite different. It needs to include a major thrust aimed squarely at the private sector to prompt the emergence of sustainability-promoting firms and to win over significant numbers of firms to a new approach to governance and new policies of governance. To be effective this campaign cannot be negative and oppositional. In fact it needs to be a new style of campaign - very radical and growing from the grass roots but also cooperative and pro (ethical) business. A campaign that is negative and inherently anti-business will not be able to engage firms in the necessary process of internally driven change. This is clearly a new form of campaigning and it will call for new skills and strategies.

The campaign is likely to be initiated by a combination of:

- people from green groups and government agencies with a positive interest in business, and
- green-minded people from within business itself¹⁹.

The author's organisation, Green Innovations, has committed itself to helping to catalyse such a campaign and interested people are invited to get in touch.

The role of political parties

Political parties might contribute to a business-orientated sustainability campaign by encouraging their members to become personally involved. Or the parties might adopt a more direct role by formally working with businesses to encourage them to become sustainability-promoting. This more direct but general approach might be quite challenging for firms since they generally try to maintain a non-partisan profile. Consultants and community groups could probably carry out this function more easily.

A more appropriate approach might be for political parties to work with green-minded business people and sustainability-promoting firms to develop new policies for the creation of an ecologically - sustainable economy and for the necessary strengthening of the process of governance, right from the international to the local level.

Firms are more likely to support a shift to a truly sustainable economy if they have the security of a degree of political bipartisanship. For this reason it would be very valuable for as many parties as possible to develop some shared policy elements for the transition. This might seem to be an unrealistic suggestion given that political parties need to differentiate themselves in order to attract voters. But it might be possible, if parties work cooperatively, to create a shared paradigm but then each party can actively differentiate themselves in terms of how they would bring about the paradigm shift and where, within the new paradigm, they would position themselves. This model of change is often used by groups of commercial competitors to open up radical new options (the telecommunications/multimedia industries abound with examples). It is also an approach that should come easily to political parties that advocate proportional representation since effective government under this system depends on multi-party cooperation.

References

Barnett, H., & Morse, C. (1963). Scarcity and growth. Johns Hopkins Press: Baltimore.

Campbell, C.J. & Laherrere, J.H. (1995). The world's oil supply 1930-2050. Institute of Science and Technology Policy: Murdoch Western Australia.

Clark, J. (1992). Growth in the Victorian timber industry: Initiatives for jobs in the 1990s. Conservation Council of Victoria: Melbourne.

Collins, J. & Porras, J. (1994). Built to last: Successful habits of visionary companies. Century: London.

¹⁹ People from management consulting groups and business-related schools in tertiary education institutions could be considered to be from 'within' the business community too.

- Crosthwaite, J., Sutton, P. & Alden, D. (1997). "Towards an ecologically sustainable economy". Presented at the Environmental Justice: Global Ethics for the 21st Century Conference, Melbourne University 1-3 Oct. Melbourne, Australia.
- DRI et al. (1994). Potential benefits of integration of environmental and economic policies. Graham and Trotman and Office for Publications of the European Communities: Brussels.
- Enting, I., Wigley, T. and Heimann, M. (1994). Technical Paper No. 31: Future emissions and concentrations of carbon dioxide: Key ocean / atmosphere / land analyses. CSIRO Division of Atmospheric Research: Melbourne.
- Fleay, Brian (1995). The decline of the age oil. Pluto Press Australia, Marrickville, NSW.
- Gershon, D. and Gilman, R. (1992). Household ecoteam workbook. Global Action Plan for the Earth: Woodstock, New York.
- Greer, J. & Bruno, K. (1996). Greenwash: The reality behind corporate environmentalism. Third World Network/The Apex Press: NY.
- Grilli, E. & Yang, M. (1988). "Primary commodity prices, manufactured goods prices, and the terms of trade of developing countries: What the long run shows", The World Bank Economic Review, 2:1, pp. 1-47. The International Bank for Reconstruction and Development/The World Bank.
- Herz, J. (1998). "Subtleties of governing a virtual world", New York Times. 26 Feb 98.
- Intergovernmental Panel on Climate Change. (1996). Climate change 1995: The science of climate change. WMO/UNEP.
- Lloyd, T. (1990). The 'nice' company: Why 'nice' companies make more profits. Bloomsbury: London.
- Lovins, A., Brylawski, M., Cramer, D. and Moore T. (1996). Hypercars: materials, manufacturing and policy implications. Rocky Mountain Institute: Snowmass, Colorado.
- Roodman, D. (1997). Getting the signals right: Tax reform to protect the environment and the economy. Worldwatch Paper 134. Worldwatch Institute: Washington.
- Sutton, P. (2001). "If I managed Australian Ethical's \$120m - Investments that transform the economy and society", Aim High. Australian Ethical Investment Limited: Canberra.
<http://www.green-innovations.asn.au/transformative-funds.htm>
- Sutton, P. (1997a). "Tapping the sustainability market". Greener Management International, 18, UK.
<http://www.green-innovations.asn.au/tapsmkt.htm>
- Sutton, P. (1997b). "Targeting sustainability: The positive application of ISO 14001" in Sheldon, C. (ed.) ISO 14001 and beyond: Environmental management systems in the real world. Greenleaf Publishing: Sheffield, UK
<http://www.green-innovations.asn.au/iso14001.htm>
- Sutton, P. (1996). Transformed market conforming planning. Green Innovations Inc.: Melbourne.
<http://www.green-innovations.asn.au/tmcp.htm>
- Sutton, P. (1995a). "Ecological tax reform: A policy analysis of the Costanza, Daly, Hawken and Woodwell package." Presented at the Inaugural Conference of the Australian and New Zealand Society for Ecological Economics: Redefining resource management and environmental policy through ecological economics. Coffs Harbour, Australia.
<http://www.green-innovations.asn.au/anzsee.htm>
- Sutton, P. (1995b). Scenario 2 - waste elimination: waste minimisation report - chapters 2, 11 & 15. Green Innovations Inc.: Melbourne. <http://www.green-innovations.asn.au/zero-waste-scenario.zip>
- von Weizsäcker, E. Lovins, and A., Lovins, H. (1997). Factor four. Allen & Unwin: St. Leonards, NSW.