

Chapter 4

Making progress within and beyond borders

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Note: Photos and biographies of co-authors can be found in the appendix.

Transformations of the twenty-first century

Climate change is now almost universally recognized as one of the gravest threats to life and well-being on this planet. Unfortunately, any potential response to this threat is complicated, if not hobbled, by four other factors.

First, there is another unfinished global policy agenda – the eradication of poverty and global inequality – whose only widely accepted solution – economic growth – conflicts directly with climate stabilization. Second, climate change has emerged as part of a complex mosaic of challenges, some of which are closely related to it. A short list of these challenges includes trans-national epidemics (such as HIV/AIDS, SARS, and Avian Flu), environmental degradation and biodiversity loss, accelerating water stress, increased frequency and/or intensity of various catastrophic events (floods, droughts, hurricanes, cyclones, tsunamis, and earthquakes), and threats to global security (especially from terrorism). Moreover, economic globalization has revived the spectre of runaway financial epidemics as manifested in the recent global financial crisis and subsequent economic recession. The current global economic crisis is not only the deepest since the 1930s, it occurs simultaneously with global climate change and ecological crises, all of which are closely interwoven; with unsustainable, excessive consumption and production patterns humanity has applied the logic of sub-prime lending not only to the housing sector but also to the global ecosystem. At the same time, economic globalization has eroded the capacity of states to cope with financial or other epidemics, or more broadly to protect social welfare and environmental resources by regulating financial and corporate capital.

Third, the human impacts of climate change are determined by the social and ecological resilience of human societies and the natural capital that supports them. The dramatic ‘hockey-stick’ pattern of temperature and greenhouse gas accumulation from anthropogenic emissions applies to virtually all critical ecosystem services of the Earth, as observed in land degradation, loss of biodiversity, deforestation, overfishing, and air pollution (see Fig. 1). Over half of the cumulative anthropogenic greenhouse gas emissions have been absorbed by terrestrial ecosystems (in forests and soils) and the oceans (Canadell *et al.*, 2007).

We can expect unforeseen positive feedbacks from climate change, when the warming interacts with the broad spectrum of hockey-stick patterns. It remains unclear though, what human-induced surprises could be triggered, even though several of the risks have been identified (e.g., abrupt change in the African and Indian monsoons, accelerated melting of glaciers, abrupt savannization of rainforests; Lenton *et al.*, 2008), and have even been observed (the abrupt collapse of the Arctic summer ice in 2007). A key element of this unknown is the global degradation of ecosystem functions (e.g., carbon sequestration) and services (e.g., food and fish

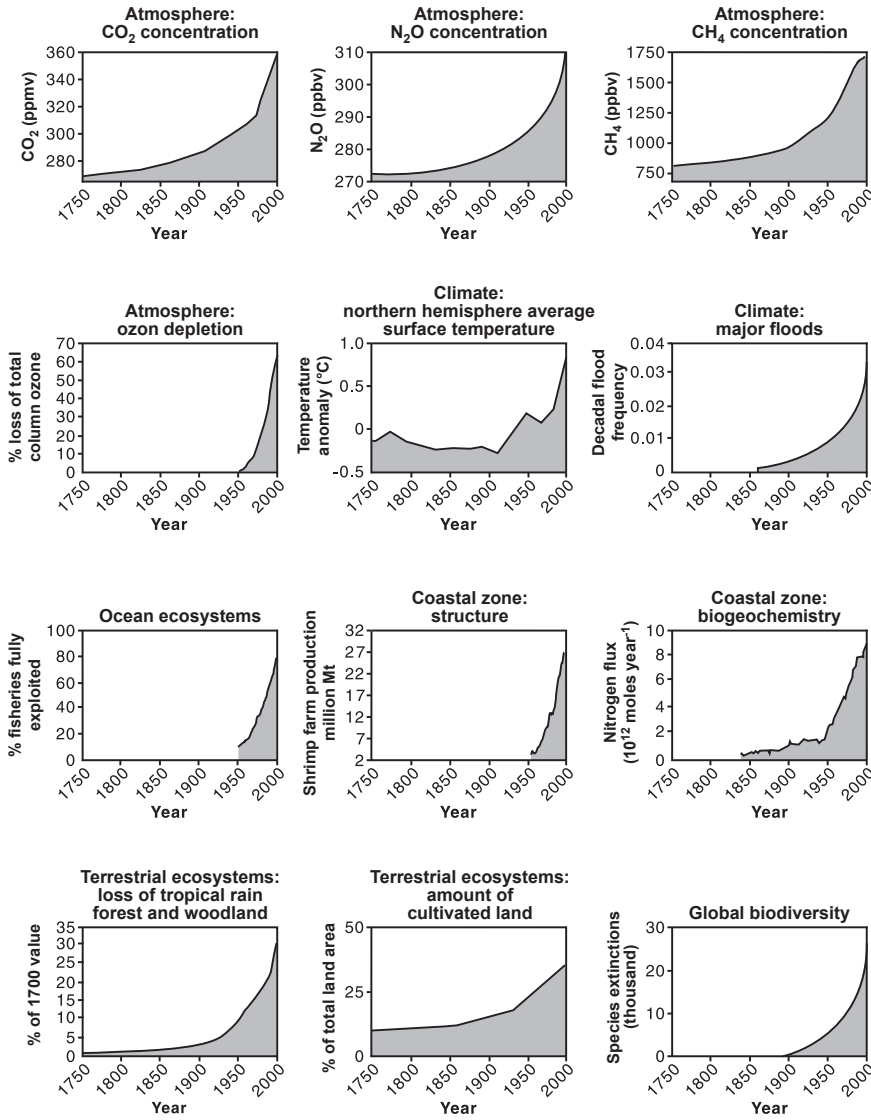


Fig. 1. Hockey-stick pattern of key ecosystem functions in the Earth system under pressure from human drivers. (Source: Steffen *et al.*, 2003, p. 133)

production). The UN Millennium Ecosystem Assessment, presented in 2005 (Millennium Ecosystem Assessment, 2005), was the first global health check on the state of the planet’s ecosystems. It concluded that we have degraded 60% of key ecosystem services, which are not only fundamentally important for human well-being, but particularly critical for poor communities, and a key feature of our capacity to adapt to climate change.

Fourth, climate change upsets the very foundation of modern society. The growth momentum of the industrial age since the middle of the eighteenth century has been built upon the harnessing of energy from fossil fuels, and the bulk of modern physical infrastructure and corporate profitability is premised on the continued availability of fossil fuels. An effective resolution to the crisis will imply a radical transformation of both the technological and corporate basis of industrial activity. This, in turn, will only occur if pushed by a fundamental social transformation.

But the problem goes deeper than fossil fuels. Climate change is the thin end of the wedge of an irresolvable conflict between finite resources and unending growth. Continued and unending economic growth has become the very definition of progress and the basis for social solidarity in industrial society. Ultimately, this conflict will be resolved only by weaning post-industrial society from its continued reliance on growth, and thus by critically reassessing growth itself and some of the core values that underpin it: competition, entrepreneurship and consumption.

Climate change is ultimately the visible face of an absolutely unprecedented challenge to the international community. This challenge forces us to simultaneously ask (a) how to sustain the process of economic development in poor countries (both fast- and slow-growing ones), (b) how to move existing infrastructure and economic institutions away from their almost exclusive reliance on fossil fuels, (c) how to continue to enhance social welfare while weaning modern society from its dependence on unending growth and resource use, (d) how to strengthen the conventional locus of policy making – the nation state – while creating effective institutions for local and global governance, and (e) how to do all this while simultaneously addressing other areas requiring immediate attention – health, environment, financial instability, and political conflict.

This will require novel instruments and institutions of global governance, a dramatic change of direction of technological progress towards resource productivity, and strong incentive structures locally and globally, encouraging all actors to abandon unsustainable technologies and habits and to work towards a sustainable future. Most of all, it will require enlightened and responsible global leadership that serves to unite people from all nations in a common cause rather than creating divisions, friction, and distrust.

The climate challenge: crisis and opportunity

The climate community has long articulated the 2°C limit (namely an average temperature increase of no more than 2°C over preindustrial levels) as the safe threshold beyond which irreversible, costly and even catastrophic change becomes likely. The Fourth Assessment Report of the Intergovernmental Panel for Climate Change (IPCC) interprets this target as implying a stabilization of carbon concentration at

450 parts per million (ppm) CO₂ equivalent, which in turn means drastic reductions in global carbon emissions. The scientific assessment in the IPCC cautioned that even stabilization at 450 ppm CO₂ equivalent constitutes no less than a 30% risk of exceeding 2°C, and more recent science suggests a need to keep the carbon dioxide concentration below 350 ppm, which would correspond to approximately 400 ppm CO₂ equivalent, to avoid accelerated and dangerous climate change (Hansen *et al.*, 2008). Today, in 2009, we have already reached 385 ppm CO₂ and almost 450 ppm CO₂ equivalent.

As mentioned already, the carbon stabilization goal has emerged at a time when the pre-existing common agenda of humankind, namely poverty eradication and reduction of global inequality, is still unfinished. The well-known ‘champagne glass figure’ (see Fig. 2) from the cover of the 1992 Human Development Report depicts this issue vividly. The poorest 20% of the global population earned only 1.4% of the global net income, while the richest 20% received 82.7%, a ratio of 1:60. This inequality appears to be widening rather than narrowing. In 2004, the corresponding ratio was estimated at 1:90.

The only sure way to reduce this inequality, and thereby also to address associated social ills – poverty, unequal access to basic human needs (nutrition, health, education, and right to due process and participation), and protection from predatory behaviour – is economic growth in poor countries. A few countries, especially in Eastern Asia, have taken off into what appears to be a robust growth pathway, but they still face enormous challenges that call for global cooperation: how to protect the momentum from getting derailed by external pressures, how to make it compatible with resource limits, and how to extend it to areas where poverty persists. Other countries and regions are showing slow or intermittent growth, and there too global cooperation is of paramount importance to increase the momentum of growth by addressing familiar obstacles of governance, institutions, and human resources. Economic growth, however, is an imperative not only in developing countries. It provides the foundation for the successful operation of a modern economy. While it is now becoming clear that our love affair with economic growth must come to an end, the means of achieving this transition are far from clear.

All this, in other words, represents an unfinished global responsibility. The only hope of obtaining the requisite political support in rich countries is to gradually de-couple welfare from growth so as to accommodate social needs within the resource portfolio of a finite biosphere. Likewise, the only hope of marshalling the energies of four-fifths of the world behind newer challenges that are assuming ever-greater importance is that the sustainable development agenda in poor countries continues to be viewed as a common global agenda until such time as the most glaring inequalities have been eliminated.

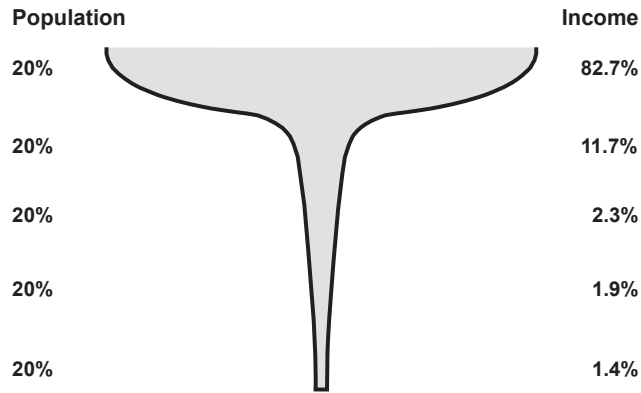


Fig. 2. The ‘champagne glass’ of global inequity. There is large and growing inequity in the distribution of wealth, with 20% of the world’s richest inhabitants receiving more than 80% of the world’s income, while the poorest 20% receive approximately 1%. (*Source:* adapted from UN HDR, 1992)

In the absence of concerted global action, climate change, foremost among the newer challenges, will remain on a collision course with development and growth. With the existing technological portfolio, continuing growth in rich as well as poor countries would lead to a threefold increase in carbon dioxide emissions by the end of the century, with consequences that can only be described as catastrophic. On the other hand, without additional measures, many of which require visionary action, any serious response to the climate challenge will disable the growth process, undermine societal welfare in rich as well as poor countries, and deal a severe blow to prospects of global solidarity.

Crises as springboards for collective action

The Chinese pictogram for the word ‘crisis’ is a combination of two characters: threat and opportunity. The current financial and economic crisis represents not only a threat but also an opportunity. Long-term solutions will require fundamental change to the way financial markets and global financial institutions are regulated. The Bretton Woods institutions, set up to rebuild a war-torn world after the Second World War, are not configured to deal with the global social, economic, and ecological crises humanity faces today. The financial crisis has triggered a healthy insight that these and other institutions will require reform. The huge sums invested in various ‘stimulus’ packages, which amount to thousands of billions of US dollars, could be directed towards investment in low-carbon technologies and practices. The large investments now being generated to ‘save’ predominantly rich economies from collapse expose by comparison the ridiculously paltry amounts

allocated to ‘development’ in poor countries in the world (with global development aid in the order of USD 80 billion compared to stimulus spending of more than USD 1000 billion in the United States alone). These factors constitute an opportunity. There is a risk, however, that the large stimulus funding will be re-invested in the old ‘business-as-usual’ economic system that was the original cause of the crisis, thereby stimulating more unsustainable consumption and growth (see Töpfer, this volume).

In the past, great crises have often served to unite people by creating a common cause of action. Through enlightened leadership and an engaged populace, crises have often regenerated societal trust and collective action on the basis of new visions, new institutions, and new laws and agreements. The example of the economic crises of the inter-war period, leading to the emergence of the welfare state, is often given. At the international level, acute problems have similarly served as springboards for testing and improving means of international coordination, balancing interests, sharing burdens, learning about and managing impacts, and expanding scientific understanding.

Such exploitation of opportunity has been evident in recent crises. Global epidemics have stimulated unprecedented international cooperation between countries and institutions that otherwise are not closely linked. Global dissemination of information on violent genocides has provoked the international community into developing new institutions to ensure dignity and human rights for everybody. The increased frequency as well as awareness of natural disasters (including earthquakes, floods, droughts, and storms) has led to charitable actions and solidarity as well as the beginnings of investments in institutional coping capacity. All of these developments have been pushed, supported, and monitored by global social movements for the environment, human rights, women’s rights, and the rights of indigenous communities.

However, crises can also lead to more regressive responses. The rapid growth in international migration in recent decades, driven by economic, political, security, or environmental factors, has fostered a fortress response. Similarly, while the Cold War created a stimulus for the peace movement and arenas of international cooperation, the so-called ‘War on Terror’ has triggered a more paranoid response by governments as well as civil societies. Finally, globalization has weakened traditional institutions that protect the vulnerable, including the organs of the welfare state, and has undermined social solidarity, although the response of countries affected by the Asian financial crisis helped balance some of these trends.

The great transition or a fortress world?

This, then, is the challenge for the leaders of the twenty-first century: how to pilot the world towards unity of action and common purpose on a sustainable pathway

that builds resilience and steers away from undesirable tipping points, rather than to the erection of divisions, barriers, and fortresses? The pursuit of sustainability is deeply embedded in the agenda of global solidarity. Actions within borders impact and are impacted by those beyond borders, and all foreign policy has become, in essence, global domestic policy. Actions within one sphere affect and are affected by actions as well as omissions in others, and the major questions regarding the basis of human welfare have been reopened.

What follows is a brief list of issues thrown up by this challenge. While there are powerful forces that seek to divide and fragment, there are also equally powerful visions of a world that enable us to overcome differences, and unite all people in a common future. These visions include at minimum the following elements.

Democracy and participation

One of the most powerful forces both in bringing people together and enabling a search for collective solutions is the institutionalization of democracy and participation at all levels. At local and national levels, it means the participation of the entire population, including women, children, the poor, and elderly people.

At a global level, it means strengthening the United Nations system, making it more effective, transparent, and responsible. It also means ensuring that markets work fairly in the service of global prosperity, welfare, and sustainability, and that market institutions support rather than subvert democracy. Finally, in the twentieth century we learned of the power of an engaged civil society to harness entrepreneurial energies, provide common visions, challenge conventional wisdom, and monitor and render transparent the workings of governments.

The development agenda

After a long period of unfulfilled promise, there is evidence that the development momentum has picked up sufficiently to address the concerns of large numbers of poor people, especially in Asian countries. It is a matter of tremendous importance that this momentum be sustained and expanded.

Economic growth is a necessary but not sufficient condition for eradicating the worst aspects of poverty. The world community sought to address this in a targeted approach through the Millennium Development Goals. This initiative, which aims to reduce by half the number of people living in extreme poverty by 2015, supports funding programs and raises awareness of global poverty. However, to achieve global development targets, a change in rich countries' policy is urgently needed. Investments in innovative options are required to meet the needs of the poor, for whom traditional approaches are not appropriate. These options include community

development and micro-credit schemes. There is also a need to shift towards more integrated approaches, which lead to sustainability in both resource management and service delivery systems.

The energy system revolution

The climate challenge is associated closely with the energy system. The Industrial Revolution was based ultimately on the harnessing of increasing volumes of fossil fuels. The challenge now is to engender a transformation to a radically new structure that is not dependent on fossil fuels. However, the first energy revolution has yet to reach the vast majority of the world's population (see Nakicenovic, this volume). While the energy systems of industrial countries have reached a stable level, those in developing countries still have to grow considerably.

Most of the instruments being considered at a global level to address climate change are indirect in nature. They include national emission targets, trading schemes, and support for the emergence of an emissions market. All these have found much greater acceptance in industrialized countries than in poor countries, mainly because they are at best irrelevant and at worst inimical to the development agenda.

An early idea for incorporating development concerns into the emissions trading framework was that of equitable emission rights. It remained on the sidelines of the climate debate until the recent courageous statement by German Chancellor Angela Merkel that national emission entitlements should gradually converge towards equal per-capita levels (a proposal presented in August 2007 on the occasion of her visit to Japan). The idea of equal rights to the global commons represents the spirit within which a consensus solution could be found. A global climate regime for greenhouse gas emissions that builds on the principles of the UN Framework Convention on Climate Change, stating that burden-sharing must be based on capacity and responsibility, has been developed by the Stockholm Environment Institute with partners (Baer *et al.*, 2007, p. 95). This so-called Greenhouse Development Rights (GDR) framework couples climate science with the right to development among the world's poor. It clearly shows that if humanity is serious about solving the climate crisis in an equitable way that still allows room for development among the poor majority on the planet, emission reductions in many industrialized countries (essentially OECD countries) will have to already exceed 100% by 2020. This is achievable if industrialized countries, in addition to reducing emissions domestically, commit to investing in emission cuts in developing countries.

By itself, however, the assignment of rights to development will not produce a miraculous transformation of existing energy systems and infrastructures. Immediate infrastructure investment in alternative energy systems is needed to set such a transformation in motion; it will also require the development of institutions that

can help poor people to defend and benefit from their new rights. For purposes of immediate action, it might be necessary to shift from the language of ‘rights and targets’ to the language of ‘investment and action’ aimed at engendering a new energy revolution.

A change in values: long-term thinking and sustainable lifestyles

Beyond government regulation and institutional settings, individual values will shape future developments. Teaching our children new ways to view the world may even have the strongest impact in the long run. A transition to more sustainable values and life styles will take place gradually. The example of the demographic transition is highly relevant. It represents a fundamental revision of the entire bases of traditional society: the notion of family and kin relationships, the basis for economic organization, the relation between men and women, parents and children, and between citizens and the state. This transition has occurred within the space of one generation in many developing countries.

Placing climate policy in context

A number of elements of a potential response are being debated in the policy community. These include political/institutional interventions, and ecological, economic, technological, and discursive instruments.

Linking three disconnected UN processes

Climate change, as clearly pointed out in the IPCC’s Fourth Assessment Report, is already today impacting on the lives of poor communities. The most vulnerable are hardest hit, and are expected to bear the greatest burden of a climate crisis they have not caused (see Pachauri, this volume). Already the 2015 UN Millennium Development Goal targets of halving hunger, poverty and health threats are at risk due to climate change. At the same time, nowhere are ecosystem services so fundamental to human well-being as in the fight against poverty, and these ecosystems are negatively affected by climate change.

Despite these close relationships between climate change, ecosystems and development, there is a disconnect between the three UN processes supporting the governance and management of these domains: the UN Framework Convention on Climate Change (UNFCCC); the UN Convention for Biological Diversity (UN CBD), the UN Millennium Ecosystem Assessment (UN MA) and the follow-up process to establish an equivalent to the IPCC on biological diversity and ecosystem services (the Intergovernmental Platform on Biological Diversity and Ecosystem Services,

IPBES); and the UN Millennium Development Goals (UN MDGs) of halving hunger and poverty by 2015 and ensuring sustainable development among the world's poor (see Fig. 3). There is an urgent need, as well as an opportunity, for a comprehensive policy-coherent effort to connect these processes within the framework of the UN system.

Political/institutional instruments

The challenge of global sustainability requires investment in institutions of democratic governance at all levels; local, national, and global. At the global level, the overriding imperative is to invest in the UN system. At the national level, a key goal is build political constituencies in all nations for effective and fair global engagement, expanding the reach of participatory and democratic institutions, and channelling support for strengthening development in poorer countries. At the local level, there is a need to establish participatory institutions of self governance. In rural areas, there has been considerable experience with community organization programmes led by visionary leaders from civil society and government. These programmes must be expanded in order to address the livelihood needs of the majority of poor and undernourished people from rural areas. An increasing share of the world's population lives in mega-cities that are difficult to manage. There is a need for concerted investment in the governance institutions of urban areas, and also to improve the basis of rural-urban exchange.

Other important areas where institutional investments are needed include education at all levels, economic justice and income distribution, law enforcement, property rights, damage compensation, (international) burden sharing, and political transparency and participation.

Technological instruments

Technology is a broad term that includes not only the machines used in the production of goods and services, but also infrastructure and know-how for the organization of society.

Much of the discussion on climate change has focused on the deployment of renewable energy technologies on a large scale. However, the instruments that are being used to stimulate such deployment are mostly indirect in character. The ambivalence of global policy-makers sends conflicting signals to the private sector and the research community. The time has come for the global public sector to show its hand by committing itself to a large-scale infrastructure investment program, along the lines, for example, of the Apollo Programme, to help realize the potential of the technological portfolio. Such an investment would provide a clear

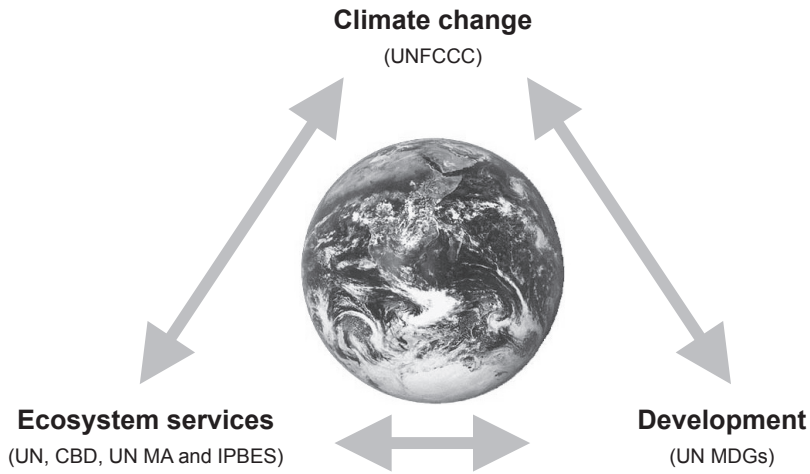


Fig. 3. Three currently disconnected global UN policy and development processes that require urgent linking. The possibilities of stabilizing climate change and adaptation to unavoidable climate change (mandated to the UNFCCC) will require active stewardship of biological diversity and ecosystem services (mandated to the follow-up process of the UN Millennium Ecosystem Assessment (UN MA), the UN Convention for Biological Diversity (UN CBD), and the international initiative to establish the Platform on Biodiversity and Ecosystem Services (IPBES) – an equivalent to the IPCC on ecosystems). Ecosystem services are directly impacted by climate change. Climate change undermines the ability to reach the UN Millennium Development Goals (UN MDGs). Investment in development to support the majority on the planet living in poverty will determine the final outcome of anthropogenic climate change. Ecosystems form the fundamental basis for social and economic development, and therefore also the basis for achieving the MDGs. (Source: J. Rockström)

and unambiguous signal to the private sector and spur both the development and deployment of technological options.

However, the idea of technology goes far beyond renewable energy infrastructure. It includes concepts of ecological efficiency, social organization, and social control of technology.

The investment in energy efficiency will not take place without adequate public support. The nature of urbanization and urban infrastructure development reflects the current inappropriate incentive schemes, and alternative pathways will need clear and unambiguous support from governments. Moreover, the idea of social control of technology assumes even greater urgency in a situation that demands extensive and sustained intervention. It is absolutely critical that technological choices be subjected to sustained and persistent criticism from civil society, parliaments, mass media, and academia. The chances and risks provided by new technologies have to be assessed in a broad and continuous social discourse.

A final issue concerns technological extension. A good example is the Green Revolution, which saw the transfer of the knowledge of an emerging technological system from a few hundred scientists into the hands of several million farmers (most of them illiterate) within a span of a decade. This revolution was engendered by support for an expertly crafted and interlocked system, which included education, research, policy, extension, input supplies, credit, and a marketing infrastructure. Compared to this highly professional system, the new technological transition is being handled in an ad-hoc and unprofessional manner.

Ecological instruments

Tragic as it is, under massive pressure from investors and market fundamentalists, many states worldwide have more or less given up on regulating resource use, water and energy markets, and even pollution. Some of the biggest problems, if not scandals, are biopiracy, patents on genes and other private appropriations of biodiversity. The ecological agenda is linked inextricably with the agenda of reviving the developmental state, which can forge political consensus for sustainability, implement environmental regulations, and protect biodiversity against piracy. For example, a case could be made for placing a significant proportion of the world's land area (say 15%) under protection. As the conversion of land to agricultural uses is the most important factor in biodiversity loss, economic and political means have to be improved to make agriculture more ecologically sustainable.

Ecological instruments are based increasingly on solid and reliable research. However, there is enormous variation in research capacity between countries and regions. Indeed, the areas that are richest in biodiversity as well as in traditional knowledge of husbandry are often the ones with the least support from the organized research community. There is a need to build organized research capacity at national and local levels, and provide support for continuous investigation of impacts in priority areas: the maintenance of freshwater resources and soil functions, conservation of biodiversity, the management of environmental conflicts, and the protection of indigenous knowledge.

Economic instruments

There is considerable controversy surrounding the strength and limitations of economic instruments. On the one hand, it is clear that measures that go against economic common sense are difficult to sustain over long periods. As such, it is widely accepted that policy measures should incorporate 'ecological and social truth' into economic activities by internalizing unwanted environmental, health and distributional impacts.

However, economic instruments suffer from some major shortcomings with regard to the agenda of sustainable development.

First, economic instruments are often found to be in conflict with the goal of equity. This is clearly visible in the controversy over climate change. Most economic instruments (including the volatility of oil prices and the unequivocal long-term trend towards higher oil prices) are highly regressive in nature, and subversive of the development and poverty agendas. In this case, it is wiser to rely on more direct policy approaches for engendering the transition in a fair and effective manner. Second, the issue of equity pertains especially to access to energy, industrial resources, financial markets, global public goods, and social infrastructure. A number of initiatives (e.g., micro-credit organizations) have tried to overcome the barriers created by the unfettered functioning of markets. These need to be supported. Third, volatile markets and a focus on short-term profitability must be rejected in favour of longer-term perspectives and higher predictability. Fourth, as already mentioned, in the absence of strong legal and political safeguards against the expropriation of the rights of poor and vulnerable groups, the exclusive reliance on market instruments will prove to be harmful.

Discursive instruments

Communication is essential for meeting the challenges of the twenty-first century. This requires access to information exchange channels, together with expanded and improved observation systems in the social and environmental spheres. The Internet and mobile telephone networks have already started to improve this access in areas that were until recently excluded. Remote parts of poor African countries have become a part of 'online humanity'. If the gain of information and empathy is not to remain virtual, a global discourse on ethical and power issues is of vital importance. This can help to share values with respect to nature, justice, and the human position.

This is of particular relevance to the need for value change. The building of a global political constituency for a transition to a sustainable pathway requires that we move beyond the current situation in which people seem to be concerned only with very narrowly defined parochial interests. Current evidence suggests that the willingness to cooperate internationally in rich societies strongly depends on two things: direct involvement and impact, and available methods and technologies to react.

Conclusions: a strategic vision

Today's challenges provide the chance to develop global mechanisms for sustainable development. They can act as springboards towards higher resource productivity

and efficiency, environmentally friendly technologies, and sustainable habits and lifestyles.

The above discussion brings up a number of issues that require thorough consideration. However, the discussion has focused mostly on the individual components of the policy framework, not on the framework itself. It may be useful to provide a brief reflection on the strategic vision that can hold these diverse components together.

We must recognize that the response of the global leadership to the current crisis has been extremely slow. Even now, there is considerable scepticism both about the commitment and capacity of the global political system. The necessary response must bring together a global constituency for change. This will not happen through piecemeal or desultory interventions.

What is needed is a bold and strategic vision that can address the goals discussed here – economic development, biodiversity conservation, and climate stabilization – directly and in an integrated manner, instead of indirectly and disjointedly. For this, it may be necessary to shift from the language of targets and trading to the language of investment. A concrete example of a direct and integrated approach to climate and development would be a globally funded public investment programme in four areas: deployment of renewable energy technologies, institutions for promoting energy efficiency, governance of biodiversity and ecosystem services, and institutions and structures for enhancing adaptation capacity.

However, such a programme will test the limits of current governance arrangements. Existing means of international exchange and cooperation will have to be improved, and new global governance structures developed. Since large social and political transformations are inevitable, the world needs blueprints for action to sustain its struggle for universal goals – the eradication of poverty and inequity, reversing environmental degradation, protecting human security, and ensuring interregional and intergenerational justice. If these transformations are managed with skill, empathy and foresight in a globalizing multi-polar world, they can drive a broad agenda of sustainability and development within borders and beyond.

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