

PREMISES FOR A NEW ECONOMY: AN AGENDA FOR RIO + 20¹

1. *The intertwined problems of development, equity, and ecology require a new economy.* In 1992, officials from 172 nations, including 108 heads of state and government, met at the United Nations Earth Summit in Rio de Janeiro and agreed on a wide range of global commitments, including the Rio Declaration on Environment and Development, a plan of action (Agenda 21), a set of 15 Forest Principles, and the Conventions on Climate Change and Biodiversity. Together, these five documents were intended as a framework for sustainable development, a new path for humanity that would satisfy the demands of equity and development and also respect the limits of planetary ecology.

A new conference, “Rio + 20,” will bring these nations together again in 2012 to assess the progress that has been made since the original Rio Principles were proclaimed. The agenda for Rio + 20 must begin from a recognition that none, not one, of the Rio commitments has been fulfilled, even if limited progress has been achieved on some fronts. Indeed, in the years since Rio the intertwined problems of development, equity, and ecology have become more severe.

2. *We are living in a danger zone.* Viewed in the light of the second law of thermodynamics, the economy is a dissipative structure — a fully contained, open, dependent, growing sub-system of a materially closed, non-growing, finite ecosphere. The economy grows and becomes more complex by using highly concentrated forms of energy and materials imported from the ecosphere and exporting degraded energy and material wastes back into the ecosphere.

Carried to excess, this process undermines the complex ecological balance of planetary ecosystems. When economic growth is associated with ever greater use of non-renewable materials and energy, or the use of renewable resources beyond their capacity to regenerate, as it has been since the dawn of industrialization, growth erodes the very ecosystems upon which the economy depends, and will ultimately lead to their transformation or collapse.

¹ This statement reflects the discussions that took place during the workshop "The challenge of sustainability: towards Rio+20", organized by the United Nations Division for Sustainable Development on May 8-10, 2010 in New York. The statement was prepared by Stephen Marglin and endorsed by the following other participants (in alphabetical order) : Frank Ackerman, Lois Barber, Peter Brown, Robert Costanza, Paul Ekins, Marina Fischer-Kowalski, Maja Göpel, Tim Jackson, Ashok Khosla, Nebojsa Nakicenovic, Paul Raskin, William Rees, Wolfgang Sachs, Juliet Schor, Gus Speth, Peter Victor, Ernst von Weizsäcker.

Timing is all. Even a century ago, the day of reckoning might have appeared to be so far in the future that we could ignore the thermodynamic constraints on growth. We seemed to be living in an empty world, operating comfortably within the safe zone of the ecosphere.

But the reality is that we are already out of the safe zone. In 2008, the Stockholm Environment Institute and the Tällberg Foundation invited a group of distinguished scientists to examine a variety of global ecosystem limits, which they described as planetary boundaries. This group, the Resilience Alliance, concluded that humanity was already operating beyond the safe space defined by these boundaries. One of the most pressing barriers they identified is the inability of the atmosphere to neutralize the detritus of economic activity, particularly, CO₂ and other greenhouse gases.

Indeed, the world is in a clear and present danger of an ecological crisis. By historical standards, the path from an empty to a full world has been remarkably swift; most of the expansion took place in the last century in what has been called the “great acceleration.” In the 20th century, a 4-fold increase in human numbers was accompanied by a 40-fold increase in economic output and a 16-fold increase in fossil fuel use, along with a 35-fold increase in fisheries catches and a 9-fold increase in water use. Carbon dioxide emissions increased 17 times, sulfur emissions by 13 and other pollutants by comparable amounts. Such rates of expansion are unsustainable. Raising the whole world to North American or European standards of incomes and resource use would require the equivalent of several additional Earths given the technologies we use today. Even allowing for technological improvements, it is at best a gamble to assume that recent historical patterns of growth can continue.

3. *Decarbonization is necessary but not sufficient.* A necessary condition for avoiding the potentially disastrous consequences of global warming is to “decarbonize” the economy, that is, to reduce energy use, neutralize carbon emissions from fossil fuels and to shift to renewable sources of energy that do not add to the atmospheric accumulation of CO₂.

Can a decarbonized economy continue to grow? Technological optimists believe so: some combination of decoupling economic growth from relying on ever more energy use and decoupling energy use from CO₂ emissions would allow us to live within planetary boundaries even as the economy continued to grow at rates that have been achieved historically and to which economics, politics (both domestic and international) and societal arrangements have become habituated and dependent. Very rapid improvements in efficiency could theoretically permit such “absolute decoupling.”

Up to now the results of decoupling have been meager at best, so that carbon dioxide emissions from fossil fuel consumption increased by 40 percent between 1990 and 2009. Whatever the theoretical possibilities, the practical reality today is that the

challenge of decarbonization on the requisite scale is daunting, requiring global rates of improvement in energy efficiency several times faster than anything that has been sustained historically.

Although technology may deliver dramatic improvements, indeed, even if technology does come to the rescue on the energy front, the growth regime of the past is problematic. The CO₂ barrier is only one of many constraints: without absolute decoupling, continued growth on a global scale at historical rates will sooner or later bring us up against barriers such as toxification, exhaustion and pollution of fresh water supplies, and loss of genetic diversity, not to mention shortages of raw materials, or, equivalently, sharply increasing costs of raw-material extraction. In short, succeeding beyond our wildest expectations with respect to energy will stabilize the climate, but will also exacerbate these other problems and bring us more quickly up against other barriers to the planetary safe operating space—and perhaps barriers that have not yet been identified.

4. Our considered view is that the range of problems the world faces require nothing less than a civilizational response, a change in how we live, work, and understand. Rio + 20 must recognize the need for a dramatically different way of being in and acting on the world—as distinct from a purely technological fix for the huge, but limited problem, of replacing fossil fuels with renewable sources of energy.

We are here clearly in the realm of massive uncertainties — uncertainty over whether energy technologies can evolve quickly enough to permit continued growth, uncertainty regarding economic and social constraints that will emerge, and uncertainty about how quickly a growing economy will come up against other limits. Nor can we calculate probabilities and outcomes to enable us to evaluate the benefits and costs of different strategies for coping with uncertainty. We thus do not base our view that we must change our way of being and acting on the world in terms of certain knowledge but in terms of prudence and responsibility in the face of many clear and present dangers to planetary health and human society. The immediate need is for mechanisms of governance and international negotiation that allow us to plan for hard choices about what kind of growth, and where growth, will take place.

5. A key implication of prudence, responsibility, and equity is that the claims of the rich must be subordinated to those of the poor and to the well-being of the Earth's life support systems. If growth is limited on a planetary scale by the inadequacy of sources of energy or raw materials or the inadequacy of sinks for carbon, nitrogen, and other pollutants, the idea of social justice embodied in the Rio Principles requires that the claims of the poor, chiefly but not exclusively residing in the South, take precedence over the claims of the rich, who reside mostly in the North. Looking back, most of the draining of sources and the filling of sinks is attributable to the richest 20 percent of the human population, the global North, who take home 75 percent of global income. Looking forward, we must accept that food, clothing and housing in the

global South must have higher priority than providing more and more delicacies, new fashions, or larger homes in the global North.

Reducing the extreme disparities that exist between and within countries is more than a mandate of social justice and human decency. Greater equality is now becoming, for the first time on a global scale, a basic ecological necessity fundamental for the very survival of civilization and perhaps of humanity itself.

In short, the very ability to cohabit in peace on a planet up against a variety of ecosystem barriers requires that the claims of the rich give way to the more pressing claims of the poor. The alternative is continual strife over resources that may show itself in a variety of ways from outright warfare to the pressures of massive migration, none of them attractive, some of them disastrous.

Recognizing a priority for the poor is not a license to replicate the wasteful disregard for ecosystem barriers that has characterized growth in the North over the past several centuries. Nor does it countenance the wanton disregard for the claims of the disadvantaged that has allowed large islands of Northern poverty to continue to exist in oceans of Northern wealth. It would be an ephemeral gain if the ecological space created by a slowdown or contraction in the North were to be abused by governments, corporations, or private citizens in the South. The South can break new ground in terms of respect for both ecology and equity.

6. Bringing the economy within the safe ecological operating space will require significant innovation in respect of both technologies and social institutions, at all levels. This will require a very different conception of the market. A global organization may be needed with powers to enforce new international law created to maintain, and where necessary, restore the planet's ecological health. Nationally and locally each country will need both government action and strong market and non-market incentives to direct innovation and technological change towards dramatic increases in resource productivity. In addition to enhancing resource productivity, these new institutions will need to foster a new sense of global solidarity, underpinned by a strong commitment to international social justice, accompanied by a renewal of local community and social interconnectedness in the places where people live and work.

What is the role of the market in this new economy? Our destiny on this planet may be bound up in how we answer this question. It boils down to whether the market will be the servant or the master.

Markets have been with us since time out of mind and are an important part of most human societies. Markets, by requiring people to back up their words with actions, serve a useful function in organizing the production and distribution of goods and services. The problem begins when markets are conceived of as a self-regulating system and the market is disembedded from society.

A totally unregulated market system has never existed, but until the financial crisis in 2008, the tendency was to go ever further in the direction of the textbook fantasy of complete deregulation. Meeting the challenges of equitable growth within ecological barriers will require us to reverse direction, to rethink the market.

Mainstream economics acknowledges that an unregulated market system, even on the doubtful premise that all the assumptions of competitive markets are satisfied, offers no guarantee of a just and equitable distribution of the economic pie. Distributional issues apart, mainstream economics can argue that an unregulated market system meets the needs and aspirations of people only if they are shrunk into the caricature of human beings that is *homo economicus*—the self-interested, calculating individual whose life is defined and determined by his or her success as a consumer. In this view of the world, all ties and relationships—whether to other humans or to the larger cosmos—are instrumental to consumption of goods and services. Knowledge is limited to that which can be apprehended through logic, and decisions are made by a precise weighing of benefits and costs. There is no place for the radical uncertainty that characterizes the relationship between the economy and the ecosphere, an uncertainty which is key to the need for a radical transformation of the economy.

However suitable *homo economicus* might have been for an era in which satisfying basic needs was the problem and growth the solution, it does not fit with the imperatives of a world in which prudence and caution should trump other considerations. The unregulated market system at the core of economic theory cannot take proper account of the ecosystem barriers inside which human activity, including markets, must operate if the system is to be sustainable.

A new economy must give teeth to Rio Principle 1 that gives primacy to serving the needs of people. In the North we can and must deliver on the promise of abundance by providing income security beyond the needs of bare subsistence, so that everyone has the basis of a dignified and meaningful life. It is imperative that we devise new ways for meeting desires and wants that are now met through the market, through commodified private consumption. This is partly a question of providing public amenities and spaces that create non-commodified opportunities for leisure and self-development, and partly a question of strengthening communities and other forms of human connection that enrich human life without enlarging our ecological footprint. But even more it is a question of developing non-consumerist ways of understanding and being in the world. These ways, which can draw on a variety of traditions that have always opposed consumerism, will in turn be strengthened by a retreat from market-driven growth, which inevitably inculcates values, beliefs, and ways of being that favor success in the market environment.

Consumerism has been a major driver of growth, and advertising is the most obvious attribute of the consumer society. Although advertising provides information, it is primarily a means of persuasion, one that is particularly pernicious in limiting the

mental and spiritual universe of our children. A non-consumerist economy will limit advertising and allied forms of manipulating people, as one step among many in the re-orientation of the economy of the North away from growth-at-all-costs.

None of this is to deny the very real problems that exist in the North, ranging from enormous income disparities to the erosion of community. But none of these problems requires economic growth for a solution; indeed, growth might make many problems harder to solve.

Even as we back away from growth, the current recession highlights the need for renewing a commitment to full employment—the availability of jobs for all willing and able workers. This said, the meaning of “full” employment will change dramatically as the amount of time people spend in paid employment gradually declines to balance productivity gains with ecological barriers and the opportunities for meeting people’s needs outside the market expand. The evolving balance between paid employment and other activities will at the same time require strengthening of our educational systems at all levels, so that people have the skills and tools to meet their needs both inside and outside the market.

7. The changes we envision require that the enormous power of large corporations be subordinated to the needs of society. The most egregious examples of corporations run amok are the BP oil disaster of 2010 and the meltdown of the financial sector in 2008. Financial corporations create instability which threatens livelihoods and economic security as they catalyze unsustainable growth of the most obvious kinds. Regardless of how far the political response to the meltdown goes in subjecting financial corporations to effective regulation, the prevailing model of investment, built on a system of capital markets dominated by large financial institutions, is unlikely to prove adequate to the task of mobilizing the massive reconfiguration of energy that is the first and most obvious step to a new economy.

But it is not only financial corporations that must be brought into line with human needs. As corporations are presently constituted in law and fact, major shareholders, creditors, and top executives dominate decision-making. This creates a vested interest in growth which will not easily adapt to the demands of ecology and equity. New regulations will be necessary, in order to reassert the primacy of sustainability and therefore the primacy of the rights of stakeholders other than owners, creditors, and executives. New incentives will be needed along with new regulations, but it would be folly to rely on carrots alone. In addition, radically different institutional structures may be more suited than the traditional corporation for managing common property and natural resources, for stimulating innovation and investment in sustainable energy, and more broadly for mobilizing individual and collective creativity to serve human needs.

8. *A new economy requires a new economics.* Although historically markets have played a positive role in harnessing individual initiative to society's purposes, the emphasis on the market as the repository of social virtue is overstated—at best. To be sure, there is a growing recognition of the limits of the invisible hand within mainstream economics. Mainstream economists have begun to question the role of consumption in enhancing well-being once societies have reached a critical threshold that provides the material basis for a dignified and meaningful life. Even the identification of well being with the utilitarian conception based on a calculus of pleasure and pain is being challenged. Behavioral economics is a first step in the direction of more realism about how people know and how people make decisions. And greenhouse-gas emissions are a canonical example of negative externalities, a concept that has been recognized as undermining the invisible hand for almost a century. Lord Nicholas Stern, author of the eponymous *Stern Review*, could call global warming the biggest market failure in the history of mankind while situating himself completely within the framework of mainstream economics.

Nonetheless, *homo economicus* is not exactly a caricature. Markets organize the production of goods and services, but at the same time markets produce people: they shape our values, beliefs and ways of understanding in line with what makes for success in the market. Markets thus exist in a kind of symbiosis with the discipline of economics, shaping people to fit the assumptions of the discipline even as economists shape the world in the textbook image of the self-regulating market. A new economy will need a new economics, which goes beyond the calculating, self-interested, individual to take account of community, compassion, and cosmos. It will build on a basic insight of ecological economics, namely, the fundamental interdependence of humans and the rest of nature.

9. *We need to discover, or rather rediscover, relationships of respect and reciprocity with each other and with the Earth. The time for action is now.* With one exception, the authors of this document are citizens of the North. Indeed, in the economic sense of where we fit in the global distribution of income, we authors are *all* citizens of the North. As such, we are loath to be seen as lecturing to the South, where conditions and needs are very different from our own. Apart from general principles of respect for ecology and equity, the South must and can find its own way, or rather *ways*, since the South (no less than the North) is far from a homogeneous entity for which one size fits all.

In all likelihood, some form of global polity will emerge in the coming decades—good or bad, beautiful or ugly. In one scenario we will descend into a latter day version of Hobbes's war of all against all, powerful nations fighting for access to the limited sources of materials and energy for growth, as well as for access to the limited sinks into which to throw out the garbage that comes with growth. In another we will go

forward in appreciation of what unites us, building solidarity and equality, justice and compassion, quality of human life and ecological flourishing.

We have a choice between a blessing and a curse: either we live in harmony with each other and the planet, or we destroy each other and—perhaps—life on the planet. Let us choose life.

New York, 10 May 2010.