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**Waiting for a Fair Future...
Talking about Environment
Well-being and Justice**

An Interview with Wolfgang Sachs

by Federico Paolini

Wolfgang Sachs studied sociology and Catholic theology in Munich, Tübingen and Berkeley. Since 1993 he has been a Senior Research Fellow at the Wuppertal Institute for Climate, Environment and Energy. He is Guest Lecturer at the Schumacher College (England) and Honorary Professor at the University of Kassel (Germany). He has published several books about globalization and environmental sustainability: *The Development Dictionary: A Guide to Knowledge as Power* (London, 1992); *Greening the North: A Post-industrial Blueprint for Ecology and Equity* (London, 1998); *Planet Dialectics: Explorations in Environment and Development* (London, 1999); *Fair Future. Resource Conflicts, Security, and Global Justice* (London, 2007).

The interview that follows briefly touches on some themes that have nowadays become highly topical: the relationship between conflicts for resources and the absence of a global justice; relations between patterns of development and environmental issues; the reformation of the chief institutions of global capitalism; and possible solutions for confronting global warming.

The report of the Wuppertal Institute sees in the absence of a global justice one of the main problems of our age and fears that a “neocolonial” scenario where industrialised countries maintain their dominant position through the registration of patents, biopiracy, and the appropriation of resources located in the poorer countries. A situation that portends a future dense with conflicts, don’t you agree?

That the environment may be both a cause and an instrument of social conflict can be gleaned from the very etymology of the word “rivalry.” Residency along the same river (Lat.: rivus) easily turns people into rivals. Falling water levels may instigate competition among them, just as upstream residents may interrupt the water flow to the disadvantage of downstream residents. Language suggests that environmental quarrels figure as archetypes in human experience for any kind of conflict. Indeed, conflicts about water or fertile land, about timber or gold, have been part and parcel of the human adventure since time immemorial.

However, present resource conflicts occur – as will future ones – within a context that distinguishes them with respect to the past in terms of their bio-physical, cultural, and social dimensions. As for the bio-physical dimension, environmental conflicts may revolve around natural goods that are in short supply not only locally but globally as well; it is the finiteness of the biosphere – which has only become manifest a couple of decades ago – that has emerged as the background condition of changes in ecosystems or resource endowments. For instance, the shortage of oil in China is aggravated by the foreseeable decline in oil production worldwide, just as the shortage of cod in the North Atlantic heralds a greater disaster when seen against the backdrop of globally declining fish stocks. As for the economic dimension, demand is no longer stable or rising only with regard to specific materials such as, for example, silver or tobacco, but expands across a wide range of resources, driven by the requirements of a globally expanding consumer economy. Finally, as for the social dimension, rivals competing for resources no longer include only neighbours, but also nations, corporations, and con-

sumers across the world. In sum, it is because of the globalization of the environmental crisis, the globalization of the consumer model of development, and the globalization of resource capture by the transnational economy that resource wars are likely to become, in the decades ahead, the most distinctive feature of the global security environment.

In this context, everyone knows the name of the gravitational force which ensures that resources move from near and far to the big consumers: it is called power. Yet power has not one but many faces. It does not spring from an arbitrary act but is part of the normal course of things. By virtue of its effects, fleets of oil tankers set a safe course for the industrialised countries, while tea, rice, soy and coffee find their way from poor areas of the world to supermarkets in the rich countries, and the swimming pools of the well-to-do remain supplied with water even in times of drought. So, the power of the transnational economic complex operates through force fields involving innumerable decisions, in such a way that in the end a quarter of the world's population can make disproportionate use of many valuable natural resources.

But counterforces are also developing. The victory of the strongest is by no means assured, and the outcome is seldom clear-cut. Resource appropriation is therefore a conflictual process that constantly radiates out into the surrounding society. The struggle for resources is regularly associated with conflicts of a political or ethnic nature, as injustice on this issue is often what lies behind what may be called religious or tribal feuding. Neither the crisis in the Middle East nor the civil war in Sudan can be understood without reference to the role of oil, nor the plight of refugees in Pakistan or the genocide in Rwanda without reference to soil loss and degradation. Whether at an international or subnational level, disputes over resources contribute to social destabilization whenever legitimate forms of conflict regulation are absent. It is therefore likely that, if the resource situation continues to grow tenser, conflicts will flare up in many places and make the world as a whole more inflammable.

Do you think it possible to reconcile the need for an ecological justice, an awareness of the limits of the Earth's biological system, and the developing countries' yearning for growth? There are hundreds of millions of people living in countries like India, China, Mexico, Argentina and Brazil who aspire to emulate the lifestyle of rich countries. How can we explain to them that this will not be possible?

Let's put things in a historical perspective. According to the studies of Kenneth Pomeranz (*The Great Divergence*, 2000), at the end of the 18th century China and England, which at that point were just about equal in terms of their level of development, both found themselves constrained in their progress by the scarcity of land available to grow food, supply fuel, and provide material. But it was only England that succeeded in overcoming this limit. For England was able to tap into new stocks of resources: it began to massively import agricultural goods from North America, and, above all, set out to systematically utilize coal for industrial processes. Put more generally, access to fossil resources from the crust of the Earth and biotic resources from (ex-)colonies was essential to the rise of the Euro-Atlantic civilization. Industrial society would not exist in its present form had resources not been mobilized from both the depth of geological time and the expanse of geographical space.

In hindsight, Europe's development path turns out to be a special case, one that cannot be repeated everywhere and at any time. For the wealth of fossil and renewable raw materials at Europe's disposal in the 19th and 20th centuries is no longer available. Fossil resources, apart from destabilizing the Earth's climate, are gradually running short, just as there are no colonies left to take biotic resources from. Resources, now and in the foreseeable future, are neither easily accessible nor cheaply available. Thus, trying to bring prosperity and well-being to the majority of the world's peoples by imitating the Euro-Atlantic example would be a hopeless endeavour. It is impossible to have success in the 21st century on the basis of the utopias of the 19th century.

This is not a matter of moral appeal, but of economic realism. The pattern of scarcity in developing countries is about to change, the

limiting factor being the availability of nature rather than the availability of machines. More and more frequently economic progress is hindered not by a shortage of fishing boats but by a shortage of fish, not by poorly performing pumps but by the sinking of groundwater, not by a lack of chainsaws but by the disappearance of forests, not by the absence of engines, but by the high price of oil. In this situation, a heavy industrial, machine-intensive, and resource-squandering mode of development makes less sense than in 19th-century Europe. The only economic forms that offer a real promise of social progress are those which embrace a great number of people and at the same time deal circumspectly with material and biological resources.

But sustainable development paths also offer a historic opportunity: the countries of the South, for the first time, have a chance to outwit the industrial nations. Since dependence on fossil fuels is driving the industrial countries into a dead end, countries in the South that were long regarded as backward could take the lead. They could wager on bold ecological ‘leapfrogging’ over the false paths followed by the industrial countries and, for that matter, move directly to modern renewable energies, for example by investing in solar energy earlier and more consistently than the Northern economies. They could very soon find themselves enjoying a level of sustainability that the rich nations are not even close to achieving. There are some signs that this is already happening. China, despite its high resource consumption in many sectors, is a leading seller of wireless telephony and solar heating systems – which represent massive savings of copper and coal. The so-called “underdevelopment” may even end up turning into an advantage.

In this context, newly industrialized countries face crucial decisions concerning energy, transport, sewage, and communications systems. In these key policy areas, many countries of the South are still in a position to opt for infrastructures that will put them on a resource-saving and low-emission path of development. A choice for light-rail systems, priority to pedestrians, cyclists, and public transport, decentralized and renewable energy production, water recycling circuits, environmentally adapted construction, a regional food supply, and dense settlement patterns can set a country on the

road to cleaner, more cost-effective and equitable patterns of production and consumption.

Do you believe it is realistically possible to establish an ecological justice capable of pulling through a profound reform of the WTO and the World Bank?

One needs to be aware that the WTO has a chronic tendency to confuse the means with the end, the spread of trade with economic prosperity. The rule of the means over the end becomes even more dramatic when the goals of 'environmental sustainability' and 'human rights' are brushed aside in favour of 'living standards'. Trade liberalization cannot be considered a panacea: it is one of many means, and it has to be carefully considered and applied at the right time in the right dosage. A world trade system can face the challenge of the future only if it pursues the regeneration of nature and the securing of human rights, as well as prosperity.

In lengthy and conflict-ridden negotiations over the last half-century, the countries of the world have developed legal orders that are supposed to give form and dependability to global society. Specialists in international law classify the multiplicity of regulations and agreements into several groups under the general heading "international regime". The oldest of these groups, the human rights regime, consists of the basic legal declarations contained in the International Bill of Rights. The environmental regime comprises several hundred agreements, the most prominent of which are conventions on climate protection and biodiversity. The world trade regime includes the WTO agreements, as well as various regional and bilateral accords. The chaos in the construction of an overarching "global governance" stems from the fact that the three regimes are scarcely compatible with one another. They do not obey the same logic, and their agreements and norms embody conflicting values. A zone of conflict has arisen not only between the world trade regime and human rights, but also between the world trade regime and environmental rights.

As to human rights, the bedrock of the United Nations is a com-

mitment by member-states to respect human rights. It is therefore all the more astonishing to find no reference to human rights either in the WTO founding agreement of 1994 or in the practice of the WTO's court of arbitration. The WTO operates in a legal framework in which the fundamental law of the United Nations plays no role. Nevertheless, it cannot escape the obligations that arise out of the human rights canon, as in the end this has universal validity. The UN Charter leaves no room for misunderstanding: 'In the event of a conflict between the obligations of the Members of the United Nations under the present Charter and their obligations under any other international agreement, their obligations under the present Charter shall prevail' (Article 103). For human rights have an absolute character: they apply under all circumstances and can be neither bargained away nor sacrificed to economic utility. They are not subordinate even to a democratic majority decision, and still less to a cost-benefit analysis. Human rights take precedence over all other moral, political or economic claims.

Foodstuffs, for example, have a human rights reference; they are not a commodity like any other. They are indispensable for the preservation of physical existence, and in the countries of the South are also an indispensable source of income for the majority of the population. An average of 56 per cent of the population of southern countries is economically active in agriculture – a figure which increases to 90 per cent in countries like Rwanda or Burkina Faso. An attack on food production and supply may therefore mean a severe attack on the basis of life for large numbers of people. The right to food, however, is indisputably one of the fundamental human rights (Article 25), and as such ought to set a standard for the rules of agricultural trade under the WTO.

When it comes to environmental rights, the preamble to the WTO Agreement does state that the goal of "sustainable development" should qualify "the raising of living standards" and "the expansion of production", and that trade relations should "allow for the optimal use of the world's resources in accordance with the objective of sustainable development". The GATT, for its part, under the special provisions of Article XX, permits governments to introduce

trade restrictions if there is a threat to the health of plants, animals, or humans, or if the consumption of exhaustible natural resources has to be cut back. When we look back at ten years of negotiations within the WTO, however, it is evident that the words in the preamble have had a largely rhetorical character. The broad spectrum of trade policy has never been systematically reviewed with reference to “sustainable development”, although the Appellate Body has invoked it in some of its rulings. In the institutional structure of the WTO, environmental issues are discussed by the special Trade and Environment Committee, but of course the main concern there has been with the effects of conservation measures on free competition and much less the effects of free competition on the environment.

Any reorientation of the WTO will have to begin with the placing of economic law under the constraints of human rights and environmental law. It will therefore involve displacing trade liberalization from the centre of economic cooperation. Instead, multilateral trade policies should focus on balancing the interests of different countries and economic structures, and on shaping trade flows in accordance with efficiency, fairness, and ecology.

Nowadays the media dedicate ample space to the problem of “global warming”. What is your opinion regarding the analyses and results produced by the IPCC (specificare l’acronimo) in its 4th Assessment?

Too bad for the media, but there is not much novelty in the 4th Assessment Report of the IPCC. Or better, the main novelty was that the findings of previous reports have been confirmed, and in some cases indicate a further worsening of the situation. But yes, it seems we have passed a watershed during the past few months. The message of threatening climate chaos has been driven home. The corporate elite was visibly worried about future growth prospects at its 2007 meeting in Davos, the tabloids rushed to offer their readers 100 ways to save the planet, and the German chancellor, Angela Merkel, declared climate change the most important challenge facing mankind in the 21st century.

Climate worries converge with worries about energy supplies and energy dependency. Indeed, the cunning of history works in favour of an energy transition; it is nothing but a fortunate coincidence that climate crisis, peak oil, and the Iraq syndrome impose themselves on the world roughly at the same time. Without peak oil geographical accessibility would be less of a problem, just as without climate change peak oil could be resolved by stepping up coal production. But with the crises converging, calling for action becomes the new common sense.

But what action, by whom, and to whose benefit? These are the questions at the core of future environmental politics. Four scenarios can be discerned. Firstly, there is the Apartheid Scenario. It comes down to reducing scarcity by social exclusion. The well-to-do will attempt to keep precious energies to themselves, exerting both political power, for instance in the post-Kyoto negotiations, and economic power, for instance through rising prices. Secondly, there is the Dirty-Business Scenario, where scarcity is mitigated by turning to new sources, such as nuclear energy, tar sands, industrial biomass, and carbon-free coal. Thirdly, advocates of the Clean-Business Scenario look forward to the rise of an eco-capitalism that thrives on offering efficiency solutions to scarcity – from photovoltaics to hypercars. And finally, there is the Equity Scenario. Its promoters suggest reducing scarcity by curbing the demand for speed, air conditioning, appliances, and processed food. These scenarios will overlap, but they nevertheless provide a basic framework for the conflicts in the transition from an age of excess to one of moderation.

Let us now come to the possible solutions. The governments belonging to what you call the “omnivorous triad” are encouraging a reliance upon the vegetable biomass as a source of fuel for vehicles and for the production of electricity. On the surface this may seem a positive solution for reducing emissions of greenhouse gases but, once again, this will be detrimental to poorer countries.

For example, in Indonesia the increasing demand for palm oil is accelerating the depletion of forests, while in Mexico and China the demand for maize for the produc-

tion of biofuels has inflated food prices for the poorer. Would it not be more profitable, for example, to impose upon car producers a decrease in the power of car engines and the large scale production of vehicles powered by hybrid fuels? What is your opinion on this point?

Indeed, risks are high that unregulated trade in bio-fuels will drag the world into a new round of agricultural intensification, land conversion, and expanding virtual acres. Even today the cultivation of sugar and soy already carries a heavy environmental burden – and a social one as well. An economic boom in bio-fuels is likely to worsen the situation. Moreover, grasslands and forests are likely to be converted into energy crop fields on a massive scale in countries such as Brazil and Indonesia, unless farmers are required to focus on productivity and recycle agricultural waste material. And finally, the expansion of virtual acres could create serious and irreversible environmental consequences for many exporting countries. It is unlikely that international bio-fuel trade will realize its promise for the welfare of countries unless measures are taken to ensure that bio-energy plantations do not expand through land-grabbing, destruction of valuable ecosystems, and the dispossession of indigenous peoples and local communities. On a general level, what the story of palm oil tells us is that even renewable energies are not unlimited; on the contrary, they are in the last instance limited by two of the most precious, but also scarce resources, namely land and water. Any biofuel strategy makes sense only on a drastically reduced level of demand; it is an hallucination to believe the present demand for fuels could be satisfied by plant resources.

When it comes to solutions in general, three overall strategies can be distinguished that have emerged in the last decades: efficiency, consistency, and sufficiency.

First, with regard to efficient resource consumption, the idea is to reduce the use of materials and energy per unit of goods and services, through improved technology and organization, recycling and waste avoidance. There are plenty of examples: washing-machines that save on water and electricity, lightweight motor vehicles, fre-

quency-controlled industrial motors, high-efficiency power stations, recyclable products such as newspapers or chairs. Resource-efficient initiatives concentrate on the design of products for greater durability and repeated use, on the reduction of energy and material flows in the production process, and on corporate strategies to promote the extended use of products more than physical sales. But the efficiency strategy has an Achilles heel: it may score major successes in cutting the use of particular resources, and therefore the expenditure of materials and energy per unit of output, but it does not prevent greater overall consumption. For the sum of all savings may be eaten up and overcompensated by global growth in the demand for goods and services.

With regard to consistency, the key question is the compatibility of nature and technology. The principle is that industrial metabolic processes must not disturb natural cycles; the two should as far as possible complement or even reinforce each other. Where this is not possible, substances damaging to nature should be placed in a fail-safe technical circuit of their own or – if that is not successful – taken out of service altogether. In fact, in intelligent systems there is no waste, only products. Mushroom cultures grow in the residue of beer production, and electric power stations also generate waste heat that can be used elsewhere. An economy can be organized in such a way that – abstracting from the inevitable entropy – the waste from one activity is used as raw material for the next. Thus, it is less important to reduce energy consumption and material flows than to manage them in an ecologically sound manner. Solar-generated hydrogen, for instance, might make it possible in the long run to have an energy supply that does not damage the atmosphere. There is a similar potential in bionics, a technology which takes nature as a model to be imitated. However, the consistency strategy is not a panacea either. Cars with hydrogen fuel cells, for example, may not pollute the atmosphere, but they do need and use land or infrastructure that is available only within certain limits. This is especially true of bioenergies and biomaterials, whose ultimate limit is the surface of arable land available.

The issue of sufficiency, on the other hand, raises the question

of what is enough, what is good for the economy and life patterns. The etymology gives us a clue: the Latin *sufficere*, composed of *sub* and *facere*, means in its transitive use “laying the ground”, and in its intransitive use “to be enough, to be able or capable”. The point of sufficiency, then, is to avoid falling victim to excess and overstretch, and take, instead, only as much as is beneficial for the well-being of individuals and the whole. While – to borrow from Paul Hawken – efficiency requires us to do things right, sufficiency calls for the right things to be done. For it is doubtful that the expectations raised in the age of resource abundance can be sustained in the age of resource saving. Strawberries in winter, four by fours in city traffic, hot water on tap day and night: such comforts bring little but cost a great deal. A resource-light economy would therefore be better advised to adjust to a middle level of achievement. The question “How much is enough?” cannot be avoided. A change in our behaviour is required, and eco-sufficiency looks like a viable road, being closely connected with what has been known since antiquity as the due measure, the good life, the art of living. And it may well be that the meaning of eco-sufficiency can be summarized by that wise ancient maxim, “Nothing in excess”. We can therefore think only of a two-track transition to a sustainable economy: through the reinvention of technology and through an orientation to the quality of life rather than the quantity of goods.

Many nowadays believe that a cultural rather than a technological revolution is needed to counter global warming. If the industrialised countries (and the high-income developing countries) do not change their highly wasteful lifestyle it will be difficult to achieve a truly sustainable form of development, as noted in the “Fair Future” report. For this reason, the notion of “sustainable development” is being increasingly criticised. What do you think of this?

It is because “development” means just about everything, from pulling up skyscrapers to putting in latrines, from drilling for oil to drilling for water. It is a concept of monumental emptiness. There-

fore, it is easily used as a projection screen for contradictory perspectives. On the one hand, there are the GNP champions who identify development with economic growth per capita, undisturbed by the fact that growth often undermines natural and social capital to produce more money capital. On the other, there are the champions of justice who identify development with more rights and resources for the poor and powerless, hoping for less profit-driven, more sustainable societies. Putting both perspectives into a single conceptual shell is a sure recipe for confusion.

For instance, the slippery nature of the concept of development has emasculated the idea of sustainability, which is ultimately the art of living gracefully within the limits of nature. A small historical reflection might be in order. As it happened, the global environmental movement up until the 1970's was shaped by bio-centric values; forests, waters, soils and wildlife were deemed worthy of preservation for themselves. In a certain way, nature was regarded as the opposite of development, embodying values of otherness and permanence to be safeguarded against the pressures of economic growth. With the 1980 "World Conservation Strategy" of the IUCN, WWF and UNEP, however, a shift in perception took place at the global level that had already occurred among US-American protectionists during the decades after 1900: nature turned from a treasure to be preserved into a resource whose yield had to be sustained. Forests, soils and grazing lands were now regarded in a new light, as necessary inputs for long-term growth whose availability could no longer be taken for granted. Conservation thus became synonymous with efficient management of natural resources in order to optimize the yield of living resources, such as forests or fish stock, by harvesting as much as possible without impairing the rate of regeneration. And it was in the "World Conservation Strategy" that the concept of "sustainable development" appeared for the first time. By linking "sustainable" to "development", however, a terrain of semantic ambivalence was created, which was to later on accommodate a host of different meanings put forth by rivalling groups. The new concept subtly shifted the locus of sustainability from nature to development; while 'sustainable' previously referred to natural yields, it now refers to development.

With that shift, the perceptual frame changes; development, instead of nature, becomes the object of concern, and nature, instead of development, the critical factor to be watched. In short, the meaning of sustainability has slipped from conservation of nature to conservation of development. Adding a qualifier to a conceptual shell can only result in confusion. Thus, today it has become eternally unclear and contestable just what exactly should be kept sustainable. But the confusion was not without a political consequence; for by adding “sustainable” to “development” the idea of limits was once again devoured by the idea of open-ended growth. This has profoundly affected the concept of sustainability. For if growth is taken as a natural imperative, all efforts become focussed on reforming the means of growth, i.e. technologies, forms of organization, incentive structures, while the ends of growth, i.e. those levels of comfort, choice, and consumption reached by the most advanced countries, are taken for granted. In such a scheme of things, awareness of nature’s carrying capacity was bound to fall into oblivion. As a consequence, the development discourse has become largely unfit for dealing with the central challenge of the 21st century.