

# *Empowering the UN to Achieve The 'Negative' Paradigm of Sustainable Development*

The following excerpts are from an article prepared by one advocate of the '*negative*' *paradigm of sustainable development*, the recommended panacea for all of the global ills that have allegedly been triggered by free markets, private intellectual property rights, new technologies and current WTO principles. Since this article appears on the website of the United Nations University (UNU), it may fairly be concluded that the ideas expressed within it have been embraced by UN officials.

<http://www.unu.edu/interlink/papers/WG1/Khor.doc>

## GLOBALISATION AND THE CRISIS OF SUSTAINABLE DEVELOPMENT

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### A. THE CRISIS OF SUSTAINABLE DEVELOPMENT

It has been almost a decade since the Rio Summit of 1992. At the time it was hailed as an achievement for placing the environment crisis at the top of the international agenda, and for linking environment with development in a new paradigm of sustainable development. **There was a hope that the "Spirit of Rio" would carry the paradigm forward into practical programmes and policies that would deal with both the environment and development crises in a new North South partnership.**

**Today it must be admitted that the process after Rio has largely failed to fulfill the promise and hopes of Rio.** The Rio Plus Five Summit (UN General Assembly Special Session to review UNCED) concluded in June 1997 without a political statement because the divide between North and South countries was too wide to bridge. The world's environment had continued to deteriorate. For example, forests continue to disappear or be degraded at a rate of 14 million hectares a year; Greenhouse Gases are still increasingly pumped in the atmosphere, but the US has pulled out of the Kyoto Protocol and the present targets for emission reductions are clearly inadequate; and there is a looming crisis of water shortages around the world.

**The reason is not to be found in the paradigm. Rather, the paradigm was not given the chance of being tested in implementation. Instead, the sustainable development paradigm came under competition from a rival, the paradigm of globalisation.** This rival had indeed already been gathering strength even before the UNCED process. But UNCED for a time gave globalisation good competition, and UNCED was even given support by the Copenhagen Social Development Summit of 1995.

**However, the globalisation paradigm was given a great boost by the Marakkesh Agreement of 1994 that established the World Trade Organisation. Globalisation found a new institutional house with its many rooms in the WTO's several agreements. Moreover the WTO's dispute settlement system based on retaliation and sanctions gave it a strong enforcement capability.** The WTO agreements rivalled the chapters of Agenda 21 and the Rio Declaration. The UNCED did not have a compliance system or a strong agency for following up its agreements. As the 1990s drew on, and the WTO agreements became more and more operational, the globalisation paradigm far outstripped the sustainable development paradigm. Marakkesh 1994 overrode and undermined Rio 1992.

**Moreover, globalisation was fostered by more than the WTO. Financial liberalisation** contributed to the series of new financial crises that began with Mexico, going on to East Asia, Russia and Brazil and now enveloping Turkey and Argentina. This was in addition to the old financial crisis of debt in Africa and other regions that has refused to go away. **Globalisation also took the form of the spread of new technologies, including genetic engineering that has the potential of impacting significantly on the environment.**

**The competition between the two paradigms, with globalisation without doubt running away as the winner, and moreover a winner whose speed, direction and effects seem to be uncontrollable, has resulted in a crisis of sustainable development** -- or rather a number of crises:

- The environment crisis has not been checked. It is getting worse including in the area of biodiversity loss, water depletion and scarcity, climate change, deforestation. The effects are going to be devastating.
- The crisis of development has worsened. The plight of LDCs continues, whilst many of the more successful emerging economies also fell into crisis, and several development options have been diminishing in scope or possibility.

- The conceptual, policy and political link between environment and development which had apparently been made inextricable by the UNCED process seems to have broken all too easily, and “development” as a principle or right seems to be disappearing in the Northern establishment.
- Even on the more narrow arena of environment, there is a backlash from commerce- backed forces, which has resulted recently in weakening of multilateral partnership (as witness a small group of countries almost succeeding in scuttling the Biosafety Protocol, and the US rejecting the Kyoto Protocol).

In short, in the years after the Rio Summit, the environment has dropped many notches down the global and national agendas, whilst "development" is also fast vanishing as a principle and an agenda item, in the countries of the North and thus in the international agenda.

**The process of globalisation has gained so much force that it has undermined and is undermining the sustainable development agenda. Commerce and the perceived need to remain competitive in a globalising market, and to cater to the demands of companies and the rich, have become the top priority of governments in the North and some in the South. Correspondingly, partnership for environment and development concerns has been downgraded.**

***The most glaring weakness at Rio was the failure to include the regulation of business, financial institutions and TNCs in Agenda 21 and the other decisions.*** These institutions are responsible for generating much of the pollution and resource extraction in the world, as well as greatly contributing to the generation of unsustainable consumption patterns and a consumer culture. ***UNCED and the Commission on Sustainable Development, the UN system as a whole and governments have collectively failed to create international mechanisms to monitor and regulate these companies.*** Instead their power and outreach have spread much more, and this has been facilitated by the implementation of the WTO’s rules.

**However whilst sustainable development is at a low ebb, there are also signs of its revival as a paradigm. The limitations and failures of globalisation have caused a major public backlash which may eventually result in some policy changes. Pro-sustainability forces within governments in developing countries are becoming more aware of their right or responsibility to try to rectify the present problems, including changing some of the rules in WTO. The World**

*Summit on Sustainable Development* provides a good opportunity to refocus attention of the establishment and the public, not only on the problems, but on the need to shift paradigms.

This paper re-states the UNCED principles, reviews UNCED's weaknesses and the problems of non-implementation of the Rio agreements, gives examples of how globalisation has undermined sustainable development goals, and outlines proposals for dealing with some of the problems in the interface between globalisation and sustainable development.

## **... F. INTELLECTUAL PROPERTY RIGHTS, TECHNOLOGY TRANSFER AND SUSTAINABLE DEVELOPMENT**

### **1. Technology transfer in the UNCED process**

One of the major developments in the field of globalisation after the Rio Summit has been the establishment of global minimum standards for IPRs, under the WTO. This has had a major negative effect on access to technology by developing countries.

UNCED recognised that technology transfer was essential for developing countries' transition to sustainable development. Indeed, technology transfer was one of the two critical cross-cutting issues in the North-South compact, the other being financial resources. In the UNCED process, the key issue in technology transfer was intellectual property rights. The South argued that IPRs had to be relaxed in the case of environmentally-sound technology (EST), for otherwise IPRs would hinder the South's access to such technology.

The Northern delegations were very sensitive on this point and refused to concede. Whilst agreeing that concessional terms should be encouraged for the transfer of ESTs, the Northern governments insisted that IPRs (such as patents) be applied and that an exception should not be made in IPR regimes on such technologies.

**Finally, the Agenda 21 chapter on technology called for action to promote and finance the access to and transfer of environmentally-sound technologies to developing countries on favourable (including concessional and preferential) terms. But it also says these terms must be "mutually agreed" upon and also take into account the need to protect intellectual property rights.**

The full application of such rights would of course be a major barrier to technology transfer, and deprive the commitment to transfer technology of much of its content. There is thus a fundamental tension within the agreement on technology, and room

for more discussion on how to operationalise the Agenda 21 proposals on technology cooperation, transfer and capacity building. The Southern countries consider this to be an area where assistance from the North is critically needed.

## **2. IPRs as obstacle to technology transfer**

Since Rio, there has also been little or no progress on facilitating the transfer of environmentally sound technology to the South. Instead, the international IPR regime has become much stricter, especially through the TRIPS Agreement in the WTO, which will have to be translated to policies and laws at national level. **Evidence is also emerging that the IPR regime can prevent developing countries from having effective access to environmentally-sound technologies (ESTs).**

**Holders of the patents to these technologies, which are usually Northern-centred transnational companies, can charge high fees or royalties for the right to use them, or impose conditions that are onerous.** Companies in the South may not afford to pay at such prices, and if they do their competitiveness could be affected. As a result, developing countries may find difficulties in meeting their commitments to phase out the use of polluting substances under international environment agreements.

**For example, Third World firms find it difficult to have access to substitutes for chlorofluorocarbons (CFCs), chemicals used in industrial processes as a coolant, that damage the atmosphere's ozone layer.** This hinders the South's ability to meet commitments under the Montreal Protocol, an international agreement aimed at tackling ozone layer loss by phasing out the use of CFCs and other ozone-damaging substances by certain target dates.

Under the Protocol, developed countries originally agreed to eliminate production and use of CFCs by the year 2000, whilst developing countries are given a ten-year grace period to do the same. A fund was set up to help developing countries meet the costs of implementing their phase-out, and the protocol includes articles on technology transfer to the South on fair and favourable terms.

Indian firms that manufacture products (such as refrigerators) with CFCs found it very difficult to phase out the use of these substances because of the lack of access to environmentally acceptable substitutes controlled by Northern multinationals. There are five Indian companies that are major manufacturers of products that depend on the use of CFCs. They face closure if they are unable to meet the dateline of eliminating CFCs use by the year 2010. However, the pledged technology transfer on fair and most favourable terms has not materialised. Three of the Indian companies

formed a consortium to commission a local institute of technology to produce a substitute for CFCs, i.e. HFC 134A. However, the patent rights to the substitute are held by a few multinational companies. Some of the Indian companies are willing to pay the market price or even higher for the technology. But a multinational holding the patent has refused to license it unless it can take a majority stake in the companies' equity. This example shows how much the developing countries have been put on the spot.

On one hand they are persuaded or pressurised to join international environmental agreements and commit themselves to take painful steps to change their economic policies or production methods. Financial aid and technology transfer on fair and most favourable terms are promised during the hard negotiations, to persuade the South countries to sign on. Then, when the agreements come into force, the funds are far from the promised level, and technology transfer fails to materialise.

Meanwhile in another forum like the WTO, other **treaties such as TRIPS are negotiated which produce an opposite effect, and that is to block the South's access to environmental technology.** Yet, when the time comes, the developing countries may not be able to meet their full obligations, such as phasing out the use of CFCs (in the Montreal Protocol). There is thus an unfair imbalance. The North does not follow its obligation to help the South, but the South has to meet its commitments, which because of the lack of aid and technology, will cause economic dislocation.

**One remedy being proposed by some public interest groups and developing countries is to change the international laws on patents so that the full weight of IPRs is not applied to environmentally-sound technology. For example, the Indian government has made out a strong case for amending the TRIPS accord in the WTO in order to recognise developing countries' need for transfer of ESTs on "preferential and non-commercial terms."** It tabled a paper on the issue of TRIPS and the transfer of ESTs at the WTO in 1996 (see section below).

### 3. TRIPS and Environment at the WTO

In the WTO's Committee on Trade and Environment (CTE), the "TRIPS and environment" is being discussed, under two issues: (a) the relationship of TRIPS agreement to access to and transfer of technology and the development of environmentally-sound technology; and (b) the relationship between the TRIPS agreement and MEAs which contain IPR-related obligations.

**A key issue, as defined by NGOs and some Southern governments, is an important clause in the TRIPS agreement relating to patentability and non-patentability of biological materials, i.e. the issue of "patenting of life forms."**

An interesting set of proposals on TRIPS and technology transfer has been presented by India to the CTE. The Indian paper (March 1996) states that the five types of intellectual protection (IP) covered in TRIPS are relevant in this context: patents, plant variety protection, layout designs of integrated circuits and undisclosed information. Two types of technologies incorporating IP are distinguished: those that harm and that benefit the environment. The use of the first should be discouraged, the second encouraged, by the international community.

***On patents, for technologies harmful to the environment, measures needed to discourage their global use may include exclusion from patentability (so that incentives are not given to generate such technologies) and ban of their use or commercial exploitation.***

**The TRIPS agreement recognises this reasoning in Article 27.2 which allows exclusion from patentability "inventions, the prevention within their territory of the commercial exploitation of which is necessary to protect *ordre public* or morality, including to protect human, animal or plant life or health or to avoid prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by their law."**

For environmentally-beneficial technologies, to encourage their global use, and in cases where other measures for technology transfer are not possible, India proposes three points: (a) Members may have to exclude from patentability, to allow free production and use, such technologies as are essential to safeguard or improve the environment. Such an exclusion is not incompatible with TRIPS and may have to be incorporated through a suitable amendment; (b) For currently patented technologies, Members may revoke patents already granted, if this is done in consonance with the Paris Convention and must be subject to judicial review; (c) To encourage the use of environmentally-beneficial technology, Members should be allowed to reduce the term of patent protection from the present minimum of 20 years to say 10 years, "so as to allow free access to environmentally-beneficial technologies within a shorter period."

**Another key aspect of technology transfer and IPRs is the TRIPS provision in relation to biological materials (Article 27.3b).** It requires governments to allow patent protection for microorganisms and microbiological processes for producing plants and animals. It also requires that intellectual rights on plant varieties be protected either through patenting or an "effective *sui generis*

system of protection." This raises concerns: firstly, that TRIPS makes it mandatory for countries to patent some life forms; and secondly, that the knowledge of Third World farmers and indigenous communities that has mainly contributed to the development of crops and the use of plants will not be legally recognised, whilst the corporations which genetically engineer biological resources will be unfairly rewarded. Countries of the South would then have to purchase biotechnology products at high prices (which are facilitated by the patent protection) even though they are the origin of the biological resources (and of the knowledge on their utilisation) used in biotechnology. This is likely to lead to higher cost of seeds and food products in developing countries.

**In the TRIPS Council, many developing countries (most notably the Africa Group of countries and India) have raised the above concerns and asked for revisions to TRIPS or clarifications, to the effect that living organisms and processes cannot be patented, and that Members can introduce a *sui generis* protection system that protects the traditional knowledge of farmers and indigenous communities. However, there has been generally a negative response from developed countries which prefer the status quo to remain, or which want even tighter IPR disciplines in this area.**

There are many other issues in TRIPS that are relevant to a discussion on sustainable development, such as the effects of IPRs on affordable medicines, other consumer items, and on technology transfer generally.

## **G. "TRADE AND ENVIRONMENT" AND ENVIRONMENTAL STANDARDS**

"Trade and environment" was established as an issue in WTO due to a Ministerial decision at Marrakesh in 1994. It is discussed at the WTO's Committee on Trade and Environment.

That there are links between trade and environment cannot and should not be denied. Trade can contribute to environmentally harmful activities. Ecological damage, by making production unsustainable, can also have negative effects on long-term production and trade prospects. In some circumstances, trade (for example, trade in environmentally-sound technology products) can assist in improving the environment.

**What has been most controversial in looking at "linkages" is the advocacy of the use of trade measures and sanctions on environmental grounds. Some environment groups and animal**

**rights groups believe that national governments should be given the right to unilaterally impose import bans or restrictions on products on the grounds that the process of production is destructive to animal life, and that WTO rules should be amended to enable these unilateral actions.**

Some groups, and some developed country Members of WTO, go further and have advocated the adoption of a set of concepts linking trade measures in the WTO to the environment. These concepts are processes and production methods (PPMs), internalisation of environmental costs, and eco-dumping. The three concepts are inter-related. When discussed in the WTO context, the implication is that if a country has lower environmental standards in an industry or sector, the cost of that country's product is not internalised and the prices are thus too low (being unfairly subsidised by the low standard) and thus that country is practising "eco-dumping." As a result, an importing country would have the right to impose trade penalties, such as levying countervailing duties, on the goods.

This set of ideas poses complex questions relating to concepts, estimations and practical application, particularly as they relate to the international setting and to the WTO. Developing countries are likely to find themselves at a great disadvantage within the negotiating context of the WTO should the subject (which has already been discussed in the Committee on Trade and Environment) come up for negotiations.

One of the main issues is whether all countries should be expected to adhere to the same standard, or whether standards should be allowed to correspond to the different levels of development. The application of a single standard would be inequitable as poorer countries that can ill-afford high standards would have their products made uncompetitive. The global burden of adjustment to a more ecological world would be skewed inequitably towards the developing countries.

This is counter to the UNCED principle of "common but differentiated responsibility" in which it was agreed that the developed countries, which take the greater share of blame for the ecological crisis and have more means to counter it, should correspondingly bear the greater responsibility for the global costs of adjustment.

Given the unequal bargaining strengths of North and South in the WTO, the complex issues relating to PPMs, cost internalisation, trade-related environment measures etc. should not be negotiated within the WTO but if at all discussed, the venue should be the United Nations (for example in the framework of the Commission on Sustainable Development) in which the broader perspective of environment and development and of the UNCED can be brought to bear.

Unilateral trade measures taken by an importing country against a product on grounds of its production method or process are also fraught with dangers of

protectionism and the penalising of developing countries. However tempting the route of unilateral import bans may be for the environmental cause, it is an inappropriate route as it will lead to many consequences and could eventually even be counter-productive.

Policies and measures to resolve environmental problems (and there are many genuine such problems that have reached the crisis stage) should be negotiated in international environmental fora and agreements. These measures can include (and have included) trade measures.

**The relationship between the WTO and its rules and the multilateral environment agreements (MEAs) is also a controversial subject of debate in the WTO.** On one hand there is the fear (of developing countries) that a system of blanket and automatic approval by the WTO of trade measures adopted by a "MEA" (for example by an amendment to Article XX to enable ex-ante approval of MEA measures) could lead to abuse and protectionism. A sticking point here is what constitutes a "multilateral environment agreement" as it may include not only truly international agreements convened by the UN and open to all members and enjoying near-universal consensus, but also agreements drafted by a few countries which then invite others to join (and would then also enjoy exemption under the proposed amended WTO rules).

**The fear of protectionist abuse explains the reluctance of developing countries to amend Article XX, which in their opinion is already flexible enough to enable exceptions to accommodate environmental objectives.**

On the other hand there is the genuine fear of environmental groups (and also developing country and some developed country Members of WTO) that negotiations in new MEAs can be (and are being) undermined by the proposition of some countries that WTO rules prohibit trade measures for environmental purposes, or that WTO "free-trade principles" must take precedence over environmental objectives. Such arguments were for example used by a few countries in the negotiations for an International Biosafety Protocol. Such arguments are false, as the WTO allows for trade measures agreed to in MEAs through the present Article XX (although not in the ex-ante manner proposed by some countries).

The use of the WTO name by a few countries to turn away the proposals by the overwhelming majority of delegations to establish checks on the trade in genetically modified organisms and products (through a prior informed consent procedure) gave the impression that commercial interests were placed before global ecological and safety concerns and understandably generated outrage among most delegations as well as environmental and social organisations. Negative

actions like this, that blatantly use the slogan of "free trade" to undermine vital health and environmental concerns, are part of the reasons for the erosion of public confidence in "free trade" and the WTO system. Thus governments should not wrongly make use of "free trade" or "WTO rules" to counter international agreements that deal with genuine environmental problems, otherwise the credibility of the trading system itself will be eroded even further.

**For many NGOs (especially of the South) as well as developing country WTO members, an important "trade and environment" issue is the effect of the TRIPS Agreement in hindering access to environmentally sound technologies and products. (This issue is dealt with in Section F). Another issue is the conflict between objectives and provisions of TRIPS and the CBD and how to resolve them. So far there has not been a solution.**

## **H. SOME OTHER ASPECTS OF GLOBALISATION AND THE ENVIRONMENT**

### **1. Globalisation and ecological deterioration**

The post-UNCED record on the environment component of sustainable development has been just as or even more disappointing than the record on economic and social components. A major factor for this is that the powerful commercial and financial interests succeeded in pushing economic liberalisation and the "free market" approach to be the over-riding priority for most governments. Environmental concerns fell several notches. **Liberalisation, commercialisation and globalisation together with the logic of the race to retain or gain "competitiveness" have undermined sustainable development as both a principle and a programme. Since the liberalisation/globalisation process is the main source of the increased ecological problems, the key to prevent a further worsening of environmental crises is to create conditions for public intervention in free-market forces.** The present reluctance of political leaders (or worse, their belief in the impossibility) to institute policies that alter or temper the present pro-free market approach and to make businesses more publicly accountable and responsible is at the root of the current environmental impasse.

Liberalisation and globalisation are related to the worsening of the global environment in various ways:

\* The failure to internationally monitor and regulate transnational corporations, and instead the moves to widen their rights and access, have led to a spectacular rise in their power and authority. TNCs have generally and rapidly expanded the outreach and volume of their activities. This has correspondingly increased the damage caused to the environment in terms of volume and geographical spread.

\* Liberalisation policies and global market integration have facilitated the institutions and activities that have led to greater exploitation and depletion of biological diversity and resources such as forests and fishery resources, and have promoted and expanded environmentally-harmful land-based activities (agriculture and aquaculture), that lead to continued reduction in the status of biodiversity.

\* Other resources continue to be depleted beyond sustainable rates, such as water, soil and minerals. Liberalisation has opened up more mining concessions and a new wave of environmentally damaging mining activities.

\* The lack of financial flows to and resources in most developing countries (accompanied by continuing debt and commodity price problems), and the persistence of structural adjustment restrictions and policies have meant a great lack of resources or "economic space" in many of these countries to implement or change towards environmentally-sound production.

\* There is little improvement in technology. There is no real will to change harmful production methods. The promised technology transfer to the South has not taken place; instead new obstacles have emerged, such as enhanced IPR protection. Harmful technologies continue to be exported to the South and new technologies are being spread before adequate assessment and regulation.

\* There is slow progress in reducing the trade in toxic and hazardous substances and products, and the export of these to the South has continued and even increased.

\* The emphasis on the need to be competitive has meant slow progress (and in some countries an actual rolling back) in control of pollution and energy use. Big infrastructure projects that are ecologically harmful are proliferating. The race to earn foreign exchange has led to increased tourism promotion and activities, with their side effects.

\* With the accelerated spread of information and communications products, the consumer culture has been more widely spread. In the North and among Southern elite, there is little progress in curbing wasteful lifestyles. On the whole, there is an increase in unsustainable consumption patterns.

Some details of these interactions between globalisation and the environment are given below.

## 2. The rise of TNC power and the environmental implications

On the eve of the Earth Summit in 1992, *the Third World Network made the assessment that the "biggest gap in the UNCED documents being signed in Rio is the absence of proposals for the international regulation or control of big businesses and transnational corporations to ensure that they reduce or stop activities that are harmful to the environment, health and development." (TWN 1992).* This was because the TNCs account for the largest part of global economic activity and are the main entities responsible for the global environment crisis. **TWN expressed concern that the UNCED secretariat had downgraded the need to strengthen regulation of TNCs (for example, by shelving the UN Centre on TNC's recommendations, requested for by the ECOSOC) and instead promoted self-regulation through a Business Council for Sustainable Development. "A voluntary set of principles cannot be an adequate replacement for multilaterally agreed codes and regulations which states oblige industry and TNCs to follow," the TWN concluded.**

Following the Rio Summit, the trend of deregulation of TNCs and of granting to them more rights and freedoms, without corresponding accountability, has greatly accelerated, particularly with the conclusion of the Uruguay Round agreements. This trend is likely to spurt ahead further if the proposals before the WTO on investment, competition and government procurement succeed.

That TNCs are the most important players and factors involved in environmentally damaging activities can be gauged from the following:

- \* TNC activities generate more than half of the Greenhouse Gases emitted by industrial sectors with the greatest impact on global warming.
- \* TNCs have virtually exclusive control of the production and use of ozone-destroying CFCs and related compounds.
- \* In mining, TNCs still dominate key industries and are intensifying their activities. In aluminium, for example, six companies control 63% of the mine capacity.
- \* In agriculture, TNCs control 80% of land worldwide cultivated for export crops; and 20 firms account for 90% of pesticide sales.
- \* TNCs manufacture most of the world's chlorine, the basis for some of the most toxic chemicals including PCBs, DDT and dioxins.

\* TNCs are the main transmitters of environmentally unsound production systems, hazardous materials and products to the Third World. For example, 25% of pesticide exports from the US in the late 1980s were chemicals banned or withdrawn in the US itself.

\* TNCs dominate the trade (and in many cases the extraction or exploitation) of natural resources and commodities, that contribute to depletion or degradation of forests, water and marine resources and, toxic wastes and unsafe products.

\* Through advertising and product promotion, they also promote a culture of unsustainable consumption.

**Case studies of the recent performance of twenty TNCs by Greer and Bruno (1996) show that despite the improved public relations exercise claiming greater environmental responsibility and despite more and more voluntary codes of conduct by industry, there has been little change and much "business as usual", with the corporations continuing with activities that are environmentally-harmful.**

With the growth in production volume and geographical scope of big companies, based largely on the continuing use of unsustainable production systems (and promotion of wasteful lifestyles), and in many cases displacing more sustainable systems or lifestyles, more environmental degradation worldwide must be expected.

Because of their far greater technological capacity, the use of production techniques or substances that are often more ecologically damaging, and the larger volume of production that they characterise, TNCs usually have a negative effect on the environment when they newly produce in or export to (or increase their activities in) an area. With the increasing spread and market penetration and share of TNCs and big business concerns, the damaging environmental effect has increased. This effect is not confined to Northern-based companies. In recent years there has been a significant increase in overseas investment and activity of companies based in developing countries, especially in East and Southeast Asia. For example, these companies are accounting for a large part of new and increased forest logging and deforestation in Indochina, the Pacific and South America.

### **3. Liberalisation policies and their environmental implications**

**Within countries, the processes of liberalisation, commercialisation and deregulation have generally had adverse implications for the environment.** This is true in the North as well as the South. In developing countries, whilst much of the research on structural adjustment programmes (SAPs) has focused on the development aspects of sustainability, there is a growing body of evidence that it has also contributed to the process of environmental deterioration.

In the designing of SAPs, environmental concerns have not been explicitly taken into account. The deregulation, privatisation and liberalisation measures that lie at the heart of SAP have accelerated the development of environmentally harmful patterns of production and consumption, whilst the reduction of government budgets has affected the state's capacity to deal with environmental problems.

By promoting external liberalisation, SAP has encouraged an increase in the extraction and export of raw materials in many countries, thus contributing to resource depletion and degradation. The growth of poverty and inequities resulting from debt and SAP has also pushed poor farmers and communities to open up forests to eke a living from the land.

According to Walden Bello (1994), most of the top 15 Third World debtors have tripled the rate of exploitation of their forests since the late 1970s. This is related to the survival imperative of poor, landless people and the pressing need of nations to gain foreign exchange for debt servicing. Bello has also summarised detailed case studies of four countries that underwent SAP (Chile, Costa Rica, Ghana and the Philippines), demonstrating the dynamics and interrelations between structural adjustment, poverty, market liberalisation and environmental degradation. In these countries, the overriding need to service debts led to an emphasis on expanding exports of natural resources and commodities (such as timber, fish, bananas, cocoa and minerals). Moreover, SAP-induced increased poverty resulted in a situation where landless farmers had to exploit forest, land and fishery resources. The result was rapid depletion and degradation of the fragile natural resource base in these countries.

**The environment and health condition in many Third World countries has also been adversely affected by import liberalisation promoted through SAP as well as through trade measures of the U.S. administration (through its Super and Section 301 laws) and GATT.**

For instance, there has been a significant increase in the incidence of smoking in several Asian countries that were compelled to facilitate the increased importation of cigarettes. Import liberalisation has also resulted in the proliferation of modern consumer products (aimed initially at the higher-income groups that have benefited from SAP) and which promotes environmentally unsustainable consumption patterns. There is a danger these imported and well-advertised products may replace and displace more socially appropriate and environmentally-friendly local products, including those now used by ordinary people.

According to UNRISD (1995), the effectiveness of policy responses to environmental degradation is often curtailed by adjustment: "In general terms, there are three main variants of environmental policy approaches; conservationism, primary environmental care and environmental economics. The potential of all of these to alleviate environmental problems has been limited by the economic and social changes that have accompanied economic restructuring." For example, SAPs-induced agricultural export growth often has negative environmental effects, especially where

ecological conditions are such that export crop cultivation is less sustainable than that of traditional food crops. Conservation programmes and environmental protection agencies are also most vulnerable to government spending cuts. Also, SAPs undermines the potential for community-based action and weaken the capacity of communities to adapt to changing ecological conditions, thus reducing the possibility of implementing the community-based "primary environmental care" approach.

The environmental effects of trade and trade liberalisation in the transfer of inappropriate technologies, production methods and consumption patterns have been examined in Khor (1996). The view that "free trade" is the best route to environmental protection (because it generates wealth to pay for protection measures) ignores the role that trade liberalisation plays in facilitating resource depletion and unsustainable production and consumption patterns. The present pattern of trade has in fact helped accelerate environmental degradation worldwide.

**Investment liberalisation, without corresponding tightening of regulation but instead accompanied by further deregulation, can be predicted to accelerate the process further. The higher flows of FDI in recent years to developing countries are increasing the tempo of ecologically damaging activities.** The proposed multilateral agreement on investment (developed in the OECD, but negotiations there have stalled indefinitely) and similar moves in the WTO to liberalise investment rules will have very wide environmental implications, and have raised serious concerns with many environmental groups.

#### **4. Regulating New Technologies: The case of genetic engineering and biosafety**

Globalisation is also facilitating the spread of new technologies. A major weakness of UNCED is the absence of a systematic approach to risk assessment and regulation of the introduction and spread of new technologies that may be harmful to the environment or human health. There is no systematic mechanism or agency that examines and regulates new technologies for their environmental and social impacts. An example is the rapid development of the new biotechnologies, especially genetic engineering and their application in agriculture and medicine. These rapid developments have generated increasing public concerns about the potential environmental and safety effects of the use of genetically modified organisms (GMOs) and about safety aspects of genetically-engineered foods.

The development of biosafety disciplines was not due to any systematic arrangement, but to: (a) the initiatives of some countries in placing the biosafety issue in the CBD and then pushing for a protocol, whilst facing tremendous opposition from a few countries; (b) the determination of NGOs and independent scientists that campaigned for a protocol and national regulation, and they also faced tremendous opposition from the industry and some governments.

In the biosafety protocol negotiations, a few countries attempted to use “scare tactics” by putting out the argument that some aspects being proposed would violate WTO rules. Presently the US is also putting pressure on some developing countries (and also the EU) not to place restrictions on imports containing GMOs. The misuse of the “free trade” principle by a major country can have a “chilling effect” on other countries, i.e. making them fearful of taking legitimate environmental or safety measures as they could face bilateral or multilateral pressures or sanctions.

## **5. Lack of progress on sustainable agriculture**

In the past decades, the globalisation process has spread environmentally unfriendly agriculture technology to many parts of the South. In recent years, the harmful effects of this model have been recognised. UNCED has agreed that in its place, "sustainable agriculture" should be promoted. Unfortunately, little has been done at the international level to implement sustainable agriculture. This lack of commitment is probably related to the fact that the current dominant models of chemical-based agriculture are relied upon by commercial agribusiness corporations for generating their revenues, whereas ecological and organic forms of agriculture rely on low inputs and are thus not in the interests of commerce.

In the past, most agricultural aid has been for promoting the Green Revolution model, which uses seeds with a high response to big doses of inorganic fertiliser and chemical pesticides. These few seed varieties have displaced a wide range of traditional seeds, thus eroding crop biodiversity. There is also mounting evidence of other ecological problems, such as increasing soil infertility, chemical pollution of land and water resources, pesticide poisoning, and pest infestation due to growing pest immunity to pesticides. These are symptoms of a technological system in decline and the system's main claimed benefit, high productivity, is itself now in question.

With disillusionment setting in on the Green Revolution, commercial resources are now turning to the new biotechnologies. There is need for great caution in this regard, for the claimed benefits of genetic engineering are far from being proven, whilst there is increasing evidence of real and potential risks.

Given the concerns about biosafety, aid resources should not be channeled to developing the new biotechnologies as a new technological panacea. Instead, priority should be given to support research and projects on ecological and community-based farming practices and systems. So far, relatively little resources have been made available for this. There is a premise that whilst "sustainable agriculture" may be ecologically good, it is inferior and inadequate in terms of productivity. This premise could actually be a prejudice, for there is evidence that ecological farming can be high yielding as well, higher yielding in fact than the Green Revolution method.

Since UNCED in 1992, there has been little coordinated official action at global level to phase out chemical-based agriculture nor to promote sustainable agriculture despite

a tremendous increase in public demand for organic foods. As a result of lack of support, sustainable agriculture today remains at the level of anecdotes and case studies and the biases against it are deep-seated.

A positive recent development is the shift in policy in some European countries (especially Germany) towards promoting organic farming. This is the result of the series of problems linked to conventional farming, biotech farming and livestock rearing, including BSE, foot and mouth disease and the public unpopularity of biotech agriculture. However much more needs to be done at the scientific, field and training levels to promote sustainable agriculture.

## **6. Mining activities**

Mining is closely linked to globalisation as much of the products are internationally traded. The extraction of minerals, including fossil fuels, was conspicuously absent from the UNCED negotiations, and thus from Agenda 21. It is a serious anomaly and deficiency in Agenda 21, which should be rectified. Perhaps it was an admission that mining cannot be sustainable: the destabilisation of local environments caused by mining is undeniable, with forests stripped bare, soils degraded and water channels polluted. Besides suffering the ecological effects, millions of people also find their land rights and livelihoods are threatened by mining activities.

In recent years there has been an escalation of mining projects. Massive projects are underway or proposed in every continent, accompanied by violent protests in a number of cases. As technology advances, and the more accessible deposits are exploited, mining companies are penetrating more remote areas. These are usually remaining forests, watersheds and mountainous regions. To mine these areas would be to cause more devastating environmental damage. Most of these areas are also indigenous peoples' lands, recognised or claimed.

At the same time, many developing countries have been attracting foreign investments in mining, and introduced or amended mining laws that have enabled more generous concessions and licenses to foreign firms. Investment liberalisation in mining is likely to damage the environment and result in widespread dislocation of communities.

In a study of recent trends in the global mining industry, Corpuz (1997) concluded: "In the mid-1990s technological advances coupled with the fast globalization and liberalization of the mining industry, which is called the "the mining sustainability framework", allowed the transnational mining corporations to temporarily ease themselves out of a crisis (that they faced in the 1980s due to low prices). The higher profits by the mining TNCs, however, meant higher sacrifices on the part of the majority who are marginalized and greater devastation for the global environment. Among those who have suffered the most from the liberalization of mining are

indigenous peoples, the women, and even the workers, despite the promise that this will increase employment."

## **I. SOME PROPOSALS**

### **1. INTRODUCTION**

Given the unequal economic effects of the present process of globalisation, and its adverse social and environmental costs, there is a need for fundamental reforms of policy and practice, at both the international and national levels. The following are suggestions for changes to enable conditions for sustainable development.

### **2. NEED FOR APPROPRIATE AND DEMOCRATIC GLOBAL GOVERNANCE**

In order to have a favourable international environment for sustainable development, it is vital for the democratisation of international relations and institutions, so that the South can have an active role in decision-making whilst civil society can also have its concerns taken into account. The role of the United Nations should be strengthened whilst the IMF, World Bank and WTO should be made more accountable to the public and to the poor. Democratisation in global governance structures is a pre-requisite to reforms in content of policies, which can then result in more equitable sharing of benefits and costs.

The major global economic actors are the transnational corporations, the international banks, the World Bank, IMF and the WTO. The operations of the corporations and financial institutions should be made much more accountable to the public, and indeed to the governments. The decision-making processes in the Bretton Woods institutions and the WTO are mainly controlled by the industrialised countries. The procedural and legal aspects of decision-making should be democratised so that developing countries can have their proper share of participation. These institutions must also be more open to public participation and scrutiny.

### **3. REBUILDING THE ROLE OF THE UN**

As it is the most universal and democratic international forum, the United Nations and its agencies should be given the opportunity and resources to maintain their identity, have their approach and development focus, reaffirm and strengthen their programmes and activities. **The recent trend of removing the resources and authority of the UN in global economic and social issues, in favour of the Bretton Woods institutions and the WTO, should be reversed.**

In particular, those Northern countries that have downgraded their commitment to the UN should reverse this attitude and instead affirm its indispensable and valuable role in advocating the social, equity, developmental and environmental dimensions in the process of rapid global change. **The UN could at least be a counterweight to the similar laissez-faire approach of the IMF, World Bank and WTO.**

Strengthening the UN will allow it to play its compensatory role more significantly and effectively. But of course a complementary "safety net" function is the minimum that should be set for the UN. The UN must be able to make the leap: from merely offsetting the social fallout of unequal structures and liberalisation, to fighting against the basic causes of poverty, inequities, social tensions and unsustainable development. The more this is done, the more options and chances are there for developing countries and for sustainable development.

**There is a danger that some UN agencies (and the Secretariat itself) may be influenced by conservative political forces to join in the laissez-faire approach or merely be content to play a second-fiddle role of taking care of the adverse social effects of laissez-faire policies promoted by other agencies.** The UN should therefore keep true to its mission of promoting sustainable development and justice for the world's people, and to always advocate for policies and programmes that promote this mission, otherwise it would lose its credibility and its reason for existence.

#### **4. REFORMING GLOBAL ECONOMIC SYSTEM TO BENEFIT THE SOUTH**

**Reforming the inequitable global economic system is needed as part of the battle for sustainable development.** The substance of the demands for a new international economic order should be **seriously addressed** instead of being ignored or treated as extremist. Due to the imbalances, the outflow of real and financial resources from South to North far exceeds the flow of aid from North to South. The transfer of resources from the South makes it extremely difficult, if not impossible, for Third World countries to adequately implement sustainable development policies, even if they wanted to. Thus, of major importance is the reversal of these South-to-North flows of resources.

**A major area of reform is in the terms of trade between Northern and Southern exported products.** The poor and deteriorating terms of trade for Third World commodity exports *vis-a-vis* Northern manufactured exports has been a major source of the lack of foreign exchange and income in the South. The low prices of raw materials have also contributed to the high volume of extraction and

production (to maintain export earnings); and thus become a big factor in natural resource depletion. **To rectify the unfair economic trade terms as well as reduce resource depletion, the prices of raw materials could be significantly raised to reflect their real and ecological costs.** This may require a new round of commodity agreements or other mechanisms.

An enlarged role should be given to a revitalised UNCTAD and other UN agencies to assist developing countries in areas such as improving commodity prices, building supply capacity, and formulating trade, production and development policies.

Another area for reform is the resolution of the external debt burden of poor and middle-income developing countries. Debts of LDCs and other poor countries should be written off so that they can make a fresh start. The recent financial crisis involving high external debts in East Asian countries again highlights the need for countries of the South to guard against falling into a debt trap. A fair resolution to the existing debt problem, that would not continue to squeeze Third World economies, is important to widening the options of developing countries for the future.

***In the area of investment and technology, the South and the UN had in earlier decades tried to establish codes of conduct for TNCs and for the transfer of technology, but eventually these efforts were abandoned in the early 1990s.*** Instead the Northern countries are attempting to establish a multilateral agreement on investment rules, under the WTO (since their efforts to create one under the OECD failed). The investment policy rules sought by the North would largely prevent the developing countries from having meaningful options for policy-making over strategic investment and development issues. **Developing countries should therefore exercise their membership rights and not allow the WTO to negotiate investment rules. Instead, the right of Third World countries to determine their own economic policies,** and to have control over their natural resources, should be recognised in practice as well as in principle. **This would include the right to determine the terms under which foreign companies can invest in a country.**

New efforts should be made for codes or arrangements to regulate TNCs, to regulate restrictive business practices and to foster technology transfer to developing countries.

## **5. REVIEWING THE BRETTON WOODS INSTITUTIONS AND THEIR POLICIES**

The "globalisation" of a particular set of macroeconomic policies was achieved through the structural adjustment programmes (SAPs) which the World Bank and IMF designed and exported to more than 80 developing countries. The SAPs led to

widespread public discontent, including street riots and demonstrations, in many countries undergoing adjustment, and opposition by several people's organisations and NGOs in both the South and the North. The most important issues voiced by developing country governments and especially by a wide range of Southern and Northern NGOs were the negative economic and social effect of structural adjustment policies, the non-accountability of the Bretton Woods institutions and the need to resolve the South's debt crisis. They have argued that debt and structural adjustment were the most important impediments to social and sustainable development in developing countries.

These are indeed the key issues in the required reform of the Bretton Woods institutions and their policies. The external debt overhang of highly indebted developing countries should be resolved as soon as possible (as earlier mentioned). And in light of the new round of debt and structural adjustment problems arising from the Asian crisis, it is urgent that a process of reform or revamp be initiated on the IMF and World Bank, including on their processes of decision-making and on their inappropriate economic policies. Unless this is done, many developing countries that are still under structural adjustment programmes would find it very difficult (and more difficult as well) to maintain the right to make policy choices.

A serious search for the elements of an appropriate approach to macroeconomic policies and development strategies, including the proper balance of roles between the state, the public sector and the private sector, is essential.

## **6. REFORMING THE WTO**

The WTO should be made more transparent and accountable to the larger international framework of cooperation and sustainable development. This is critical because the rapid developments in the WTO have such major ramifications for sustainable development and yet there is a lack of information and participation from the public, from many sections of national governments and Parliaments, and from other international institutions. There should also be greater internal transparency within the WTO and developing country Members must have full participation rights in discussions and decision-making.

**There is a need to assess the implications of existing WTO agreements and to address the imbalances and deficiencies that lead to unequal outcomes at the expense of developing countries.** The WTO agreements have on the whole benefited the stronger trading countries much more, and many weaker countries are likely to suffer net losses in many areas. **The inequities should be redressed during the review of the agreements that is mandated to take place in the WTO in the next few years.**

In particular, the WTO agriculture agreement has not taken into account the needs and interests of small farmers, especially the non-commercialised farmers in developing countries that form a large section of the population. The Agriculture Agreement should thus be reviewed and reformed to take into account its impact on small farmers and in the context of food security and sustainable agriculture.

**A review and reform of TRIPS is urgently needed (see Sub-Section 8 below).**

The problems of implementation facing developing countries should be dealt with as a matter of top priority, and a strengthened special mechanism should be set up to satisfactorily resolve the problems (including through amendments of agreements) as soon as possible.

The special and differential rights of developing countries should be strengthened and operationalised. In this context, **the main operational principle of the WTO, which is liberalisation and "national treatment" for foreign products, should be reviewed** in the light of the experiences of many developing countries, which have suffered adverse effects from liberalising their imports too rapidly, whilst not being able to increase their export capability, access and earnings. Developing countries that encounter problems arising from liberalisation should be able, in practice, to make use of their right to special and differential treatment, so that they can have the option of having the right balance between opening to the world market and promoting the interests of local firms and farms. **The main goal of WTO is sustainable development, whilst liberalisation is only a means (and should be done appropriately) and this central theme should be operationalised in the workings of the WTO.**

Finally, the WTO should not take up issues that are not trade-related. The attempts by some countries to introduce such new issues as investment rules, competition policy, government procurement and labour standards should not be accepted, as developing countries will be disadvantaged by the way the WTO is likely to treat such issues, and moreover the WTO would be seriously overloaded with such an expanded portfolio when most developing countries are already unable to cope with the current set of agreements and with the present volume of negotiations.

## **7. TRADE AND ENVIRONMENT**

Discussions within the WTO entailing the environmental effects of WTO rules can be beneficial, provided the environment is viewed within the context of sustainable development and the critical component of development is given adequate weightage. The principle of “common but differentiated responsibility” derived

from UNCED should guide discussions on trade and environment in the WTO and elsewhere.

The Committee on Trade and Environment should orientate its work to the more complex but appropriate concept and principles of sustainable development. But there should not be any move to initiate an "environment agreement" in the WTO that involves concepts such as PPMs and eco-dumping. **Thus, there should not be the linking of environmental standards (and the related issues of PPMs and eco-dumping) to trade measures.**

## **8. INTELLECTUAL PROPERTY RIGHTS**

There should be an urgent review of the current international IPR regimes, particularly the TRIPS Agreement, to assess the impact on sustainable development. The mandated reviews of Article 27.3b and of the overall TRIPS agreement are occasions to undertake such an assessment and based on the assessment appropriate changes should be made.

In the review of TRIPS, serious consideration should be given to the following:

- In Article 27.3b, ***changes should be made to enable Members to exclude all living organisms and biological materials as well as living processes from patentability***; and it should be clarified that Members can have the option of a *sui generis* system for plant varieties that protects traditional knowledge, farmers' rights and local community rights.
- It should be clarified that ***nothing in TRIPS prevents Members from taking measures needed to protect and promote public health; moreover, Members should be enabled to exclude from patentability medicines needed to treat life-threatening diseases and diseases related to poverty.***
- ***Measures should be allowed for the effective transfer of environmentally sound technology, including exclusion from patentability.***

- ***Measures for technology transfer to developing countries should be made operational and binding.***

## **9. REFORMING THE GLOBAL FINANCE SYSTEM**

Reforms are needed in the global finance system. There should be regulation of capital flows to prevent the disruptive effects and avoid financial crises. Countries that face debt default should be able to have access to debt standstill and debt workout under an international debt arbitration institution. A more democratic system of governance and decision-making on international financial matters is also needed.

## **10. TECHNOLOGY ASSESSMENT AND PRECAUTIONARY PRINCIPLE**

UNCED did not deal with the theme of assessment and regulation of environmentally unsound technology in a systemic manner. ***What is required is a competent international centre or agency, under the UN, that carries out sustainable development assessments of technologies, especially new and emerging technologies. The centre should establish systems for governing and regulating technologies. The precautionary principle should be applied in technology policy.***

## **11. INTERNATIONAL ENVIRONMENT GOVERNANCE**

There are many gaps in the current system of international environmental governance (IEG). The World Conference on Sustainable Development should reach some conclusions about the future evolution of IEG. There should be better coordination and rationalisation among the various multilateral environment agreements, and between these and UNEP as well as CSD. Future initiatives on environment regulation, and on IEG, must place the environmental issues within the context of sustainable development, so that the development dimension is streamed into environmental policy.

## **12. THE SEARCH FOR ALTERNATIVE DEVELOPMENT STRATEGIES**

As the UNCED process realised, a reconceptualisation of development strategies is required. For example, the recent Asian financial crisis makes it crucial to reflect on the dangers to a country of excessive openness to foreign funds and investors.

An important issue is whether developing countries will be allowed to learn lessons from and adopt key aspects of these alternative approaches. For this to happen, the policy conditions imposed through structural adjustment have to be loosened, and some of the multilateral disciplines on developing countries through the WTO Agreements have to be reexamined.

In the search for alternative options for developing countries, approaches based on the principles of sustainable development should be given high priority. The integration of environment with economics, and in a socially equitable manner, is perhaps the most important challenge for developing countries and for the world as a whole in the next few decades. So far there has been a recognition that something should be done but the real work has only now to begin.

It is crucial that the research in this area is increased. It would be very useful if economic arguments could be put forward to show policy makers that it makes better economic and financial sense to take care of the environment now, even as the country progresses, rather than later. More work needs to be done, including at regional and national levels in developing countries, to produce evidence and to make both the public and policy makers aware that environmental damage is economically harmful, and that environmental protection and eco-friendly technology and practices are themselves economically efficient ways of conducting development. It would also be very useful to highlight examples of components of successful implementation of sustainable and human development policies and approaches and to draw lessons from these. The emerging "sustainable and human development" paradigm could then contribute to the debate on appropriate macroeconomic policies; the appropriate relations between state, markets and people; and appropriate development styles and models.

In the ecological sphere, the series of negotiations initiated by UNCED is an opportunity for all countries to cooperate by creating a global framework conducive to the reduction of environment problems and the promotion of sustainable economic models. However, international discussions on the environment can only reach a satisfactory conclusion if they are conducted within an agreed equitable framework. The North, with its indisputable power, should not make the environmental issue a new instrument of domination over the South. It should be accepted by all that the North should carry the bulk of the burden and responsibility for adjustment towards more ecological forms of production. This is because most of the present global environmental problems are due mainly to the North, which also possesses the financial resources and the economic capacity to reduce their output and consumption levels.

There should be much more focus on changing economic policies and behaviour in order that the patterns of consumption and production can be changed to become environmentally sound. What needs to be discussed is not only the development

model of the South but even much more the economic model of the North, and of course the international economic order. Key issues to resolve include:

- How to structurally change the Northern model of production, and consumption or lifestyles;
- How to promote ecologically-sound and socially-just development models in the South;
- How to structurally adjust the world economic institutions so as to promote fairer terms of trade and reverse the South-North flow of financial resources;
- How to come towards a fair distribution of the sharing of the burden of adjustment necessitated by ecological imperatives, as between countries and as within countries.

**Whilst the international elements of a fair and sustainable global order are obviously crucial, there must also be substantial changes to the national order as a complement.** In both North and South, the wide disparities in wealth and income within countries have to be narrowed. In a situation of improved equity, it would be more possible to plan and implement strategies of economic adjustment to ecological and social goals.

In the South, the policy option can be taken to adopt more equitable and ecological models of development. **With more equitable distribution of resources such as land, and greater access to utilities and housing, the highest priorities of the economy should be shifted to the production of basic goods and services to meet the needs of the people.** Investments (including government projects) should be channeled towards basic infrastructure and production, in contrast to the current bias for luxury projects and status symbols of progress. Social investment in primary health care, education, housing for people, public transport and popular cultural activities should also be emphasised, rather than the high-level luxury services that now absorb a large portion of national expenditure. In this social context, changes also have to be made to make the economy follow the principles of ecology. There should generally be a reduction in the extraction and production of primary commodities: this would reduce the problem of depletion of natural resources such as forests, energy and minerals.

The decline in output and export volume could be offset if commodity prices were to rise, thereby providing a fair value of export earnings. In agriculture, the ecological methods of soil conservation, seed and crop diversity, water harnessing and pest control, should replace the modern unecological methods. With a reduction in production of agricultural raw materials, more land can also be allocated for food crops. There should be as much conservation of primary forests as possible; and the destructive methods of trawler fishing should be rapidly phased out whilst fishery

resources are rehabilitated and the environmentally-sound fishing methods of small fisherfolk are promoted. **In industry and construction, ecologically-appropriate forms of production should be given priority. There should be strict limits on the use of toxic substances or hazardous technologies, a ban on toxic products and the minimisation of the volume of toxic waste and of pollution.** Of course, to make this move towards a better global order possible, there must be people's participation, because the radical changes being called for can be realised only when there is popular will. It is crucial that information be provided to the people through the media and popular education methods, and that the people be given the freedom to make their views known to the policy makers and to others.

***It should be stressed that the elements proposed here for a fair and sustainable global order have to be taken together, as a package. Social justice, equity, ecological sustainability and people's participation are all necessary conditions for this order, and the change must apply at both national and international level.*** Policies that promote equity alone would not necessarily result in a more environmentally-sound world. On the other hand, measures to solve the ecological crisis without being accompanied by a more equitable distribution of resources could lead to even greater inequity and injustice.

(NOTE: This paper draws heavily on some other papers written by the author, especially "Globalisation and its Effects on Sustainable Development" (Khor 1996); and "Responding to the Challenges of Globalisation." (Khor 2000).)