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NGO SYMPOSIUM ON ENVIRONMENT AND THE FUTURE

WHY DOES THE ENVIRONMENT DETERIORATE

And what can be done about it

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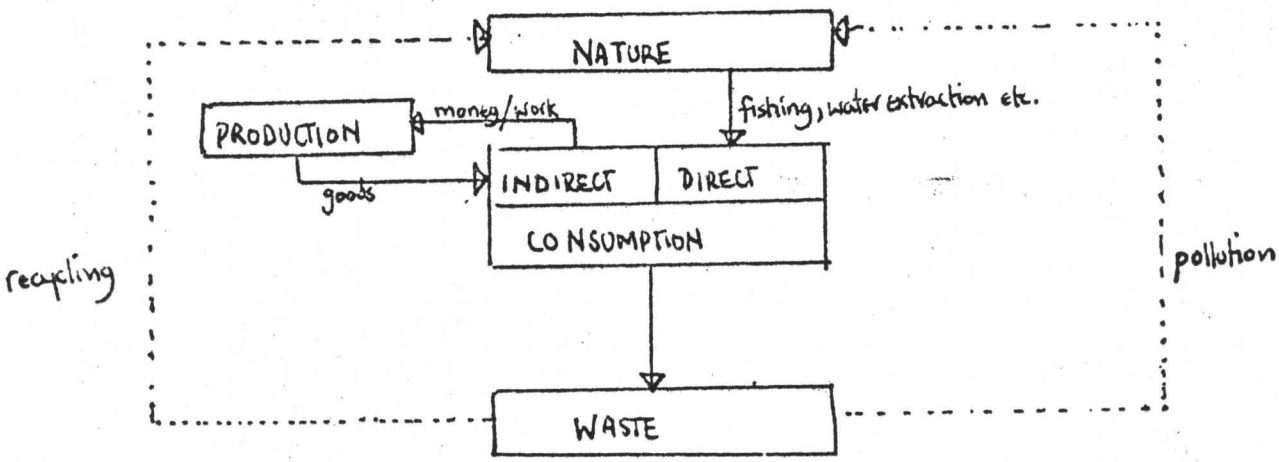
with the author before releasing it.

1. Apart from some partial victories, environmental degradation continues. For reasons that lie more in our social systems than in our technical ability, to manipulate nature, so as to yield goods and services.

It is irrelevant whether that social system is "capitalistist" or "socialist" however those terms are defined. The decisive characteristic is much simpler, so simple it is often overlooked, in what passes as "sophisticated" analysis.

2. This characteristic is <u>the expansion of the economic cycles</u>. An "economic cycle", is the way in which Nature, Production and Consumption are tied together:



Matter is taken from nature for direct consumption (water, air; gathering), or indirect consumption after processing. Agriculture is one means of processing nature. Matter also comes back to nature as waste, - agricultural-industrial waste from production or as household waste from consumption. Thus, nature loses, exchanging natural/raw/primary materials for waste products; and human beings, the end consumers and those who make a living from the various links in the chain

between nature and end consumption, win. Had nature been an economic actor in its own right, however, this system would not have worked. Since nature would have struggled over the terms of exchange between the goods demanded and the money or work supplied to buy them as much as consumers and workers have struggled for cheaper goods and higher salaries. But nature is silent and thus needs good spokesmen.

3. The significance of the scientific-technical revolution has been two-fold:

- to make it possible to process much more raw material (both biological and mineral) from nature than ever before.

- to send back to nature waste products of a kind and in quantities nature cannot handle, cannot absorb, or cannot break down.

In short, the twin problems of depletion and pollution. But at deeper levels of analysis this process also threatens the resilience or stability of eco-systems as diversity is reduced and equilibria based on symbiosis break down. One such ultimate possible consequence is desertification, today threatening one fifth of the earth's land surface.

4. However, the apparent triumph of the natural sciences in helping us to process nature to a hitherto unknown extent is not the key factor. We would have only a small fraction of our problems today if the economic cycles had remained so limited in extension that producers and consumers would themselves have faced the consequences of their own depletion and pollution. The key production/consumption unit in human history, the family farm, has survived through generations

for the simple reason that the consequences of irrational householding are visited upon the perpetrators or at least their immediate offspring. Depleted soil gives poor harvests. Products that are polluted cannot sustain healthy human bodies. This applies not only to agricultural production but to any type of production: negative consequences that come to oneself have a great impact on consciousness.

5. Historically, "enlightened self-interest" has been neither a necessary or sufficient condition for sound ecological behaviour, but it does help for example:

- Nomadism: when the immediate environment was sufficiently depleted/polluted (the latter being less important - only "scientific man" has been capable of making waste products nature cannot handle) it was time to select another place for depletion/littering. The places could be on a cycle, finally coming back to the point of origin when nature had repaired the damege,

- ignorance: people may not have been sufficiently aware of the harmful consequences of their action; the negative increments per year may have been almost imperceptible, and when cumulative and/or synergistic effects show up as a catastroph other reasons (e.g. supernatural) may have been found.
- "self" may have a class character: the economic cycles may have been very limited spatially, but the pollution/depletion consequences may have been pushed onto the lower classes in society, in the form of dwindling food resources or a life close to garbage dumps,
- priority may have been given to more immediate interests: even the family on a family farm will deplete their own soil mercilessly and eat the grain set aside as seeds when the only alternative seen is starvation.

During the middle ages in Europe all these factors were at work. Economic, particularly agricultural, cycles were very limited in extension. But the consequences of very irrational ecological behaviour were pushed onto the serfs and peasants who were then faced with starvation, ultimately leading to the "nomadism" of the lower layers into cities and to other countries, and of the higher layers into piracy, brigandry, crusades and other efforts to get away.

6. After the Middle Ages opportunity to build economic cycles in which the harmful consequences in terms of depletion and pollution were not visited upon oneself, increased. Cars and car factories can pollute, and nature can be depleted, thousand of miles away from corporate offices which may be located in a beautiful park where birds still sing. Exhaust fumes in their air conditioning shafts, industrial effluents in their drinking water and a gradual transformation of that park into waste land might have a powerful impact on the decisions of corporate officials if they were seen as linked to their own actions. Similarly, in the car factory itself the drinking water could come from the river, downstream of course, the air from the smoke-stack. The class character of the mechanisms that prevent this from happening is rather crucial to the understanding of the whole issue, yet it is left unconsidered in typical (inter) governmental analyses. One reason for this is the international class structure: "expanding, even unlimited" economic cycles is another way of saying "free trade", meaning the free flow of raw materials, of capital, of labor and of the finished products. The ecological consequences of this philosophy are to displace the depletion and the pollution to the corners of the world where people are so weak that they cannot protest, or to parts of the earth so far away that Nature's protests are not felt.

7. Since there is "only one earth" with what is essentially a space-ship economy we need to find mechanisms to restore the intimacy of the link between production and its consequences. But this type of consciousness is mediated. It is not immediate, as with the farmer destroying his own soil, or the manager drinking his own polluted water. For this consciousness to be strong, one has to be:

very enlightened - through scientific or other knowledge

have an extended self - empathy with other classes, other regions

have a long-term perspective - solidarity with coming generations.

Were everyone like this, then much would be different. But we know perfectly well that only a few people can be said to rank high on all three characteristics. And it is not enough to rank high on only two of them. The last two - synchronic and diachronic solidarity - are excellent human qualities but not helpful unless backed up by knowledge. Knowledge with only one of these moral qualities very easily leads to refined forms of exploitation in the corners where moral light does not shine. A government may well practice socialism at home and exploit other countries ecologically; or there may be intergovernmental cooperation in avoiding the type of ecological harm that hits the higher classes, pushing it onto the lower classes all around the world, eg. in the form of very high food prices because of soil depletion. In addition, although one can readily recognize these three traits, singly or combined, in the many ecological action groups (and among artists, the most sensitive part of human kind) one can just as easily recognize the absence of one, two or three of these traits in those who decide, in the public or private sector, on the construction of economic cycles. The result is environmental rhetoric, some recycling and cleaning-up execrises, but the environmental deterioration continues as the cycles expand and penetrate more deeply, economically and administratively.

8. Thus, our general moves, now slow, now fast, towards local ecocatastroph (the global ones are still far away) are based on the interplay between the scientific-technical revolution and the unlimited expansion of economic cycles, or between industrialism and capitalism, private and state. One may argue back and forth over the relative benefits of these two ideologies to the tremendous costs involved: exploited nature and expolited people. Clearly, very few people are willing to soften industrialism and contract economic cycles to the point that rational ecological behavior becomes a necessity and not only an aspiration. Tomorrow this may change but the benefits seem to outweigh the costs for most people, not just elites. Thus the prospects for succesfuly turning the many negative environmental trends are poor.

9. Thus, we get four different situations in which to discuss environmental trends and action:

	Economic cycles limited	Economic cycles unlimited
Economic activity soft on nature	A	B
Economic activity hard on nature	C	D

From what has been said above it follows that in general we shall have either case A or case D. When the activities get harder and the consequences become so unbearable that they have to be displaced as the cycles expand, they can accommodate more unpalatable consequences simply because they happen far away. However, even with soft activities consequences can be felt far away, for to the man-made economic cycles must be added the non-manmade ecological cycles brought

about by the movement of air (winds) and water (rivers, currents). So. it is essentially case C that is of less interest: that combination is not viable, at least not in the longer run, leading to A or D depending on what is modified.

10. Case A has, a touch of the utopian, and is, by and large, what the green movement in the first world stands for. It is probably much more realistic than people commonly believe. It presupposes more, but much better science and technology, capable of making do with limited resources, affecting nature gently, using sun, wind and running water and biomass, three-dimensional agriculture, electronic processing, miniaturized industrial processes,recycling and cleaning-up in the cycles. And yet the major asset of this case is not having to rely on abstractions for ecological action since the consequences come home. For this to be true, however, some conditions were pointed to above. There has to be <u>understanding</u> of ecological cycles and how they intermesh with economic cycles. There has to be <u>solidarity</u> within that community, meaning that there are limits to inequity and inequality, to the extent to which that community can be a class or even caste society. And <u>extreme poverty, disaster,</u> and <u>greed</u> may ruin it all by giving low priority to ecological considerations. In societies with steep class gradients the gains from the limited economic cycle may be easily washed out.

11. Case B is an extension of case A, either because of nature's own action, or because it is found necessary to expand the economic cycles, to trade and exchange with far away places. Essentially this calls for solidarity with those places located on the same ecological and/or economic cycles. Yellow rain, the dark or red snow, the poisoned waters have to be felt both by sender and receiver <u>as a</u> link, albeit a harmful one, such that something has to be done about it. This might involve practices similar to using a tracer element in an organism, or the tricks

be made more concrete. And yet, from understanding there is no immediate link to positive action except in the context of empathy. For man-made economic cycles this is not so important since the import of a polluted product may be stopped, or the export of a product based on depletion of non-renewable resources prevented. For ecological cycles, those of wind and water in motion, it is more difficult: intergovernmental action is needed, based on a mixture of the usual three forms of power: persuasion, bargaining and force. With internationalization of cycles environmental action is also internationalized.

12. Case D is the hardest, and the most typical. There is much to be gained, in terms of power, profit and privilege from being on top of this type of activity, combining the secondary and tertiary sector of economic activities. Whether there is so much to be gained from this type of activity for those not at the top, is another matter. Hence, the best contribution to environmental protection would probably come if people could be convinced that societies of type A can be at least as effective in overcoming extreme poverty as societies of type D. To show this, however, other types of expertise is needed than that provided by economists whose thinking is typically geared to hard industrialism and long distance trade; processing and marketing being the two pillars on which the abstraction called "economic growth" is built. Critique of type D systems would be a key ingredient of a programme of environmental action.

13. Developing this critique is an uphill fight except in the more enlightened, less inegalitarian and less explotative countries, the Northern European welfare states. Even in these countries environmental action is needed for they engage both in hard industrialism and in extended cycles. The methods typically used are:

- to counteract hard industrialism:
  pollution aspect: laws, detection, fines
  aspect: price mechanisms (oil, soil) depletion
- to counteract transmission to other countries:
  national law extended to international law
  international price mechanisms.

But these approaches are unlikely to work, for some very simple reasons. For the polluter what is bad about pollution is no longer the toxic impact, but the possibility of being fined, which is in turn a question of being detected. However, as in the relatively parallel field of armament production and control, it is so much easier to conceal and cheat than to control and detect. Going out at night with a truck with an open valve, letting a toxic fluid out slowly while the truck is driving fast; or similarly with a ship - particularly in international waters, is so much easier than detecting such practists. Detected dumps for toxic wastes are only a small number of those existing. Thus, it is the industrial process itself that has to be changed enough to be understood and controlled by all concerned.

14. Similar arguments apply to the price mechanism: from being a question of preserving the basis of sustenance for life on earth it becomes a question of who is able to pay. And that, in turn, becomes a question of creating a society such that the demand becomes inelastic within a range of prices: people simply have to have the increasingly expensive commodity, regardless of price - the key example being oil. But soil is an equally good example: prices for the use of cultivable soil to build dwellings or factories may be increased to discourage people from using the ground that way - the net result is only likely to be more expensive housing, and more expensive industrial products. In short, efforts to let the consequences come home to the polluter and depleter by creating an artificial micro environment

around that person with its rewards and punishments are not likely to yield environmentally beneficial consequences, except in particularly law-abiding and economically rational societies.

15. So far this exploration of environmental deterioration has been linked to the ever-expanding economic cycles, which stimulate production and consumption processes that deplete and pollute nature and are also so complicated and distant socially and spatially, that they become exceedingly difficult to understand and control. There are also benefits from expanding economic cycles which more than compensate for the costs, at least for those who decide on the cycles. But the costs in terms of direct destruction of nature, and thereby in the reduction of the basis of sustenance for the human beings of today and tomorrow, are tremendous. If a very particular type of "economic" cycle is added to the analysis,those of military activity, the position becomes worse. There are two: one dealing with the production of the means of destruction (the arms, in a broad sense), and one dealing with their use, with the production of destruction itself (war). Consumers of the first cycle of arms production and arms trade are above all governments; the "consumers" of the second cycle are, ultimately, everything and everybody, the natural environment and the human-made environment. One of the characteristics of military cycles is their unlimited expansion, not only of the production and consumption of the means of destruction - similar to other modern economic cycles, only growing faster - but also for the production and consumption of destruction itself. Conventional weapons are more like limited economic cycles: they hit here and now. But nuclear weapons of mass destruction recognize no such limitations: winds may carry the fall-out very far, and destructive radiation is along lasting. In general terms the biosphere is more vulnerable than the geosphere, in the biosphere animals (and humans) more than plants and higher plants more than lower plants. The atmos-

phere and hydrosphere are also vulnerable, thus a nuclear war may render large parts of the world not only uninhabited but uninhabitable.

16. If modern war leads to environmental deterioration it can probably also be stated that environmental deterioraion may lead to war. Resources for the sustenance of human life are becoming increasingly scarce. The capacity of people in power to tolerate this as long as it "only" hits people lower down is impressive. But the environmental deterioration brought about by what today is "normal" economic activity, including arms production, will sharpen the struggle for scarce resources, oil being one example, water probably soon becoming another. If military destruction is added to this the wars become self-reinforcing, vicious circles.

17. The question of what to do about all of this is a question of strategy, and the question of strategy is a problem of why to do it, what to do, who shall do it, how, when and where, at whose expense, to what extent.

18. The question of why is not difficult to answer and there is a very high level of consensus in the world about this already, not the least due to UNEP's excellent work in articulating the problem describing it, perhaps, rather than analyzing it. Analysis might be difficult given UNEP's closeness to governments and theirs in turn to corporations. Furthermore, UNEP is dependent for funds on the biggest depleters and polluters. We are going down-hill, environmentally, despite some exceptions in terms of reversals of trends (the pollution of rivers and lakes, for instance). Information work certainly has to continue and to be stepped up. But it should also undergo a qualitative change. Data on levels of depletion and pollution are indispensable. But more information is needed that could lead to a deeper understanding of why there is so much environmental deterioration. One form of presentation here would be in terms of economic cycles, showing very clearly who processes nature

point would be a law to the effect that products should carry an environmental consequence analysis, possibly with a warning (like the warning on cigarette packs). For both purposes training in seeing environmental deterioration in terms of cycles and processes, and not only as states of affairs, is indispensable. The language of discourse should be not only ppm and rates, but flows on social and spatial maps, indicating clearly who are the producers and who the consumers of the deterioration. Yearbooks ranking countries and corporations in terms of the environmental deterioration they cause and what they do to improve the situation could the situation could also be very useful.

19. The question of what to do it more problematic. As has been stated above that the best circumstances are those in which economic cycles are limited and the economic activity is soft on nature (Case A) at the same time as there is understanding, solidarity, and neither extreme poverty, nor disaster nor greed. Pure (thervada) buddhist societies may be examples of this: green wave communities in the West likewise - and there are many others. Thus working for as much social transformation as possible in that direction will not only lead to the abatement of the deterioration, but to removal of causes. But the general trend in the world, except for some small areas, is in the opposite direction - towards unlimited cycles and economic activities that are hard on nature (and through that on people). Hence what to do becomes a question of designing double track goals and strategies. Small is beautiful, among other things because smallness mobilizes the enlightened self-interest of everybody like it does inside a house, in a family. But some big is necessary not only because of the prevalance of case D economic systems, but also because of nature's own ecological cycles. Consequently a good world, environmentally speaking, would probably be one where a much higher percentage than today is run on a Case A basis, and that which is run on a Case D basis run in such a way that the polluters/depleters themselves will have to pay for environmental restoration (repairing the

economies. This could at the same time serve as a stimulus to that type of economy, leading to much more work on environmentally sound technologies. And to this should then then be added the necessity not only of a good structure, but also of an enlightened population: understanding and solidarity, with nature and humans both today and tomorrow. One without the other, education without structure or vice versa, never works well.

20. The question of who shall do it obviously calls for many answers. It calls for actors at all levels - local, national, international. And of all types: public as well as private, and among the latter associations as well as corporations. It is more complex than a simple division into governmental and nongovernmental, among other reasons because the local level is so important and so are corporate actors. However, there is another distinction that also has to be kept in mind: between those who produce environmental deterioration, public or private and those who are the consumers or victims of it. Most people are in the grey zone in-between, neither direct producers nor explicit, direct victims. It is true that when producers and consumers of toxic pollutants are brought close to each other (as in the minimata and thalidomide cases)the situation gets tense and confrontational. But from the generally accepted idea that the perptrators of environmental crimes should be brought to court rather than into positions of power where environmental control is concerned it does not follow that the victims could not be made more positive use of. They have suffered the consequences on their own bodies and hence developed a level of consciousness different from that which comes from reading and watching.

21. It is important that actors working for a safe and sound environment can cooperate or at least coordinate. Excellent work has been done to achieve this; UNEP at the governmental level, ELC at the nongovernmental level, conferences scheduled so that the two can inter act have also

NGOs should see themselves less as pressure groups on the governments and more as actors in their own right.. They are often closer to the local level where truly sound environmental practices can best be realized. They are engaged in countless small and big experiences and experiments, sometimes behind, very often ahead of governments that are big and move slowly, if at all. Very important among the NGOs are actually political parties since they constitute links between the local and the national, the individual and the public. All the NGOs should of course use conferences to bring pressure on governments, but equally, or more so to inspire each other, exchange experiences and experiments, mobilizing more people, NGOs should do things themselves not only admonish governments to undertake actions that they may be unwilling or incapable of doing. Governmental conferences have their own logic, chaining resolutions and reports to each other in time. The strength of the NGO level is that it is less formal, often in a position to carry out some action, at least at the local level, immediately. NGOs should build on this potential, thus compensating for their lack of formal power.

22. The question of <u>how</u>, <u>when</u> and <u>where</u> to do it can best be answered in the same way as the question of <u>who</u>: in the spirit of diversity and symbiosis, the two key characteristics of mature (resilient) eco-systems. In concrete terms this means in as many ways as possible, at all times and all places; but symbiotically, meaning that there should be some synergistic effect, something more gotten out of it than what one puts in. One group is interested in soft technology, another in local self reliance. If brought together the work in the same <u>concrete</u> setting could produce a soft technology that would make a higher level of local self-reliance possible. The government prepares legislation: could that legislation also encourage the type of economic cycles that generate more immediate action against deterioration, out of enlightened self-interest?

Much coordination and a good overview are needed to have actors work so that some synergy is produced, and to avoid becoming irrelevant to each other, or worse, working at cross-purposes. On the other hand, there are many interests, values and perspectives in this field and conflict among the actors is not only inevitable and natural, but also needed. To have the biggest polluters preside over pollution control is much like having narcotics dealers preside over narcotics control.

23. The question at whose expense is a rather important one: there is no social control, and particularly no social transformation without somebody losing something. The costs should be minimized and pushed upwards in society where they can better the borne, not downwards where the costs are more than high enough already. Which means that the problématique becomes relatively similar to the disarmament/arms control problématique: a problem of conversion How can one get most of the same goods and services (so that the consumers do not suffer) and at least not fewer jobs (so that the workers do not suffer) if there is to be a conversion to environmentally more healthy economic cycles? Many would argue that Case A economics, or green economics, would solve both problems since it also migh include somewhat more artisanal and somewhat less industrial modes of production - with lower productivity, but higher quality, including the environmental quality. Here experience seems to show that only countries that have already come far along the lines of Case D economics will start producing groups arguing for reversals of the trends (or, rather, for new structures that preserve some of the advantages of Case D but with a higher level of Case A mixed into it). Consequently it may be that such countries (particularly the Northwestern European welfare states) will have to be counted upon to make some experiments "on behalf of humanity" here - together with Third World countries that have sufficient amounts of traditional structures intact to build constructively on them.

24. The question to what extent is more easily answered: till the environmental deterioration has been stopped, reversed and an acceptable and sustainable level of human environmental symbiosis has been attained. But, it is not clear that we have good images of what such a sustainable levels is. We have often been too concerned with the negative signs to think of what our goal is beyond stemming the negative slide down hill. This is important, and environmental actors of all kinds would do well to devote some time and energy to goal-formulation. This means that there should be indications not only of negative development (pollution and depletion, for instance), but also of positive development (level of maturity of eco-systems, for instance). At this point indicators of human environmental symbiosis should be included. The spiritual dimensions of this symbiosis should also be included.

25. In conclusion, and given the seriousness of our predicament today, one might also go one step further where strategy is concerned. Modelled on the excellent work done by NGOs in the field of human rights why not call for an Environment International organization whose task it would be, at the non-governmental level, to monitor environmentally relevant trends and action. The organization would publish reports on the activities of governments and corporations, the key actors in this regard - state and private. The reports would go to the roots of the phenomena, giving information not only on the extent of the destruction, but also on why, and who-did-it, with names. There could then be international committees concerned with victims and perpetrators adopted by them, helping the former, putting pressure on the latter. Above all these committees would, with the help of the central organization, make both parties aware of alternative modes of production and consumption so that it does not only become an organization for the dissemination of moral norms and sanctions. But the world also has the right to know who the key polluters and