

LIVELIHOOD-ENVIRONMENT-ACCESS-EQUITY

POWER-POSSESSIVENESS-PROFIT

Some Problematic Interactions of Rights.... And Wrongs

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How is it possible to buy or sell the sky
or the heat of the earth?

- Chief Sealth (Seattle)
Refusing to sell his
people's ancestral lands

Our children's children will see this
and bless heaven.

- W. Shakespeare (Henry VIII)

not only is attacking poverty a moral
imperative, but it is also essential for
environmental stewardship.

- World Bank (World Development
Report 1992)

environmental protection is one area in
which government most maintain a central role.
...Strong environmental policies complement
and reinforce development.

- ibid

I.

What Are We Talking About?

Environment and ecology are often used as synonymous terms. This is less than helpful if it is taken to mean that only material conditions and especially those relating to nature are relevant to the environment and to environmental protection. Certain types of ecological protection can have negative or even disastrous human environmental consequences.

Livelihoods (or their absence) are an integral part of the human environment. They are an equally integral part of the right to development. Ecological policy and practice which ignores them is normatively problematic. In addition, it is usually unsustainable especially by accountable governments unless the livelihoods negatively affected are those of small, socially and politically marginal communities.

The reconciliation of the right to development and to livelihood with ecological sustainability turns on sustainability. Livelihoods and development which are unsustainable are inherently unsatisfactory usually for present as well as future generations. This approach - sustainable livelihoods and development including sustainable ecological management and protection - is conceptual, not a mere word game. It does not eliminate conflicts of rights nor the need for trade-offs and compromises but it does offer a perspective within which dialogue and reconciliation are much more likely to be attainable.

A major problem with the present debate is its tendency to use terminology which obscures rather than illuminates, combined with frequent descents into diatribes of the deaf rather than dialogue of the concerned.

Listening to the run-up to the Rio Conference the speeches and the commentaries strongly suggested that, at least so far as most of the political and economic actors were concerned, power, possessiveness and profit were the basic concepts being advanced and that they were being promulgated from relatively narrow interpretations of different speakers/writers own self-interest. That in itself is not unusual - negotiations among disinterested parties are very much the exception - but combined with terminological and presentational sloppiness it led not to any process of parameter setting for negotiation but to formalised rhetoric abuse, sanctification of what looked suspiciously like varied self-interests and demonisation of those who disagreed. That - as the disastrous record of the New International Economic Order non-dialogue should warn - is no way to achieve results. As both livelihood sustainability and ecological protection matter (not least to each other) deadlock is a worst possible result for all parties - a negative sum game.

"Whose rights to what?" is a question which needs posing. At least four quite different answer clusters emerge for - the rich North, poor Southern countries, poor Southern households and persons/groups with focussed

general or specific ecological commitments. Each sketch is necessarily on grounds of space schematic.

In principle, a fifth perspective - poor Northern households - should be equally important. In practice, it is rarely clearly articulated beyond specific cases (e.g. loggers threatened by owl protection) and usually turns on issues which Northern economies clearly do have the resources to resolve consistent with protecting ecology and livelihoods at the same time.

The rich Northern perspective is that ecological damage threatens future growth or even maintenance of achieved levels of income and amenity and, therefore, must be halted or reversed. It believes this to be technically feasible - largely within existing technology frontiers - at substantial but not non-financeable cost to itself in the North and calls on (demands?) the South to carry out a similar exercise (largely out of its own resources) in its countries.

The North does admit most past ecological damage was done by itself - out of ignorance and lack of then available protective (or alternative) technology but at least implicitly argues that present and future dangers - e.g. to forests, in respect to carbon dioxide emissions, levels of fluorocarbon usage, extinction of species - are in the South. There is something in the second strand of this argument and in the North's parallel contention that its act - if not wholly together yet - is beginning to come to grips with ecological damage control/reversal. The areas in which the latter contention is weakest are, however, forest conservation/expansion and carbon emission taxation which square oddly with ferocious criticism of Southern logging and air pollution.

The North's basic interpretation of the global obligation to achieve ecological stability/recovery is one in which each country is primarily responsible for all aspects in its own territory with some type of enforcement (tariffs? import bans?) against backsliders. It does - via free trade - propose to supply ecologically sound technology to the South, via enterprises and at a profit as well as to take a lead in relevant research - again primarily via enterprises and charged up to/profit from in patented/intellectual property protected legal monopoly/oligopoly product sales. On a grace and favour basis some joint financing of costs in Southern territory protection is recognised as desirable.

The economic logic of this approach is not impeccable. In the case of external economies (diseconomies) the "beneficiary pays" ("polluter pays") principles do not necessarily give territorially bounded results - especially if enterprises based in one country operate on a basis doing global ecological damage in another. Nor are "ability to pay" and "avoidance of regressive taxation" principles unknown to economies even if they appear to be almost totally left out of account in the Northern stance.

The poor Southern country perspective (most forcefully argued by larger, less poor Southern countries, e.g. Brazil, Malaysia but clearly - if less abrasively backed - by large, very poor, industrialising economies, e.g. China, India) has three somewhat disparate strands. The first is a root and branch cutting down of the Northern case; the second a defence of its own commitment to sustainability; the third a demand for cost sharing on a progressive taxation basis.

The basic contention is that most ecological damage and most present risks have been caused by Northern actions - not simply past but also present (e.g. present comparative CO² emissions and forest absorptions per capita levels. Linked to this is the contention that these practices were in large part necessary to achieve development and that to forbid them to the South is to forbid Southern development whether or not that is the Northern intention. Like its notorious predecessor, the Club of Rome's "Limits to Growth" exercise, the North's Rio stance is seen as a "what we have we hold" and "the devil take the hindmost" approach seeking to freeze global hierarchies and inequalities.

The second strand is an assertion that Southern governments are committed to environmental protection even if their priorities are not identical to Northern but are also committed to national sovereignty in identifying, articulating and implementing. The implication - sometimes spelled out - is that Northern ecologists do not understand Southern environmental problems, priorities or policies adequately and that both they and Northern governments are behaving in a neo-colonialist mode which is unacceptable whatever its objectives.

The last strand is to argue for a common global environmental strategy (including Southern priorities) to be financed on a cost sharing basis with charges proportional to output per capita and territorial programmes funded

on the basis of need. This might or might not be a way forward except that the Southern definition of environment at this point embraces the whole global economic environment.

Clearly there are links. For example, one cause of excess and ecologically unsound resource exploitation is debt servicing and another is worsening terms of trade. Therefore, debt relief (whether broadly linked to national environmental policy or to an agreed project package) is discussable. Experience has shown that general terms of trade manipulation is a non-starter politically whatever the economic case (or lack of one). Equally, it is a fact that human poverty leads to the creation of ecological poverty and that soil conservation/agro forestry/anti-desertification packages can reasonably be financed under ecology/poverty reduction twin umbrellas. But putting the whole array of poverty reduction (much less national product per capita disparity reduction) under the ecology rubric appears unlikely to be functional.

The Southern poor household position is by no means necessarily the same as that of Southern governments, especially relatively unaccountable ones responsive to narrow constituencies, influencers or paymasters. Especially - but not only - perceptions alter priorities and nowhere in this more true than in respect to livelihoods of poor households.

Clearly any Southern poor household position is largely an artificial construct. Poor household groupings are usually locally and conceptually limited although some national alliances backed by domestic NGO support groups with professional expertise are emerging (e.g. India, Philippines, Malaysia). Globally, all of their organisational (as opposed to individual) spokespersons are voices for not of the globally voiceless and only on land and the overlapping indigenous minority rights issues have these voices tended to focus on items on the ecological agenda.

Poor households do care about environment including ecology. The greatest single cluster of concerns turns on livelihood sustainability and the second on access to water, fuel and - at least in densely populated areas - sanitation. Perceptions of what is ecologically damaging may be 'unscientific' (if that is a fair description of observation based on reflection on perceived experience) and narrowly bounded both contextually and technologically. They are, however, genuine and often acute.

Poor households in general would not deny - and can identify - practices conducive to environmental degradation and practices not (or no longer) carried out which would reduce environmental damage and future livelihood risk. To them the basic reason for the apparent contradiction between perception and practice is self-evident - need. For example, if long rotation preserves fertility for the future but yields starvation now it will be abandoned. If the workload to terrace hill farms is beyond household capacity (or lack of secure tenure makes such investment highly risky) then terraces will not only not be extended but in many cases will not be maintained no matter how traditional they once were (e.g. Philippine Cordillera).

This perception is not anti-ecological but rather ranks survival and a modest sufficiency as the top household environmental priorities. To blame the poor households for the very considerable ecological damage they do (including a plurality of deforestation in Sub-Saharan Africa and erosion causing cultivation in Southeast Asian hill country) is normatively unappealing and operationally stale, flat and unprofitable. If the means to behave in an eco-friendly manner reducing livelihood risks consistent with achieving household incomes above a social poverty line are made available most such households will respond. How, is a complex, contextual problem. For example, many such households are well disposed to tree planting - as windbreaks, for fuel and building materials, for household fuel and fodder, for cash income - but few welcome large mono-tree stands tailored to urban fuel or hillside/watershed conservation needs designed without reference to their livelihood requirements.

Gender aspects of environmental protection certainly do exist. For example, because providing water and fuel are usually among women's responsibilities in poor Southern rural households, degradation of tree and bush cover and related sinking of the water table have a disproportionately negative impact on their workload. So too their responsibility for providing foods means that soil degradation and erosion increase the total burden on their time. In Africa, at least, terracing and tree planting tend to be on the male side of most divisions of labour so women would bear a portion of the costs disproportionately low relative to benefits and men vice versa.

Most women - like most rural people - are aware of the poverty links of ecological damage and do seek to prevent ecological looting by outsiders - including commercial forestry endangering food and fuel supply in Indian and Philippine "tribal" areas. On the other hand in the context of present poverty and narrow survival margins women - like men - necessarily choose to put present survival first sometimes with devastating ecological results from loss of trees and bushes or soil or both. Analogously, men whose household survival depends on off farm low wage employment will skimp on terracing and soil protection not because they are unaware these actions put future food supplies at risk but because they see no other option.

These contextual issues are hard to build into a conceptual framework albeit a check-list of ecological protection/degradation costs/benefits for men, boys, women and girls could be constructed in most countries. What one has conceptually is rather different and rather peculiar.

The dominant theme is that women in general care about ecology and its protection and that men in general do not because women are carers, nurturers, protectors and men profiteers, exploiters, users. This transformation of "children, kitchen, church" into a positive eco-friendly stereotype is of very dubious desirability as a means to empowering women or reducing gender typing. Even assuming that women are inherently carers independent of social expectations and constraints the analogy from children and the sick to trees and crocodiles (let alone the ozone layer and the greenhouse effect which are at a very different level of abstraction from visible corporeal reality) seems problematic. But, more to the immediate point this approach starts at the wrong end by not identifying what costs/risks particular women in particular contexts perceive; how they believe they could reduce them and what they see as the requirements (time? money? tools? knowledge?) to do so.

Some generalisations would be practicable and, even when that was not the case, a foundation would be laid for environmentally friendly initiatives which would be supported/carried out by women (who could thereby empower themselves) because they were both possible and contributory to enhanced livelihoods, reduced workloads, lower future risks, better human environment as perceived by them.

The eco-committed perception focuses on damage and risk reduction - whether in general or in a particular sector. Like any single issue or issue

cluster focus it treats other goals as inherently subordinate - though not necessarily invalid or beyond discussion/negotiation. That is not an inherent objection - so long as a set of goals and programmes are valid it is desirable that some people and organisations give them a dynamic and cutting edge by focussing their objectives on forwarding them. It becomes unhelpful only when somewhat extreme (by general ecological movement standards) positions (e.g. viewing tse tse flies as acceptable fauna defenders), totally inadequate objective comprehension (e.g. viewing co-existence of crocodiles and children in the same body of water as practicable) or impervious to other valid goals' claims (e.g. land for food as opposed to forests) makes them unable to negotiate attainable trade-offs and/or infuriates persons, institutions and countries with other priorities (e.g. reduction of poverty, reducing aid dependence by enhancing exports).

A more basic problem relates to risk, cost and temporal urgency evaluation. On most issues the direction of negative change is demonstrable. The speed and severity is much more problematic on known data. So too are evaluations of costs, positive results, timetables and sometimes even directions of results of proposed changes. For two reasons the ecologically committed tend to underplay uncertainty and pose catastrophic, immediate risk scenarios:

- a. carefully outlined limits of uncertainty do not mix easily with presenting a simple, saleable message or mobilising will and resources to respond to it;
- b. catastrophic risk (if significantly different from zero in probability) which cannot be averted after data and analysis become precise does justify high cost, uncertain degree of gain, immediate action and on at least global warming and ozone layer there is a relatively strong case that catastrophic risk does exist and - because of lags in impact of changed policies even if implementation began at once - immediate action to counter it is needed.

Unfortunately overcertainty/oversimplification of presentation against well briefed opponents can lead to loss of credibility rather than agreed initial steps. Further, the global warming counter-measures are such that while an early start is needed a 'big bang' one is less evidently essential (or attainable). Beyond those too, it is arguable fear of the consequences of catastrophic risk will not mobilise support as well as less apocalyptic

and more pragmatic arguments (e.g. for species diversity protection to yield gene and product banks and tourism bases).

The basic issues in each case except perhaps the ecological are power, possession and profit. The poor household's concerns are to earn a livelihood, to have possession of the means to do so (including secure access to usable land in rural cases) and to profit from - inter alia - ecological protection. The Northern and Southern governmental cases are even easier to translate into p-p-p terms. The ecological stance is in one sense about power over what is done and possession of the agenda albeit the profit is not material.

That summary is not to be seen either as denigration or as an epitaph on the possibility of action. To possess the means and to have the power to profit from efforts to earn a reasonable livelihood whether as a household, an enterprise or a country is not merely understandable, it is also laudable so long as it is neither self destructive nor based on impoverishing others. Further, all negotiations about power, possession and profit do involve divergent interest and successful outcomes depend on trade-offs and compromises so that each party is reasonably satisfied (barring naked coercion which is not a practicable route to environmental protection). That is a context in which positive sum games can be played - clashing over non-negotiable issues of principle is not. The issue is not the desirability of principles but the practical, attainable means to make progress in implementing them.

The present form of presenting perceptions and cases does not appear to be particularly well suited to a non-perjorative examination of power-principle-possession aimed to seeing how sustainability and livelihood (environment/right to development) can be furthered jointly. Even assuming each case has been set out as a bargaining platform (pretty certainly true of the official Southern one) the mutual reactions to the other cases has been too strident and too little negotiation focused.

One clear substantive problem area is that of technology to limit emissions damaging to the ozone layer and/or contributing to global warming. If such technology as exists is not put into general (global) use and more developed the outlook for both ozone and temperature is bleak. But the technology is costly in one and probably two senses. The first is initial purchase. Enterprises which have invested in developing it will - not

unreasonably - wish to recover their investment and a profit. Cash down purchases at resulting prices may well be beyond Southern capacity. Here the parameters of soft loans and regulated prices (a normal profit - while hard to define precisely - is one thing; a monopoly precise entrenched by international intellectual property right enforcement is something else) might well yield acceptable results.

The more serious problem is that of overall capital, operating and unit output costs. If these do mean that Southern industrialisation would - in general - be non-competitive domestically and on export markets means toward an acceptable (to the global environment and to the South) way ahead are much harder to find. A GATT chapter dealing with allowable protection for environmental reasons might offer some mileage - the export side seems more intractable unless guide-lines for allowable capital subsidies plus some means of financing them can be discovered. What clearly is needed is more case by case work on how much environmentally friendly technologies would (or would not raise the costs of which products and the extent to which this would put the South (or rather which specific countries in the South) at a significant disadvantage. That research is an urgent priority - until more, more objective data is to hand serious negotiation - let alone action - will be delayed while fluorocarbon and net carbon dioxide emissions continue.

A parallel problem area is institutional. The Rio Conference was not a possible negotiating forum, even on principles let alone parameters and least of all specific agreements. The Montreal Convention (relating to ozone layer protection) is the product of a workable process using specialist and official input to lay the ground for a last compromise plus formal unveiling political session. If the commitment exists an analogous CO² Convention could be envisaged (with emission control and absorption enhancement provisions).

However, if Southern states (especially the handful likely to have emissions seriously retarding ozone layer reduction or having a substantial impact on global warming) are to be added to the Montreal or included in the CO² Convention, work needs to begin now on a viable approach to cost sharing. As speed is important this is unlikely to be via a single Special Fund (whether free standing or in the World Bank) nor through a system of emission permits based on population and transferable among countries

(logically plus an analogous system to penalise reduction in vegetation and reward enhancement). Each would take too long to negotiate and the latter would lack a plausible enforcement agency even if the very real technical problems could be resolved speedily.

If the principle of cost sharing is agreed then a series of export studies leading to early official level explorations toward parameters on expected contributions and rough allocation of transfers (as done in IDA) would be possible. If that could be ratified at political level then how to, would - however messy, difficult and repeatedly threatened with breakdown - be feasible.

II.

Right To Development: Right To Survival

The right to development is not a codified or convention specified right so has no legal text. Nor have all contributions to dialogue on it been compatible, much less identical. However, several strands have become identifiable in the main body of discourse:

- concern with the right to a decent livelihood for households and peoples as well as acceptable levels and growth paths of national and territorial output;
- including participation, access and accountability (empowerment) aspects of the human condition as well as the more narrowly material;
- provision of universal access to basic services (or basic social and human investments to use an alternative formulation) both from quality of life and quality of productivity/livelihood concerns;
- highlighting empowerment as the main route out of absolute poverty but recognising the need for "safety nets" (as of right) to meet the needs of unempowerable persons or households;
- acceptance that the right to development - like development, however defined can only be met over time measured in decades and, in any case, is an ongoing, processual right whose specific content will vary (develop) over time.

Nothing in that set of strands is inconsistent with "The Right To Survival" (to cast environmental/ecology issues in rights terminology). Indeed, the recognition of development as processual and of attaining an acceptable approximation to it requiring decades implies a sustainability requirement. A right to development for one generation in terms condemning its posterity to the reverse would be something of a contradiction in terms, especially because most right to development advocates are concerned with human beings within social groups (in interaction with other people) rather than as isolated individuals and therefore are inherently multi-generationally oriented.

The right to survival is even less codified or the beneficiary of a process of dialogue than is the right to development. Discourse has tended to begin from ecological threats to survival and to emphasise (or at least demand) immediate technological answers with relatively less attention to process, codification or institutionalisation.

In a sense it has been analogous to fire fighting rather than to a socio-politically based campaign against poverty (or non-development). That approach has its uses - emergencies require immediate, approximately correct action with institutionalisation, participation, interaction with other concerns to be built in to hold the immediate gains after survival is assured. Whether it is an appropriate approach (beyond ringing a loud initial alarm) to most environmental problems is a matter of some dispute. Much environmental data is both scientific and subject to varying interpretations or questions as to accuracy. Even on global warming the time frame for action needed to stabilise (or for that matter the optimum temperature) is unclear. This relates in part to the offsetting impact of calamities (e.g. Mount Pinatubo) and catastrophes (e.g. Kuwait oil field fires) which apparently have provided up to five years more time (interestingly an excellent reason on ecological grounds for global finance for livelihood and land rehabilitation in the Philippines and eco-friendly technology transfer to Kuwait).

What is fairly clear is that an alarm ringing approach needs to be transformed into a more sober, bureaucratic, institutionalised one if it is to survive. One facet of this is clearly negotiations. Another may be building up a body of rights which even if not directly legally enforceable - especially globally - do have a value in the creation of a body of

opinion and of expectations conducive to successful negotiation leading to implementation. In the case of "Right To Survival" components might include:

- prevention of global emission levels leading to ecological transformations which were substantially life or livelihood threatening;
- similar provisions in respect to regional (e.g. acid rain) national (e.g. neo-desertification) and local (e.g. water pollution) ecological disintegration menaces;
- effective access to technologies necessary or conducive to preventing/reversing environmental/ecological deterioration;
- protection of species diversity with managed access and sharing of benefits resulting from that access;
- shared responsibility for achieving results and for meeting costs on a basis related to prospective benefits and per capita resources as well as physical location of requisite action.

In principle - and in practice over a 50 years perspective - these strands are complementary to (in some cases essential for) those of the right to development. The areas of conflict are short term on the one hand and equitable divisions of costs/benefits on the other.

The household level short term conflicts turn on:

- poverty
- calamity
- exclusion for ecological protection

These can be considered at household and national levels.

Poverty

The first conflict is illustrated by many land and labour time poor rural households. To live now they must use land intensively in ways leading to erosion and/or loss of fertility, collect woodfuel in ways contributing to loss of tree/bush cover, curtail erosion avoidance and tree planting in order to devote time to immediate payoff activities. Sustainability to

them necessarily begins with being alive today in order to have a tomorrow, even if today's actions erode tomorrow's probable livelihood and certainly that of present children as well as unborn descendants.

There is nothing very novel about the ways to transcend this context. Farming systems including more soil friendly crops (usually including trees), land reform, ability to pay for soil nutrients (natural and chemical), time savings to permit better land care, finance for soil protection works, alternative fuels and/or more efficient tree growing, etc. The case for priority to them is threefold:

- poverty reduction/right to development
- substantial macroeconomic gains (often, though not always, quite cost efficient ones on any criteria)
- making ecological protection pay so that a group whom necessity forced to undermine their own livelihoods' sustainability are empowered to become their active defenders and promoters.

Calamity impact is illustrated by drought which aggravates the poverty position already noted and adds new problems:

- concentration of populations (human and animal) leading to spot environmental degradation which often spreads cancerously;
- failure to restore damage or to reduce future vulnerability before resuming 'normal' use.

Again the means to avert (indeed in some cases reverse) this downward dynamic are known. Early warning systems and timely provision of food (and water) near homes can avert population concentration. Pre-planned labour intensive works related to future vulnerability reduction/ecological protection brought into force promptly and continued to - say - 6 months after the first post-drought main harvest can combine survival assistance and enforced available labour time via work for food to improve (or at least avoid worsening) of the underlying ecological position.

Exclusion as a result of measures intended to provide ecological protection has affected indigenous minority residents of wildlife protection areas, hill peasants and forest clearing cultivators. In a number of cases, the ecological gains have not been self-evident (e.g. hunter gatherers in African forest zone reserves) nor the motivation above doubt (e.g.

Philippine approval of EEC backed plantation projects on steep slopes on which the indigenous Cordilleran peoples are forbidden to farm). However, in others there is little doubt either that existing poor household land use was ecological damaging or that the exclusion of those poor households was environmentally devastating for them.

Resolution of this conflict can proceed on two lines: enabling existing users to practice sustainable activities (discussed below in respect to Philippine ex-forest land) whether by altered make-up of activities or technique changes; and/or providing adequate, acceptable alternative livelihood access (usually involving land for rural households). The problems with the second approach (however appealing on paper) are that those excluded rarely have the leverage to ensure fair treatment; hunter-gatherer land requirements are exceedingly large and often require types of land which do not in fact exist; land tied cultures may be linked to particular pieces of land so that no substitution is socially adequate. Where practicable therefore, rendering livelihoods eco-friendly in the same location is preferable.

The same issues arise in rather different forms at national level. Poverty can force maximum resource exploitation to earn foreign exchange to cover import requirements or to service debt. Equally, it can be seen to require using low capital cost technology even if this also means low eco-friendliness.

As at household level, the governments are by no means unaware that the way in which non renewable resources are being used up, and the sustainability of nominally renewable ones endangered, does result in future costs. But, again like households, they perceive present survival and growth as overriding imperatives.

In respect to air, soil and water pollution, the perception of high future costs is real - the revelations from Central and Eastern Europe ensure that. However, their present ecological priority problems turn on local pollution - e.g. the smog banks over their cities and industrial areas - rather than the high level global issues (smog, in fact, offsets global warming albeit the net overall effect of carbon burning increases it except at suffocating combustion inefficiency levels). There is no inherent bias against modern eco-friendly technology (probably the reverse) but very

serious doubts as to availability, price and impact on competitiveness, investible surplus and financeable growth rates.

As with households, the basic road to resolution turns on making present ecology protection attractive in present net cash flow terms. This can involve - compulsory transfer of technology (with or without managed prices), debt write-downs tied to ecological protection investment, joint finance packages for global (e.g. warming) and national (e.g. air cleaning) priorities. Assuming the transfers are both substantial and also less than programme costs (a safe assumption) both sides have an incentive to seek to reduce the costs of environmentally appropriate technology and to finance research to do so.

National calamity impact is almost directly analogous to household level. For example, Mount Pinatubo's explosion (ironically exceedingly valuable globally because of its contribution to middle and upper atmosphere dust) created human environmental needs as well as land reclamation ones. Had generous finance for these purposes (perhaps linked to seeking to develop small household agro forestry on derelict ex-forest lands) been made available, the pressure on the Philippines to make general cost "savings" (including a Bataan Nuclear settlement leading to activation of a poorly designed reactor near a fault line in an active volcanic zone) would have been lower.

The exclusion issue at global level is likely to prove explosive. Unilateral imposition of nominally environmental protection based restrictions on trade will not be seen to be either fair or well intentioned. The sometimes questionable accuracy of the information on which they are based, the motives of some of their supporters and the apparent arbitrariness of their coverage (e.g. Japan, Spain and the USSR - in that order - are the states whose fishing practices are the most globally disastrous for fish stocks, but not the apparent lead targets for import restrictions) ensure the suspicion that their goal is protection and their targets the weak.

A combined incentive/disincentive approach including part coverage of technology change costs (nationally for richer states, on a broader basis for poorer) with an independent monitoring body might be both more widely acceptable and more productive. In particular, that approach would allow phasing in of improved practices where the result of instant changes would,

in fact, be exclusion not adjustment and would also provide a basis for influencing techniques applied to domestic (as well as export) market oriented production.

Equitable division of costs and benefits is in principle easy to agree. A functional comprehensive costing and charging formula, however, is quite impossible to agree at political level. The question is what can be negotiated product by product, technique by technique, country by country. To assert that this is messy, tedious and at best approximately correct is to assert the self-evident, but there is no better option actually available now or even in the medium term.

At least six points are agreed to be relevant:

- most (not all) present ecological damage at global level results from the historic activities of present rich countries at home and abroad
- if present industrialising countries 'advance' to 1990 OECD output per capita levels using 1950-70 OECD technology, ecological collapse is inevitable
- politically sustainable environmental agendas at national level must address domestic (e.g. air pollution, erosion) as well as global (e.g. fluorocarbon emission, deforestation) priorities
- both external costs (from acid rain to ozone holes) and benefits (from additional carbon dioxide absorption to species diversity preservation) are common, complex and not readily quantifiable
- early action in the right direction is needed both because of uncertainty as to how much is required and of the speed of impact
- poor countries (and households) even if ultimately benefiting on direct discounted future gains flows calculations, may be unable to meet the initial capital costs.

That is an adequate base for potential recipients to put up reasoned project/programme proposals; for potential transferors to negotiate on content and transfer proportion and for a quasi independent expert group to put up proposals especially in respect to issues requiring global action with suggestions as to territorial distribution of action and national

distribution of financing including transfer payments and receipts. From these - assuming adequate prioritisation of environmental protection and restoration in resource allocation - a workable process of negotiation, agreement, implementation and monitoring could result.

In principle the case for an independent evaluation, negotiating, resource transferring, monitoring agency is moderately convincing. The closest present parallel is IDA (with its country share on both payment and drawing side and its relatively strong role for relatively independent and technically competent staff).

Because of the present size and focus of IDA putting the environmental project evaluation and finance in IDA (or the World Bank family) is probably both impracticable and undesirable. Nothing in UNDP's record suggests it would be a suitable venue and, in any event, if it is to coordinate UN economic activity it should not be one of the major operational actors to be coordinated. The UN could upgrade its Environmental Programme to Specialised Agency status with an associated specialist programme negotiation agency (à la IFAD) but to do so and to run in the resultant machinery would - optimistically - take a decade. That is no reason for not considering starting that process now, but it is a compelling reason for making an operational start via coordinated bilateral bargaining immediately.

Population growth is not directly addressed in detail in this paper for three reasons:

- output and technology issues - not population changes - are central in respect to the two most immediate global challenges - ozone layer holing and global warming
- an approach literally targeting reduced population growth as an environmental protection instrument would raise serious normative problems and rather greater political ones as well as maximising North-South conflict
- in respect to both the rural ecological and the poor household livelihood issues in the right to sustainable development cluster the causal direction is primarily from poverty to population growth and

certain types of ecological damage - particularly to trees and shrubs, hillsides and land fertility more generally.

Therefore, right to livelihood implementation by and in support of poor rural households, including universal access to basic services, is the most important road to reduced ecological damage from enhanced household/land ratios (population growth). Certainly it needs complementary eco-friendly technique access as well as access to family planning programmes but without the right to development focus neither will usually prove particularly effective.

III.

Global Heritage and National Livelihood

The priority agenda for ecological sustainability/damage reduction globally does not always appear similar to that for ecological/environmental sustainability nationally. There may or may not be actual conflicts on the desirability of the items themselves, but different agendas with varying priority rankings and limited resources are a recipe for either conflict or inanition. This problem can be illustrated in four key areas:

- threats to survival
- threats to sustaining production
- threats to global heritage
- threats to amenity

The most prominent global threat to survival probably is the thinning/holing of the ozone layer. For most poor countries it is an issue of low domestic priority because their contribution to the problem (and therefore potential to help overcome it) is negligible. However, for some Southern economies it is a problem they see as relevant but only if the Northern economies (which have caused over 95% of the damage to date) meet the cost of the South's using new ozone friendly technologies. From their perspective, fluorocarbon bans without free (or at least highly subsidised) technology transfers are objectively (whether intentionally or not) a route to blocking their industrialisation. Talk of moving locally (but not globally) environmentally unfriendly industries to the South increases

their suspicion that the fluorocarbon issue is being used deliberately to hamper their development.

In many African countries drought-erosion-desertification pose more immediate threats to survival of substantial numbers of their people and are, therefore, high on their ecology/environment priority agendas. In terms of resource transfers at least to reduce future drought vulnerability, finance for erosion control/agro forestry and anti-desertification measures do not appear to feature prominently on Northern agendas nor were they highlighted at Rio. These countries are, understandably, suspicious about agendas on which Northern priorities are funded (or imposed without funding!) while theirs are not treated seriously at global political and funding levels.

Threats to sustaining production at global level centres on global warming and its effect on rainfall patterns and sea levels. For a few Southern island countries this may well be a matter of national survival and for many others the rainfall shift results could be catastrophic. However, except for the island cases there is inadequate data to make the production threat fully credible or prioritisable. For many there is again little they can do. Namibia, for example, is bemused by suggestions its forestry priorities can be based on combating global warming. More trees and bushes it does (and many rural households do) want for reasons of fuel, fodder, building materials, food, cash income, soil protection and water conservation. But to suppose such a programme would be significant in global warming terms (and therefore should be designed specifically to relate to them) is facetious.

The main tropical forest producers' stance is more complex. They are well aware Northern countries have converted most forests into farms (or towns) as an integral part of their development and that few are even close to practising sustainable forestry. Several - e.g. Malaysia, Ghana - do have policies dividing future farm/town land from permanent forestry zones and attempting to achieve sustainable patterns of cutting/replanting on the latter. These may well be inadequate, but probably no more so than those of the USA and Canada. Further, so far as the greenhouse effect goes, cutting and replanting is as sound a solution as not cutting so that generalised opposition to harvesting a (potentially at least) renewable resource strikes a very sour note.

Again the drought-desertification-erosion complex of issues usually has higher national priority in the South. This may be especially true in respect to cut out forest lands. These (even technically) cannot be restored to primary tropical forest status. Where - as in the Philippines - they are equal to total cultivated hectareage and ten times actual forest, how they are ecologically upgraded would appear crucial to soil preservation, livelihood and increasing carbon dioxide eating vegetation. Hopeless attempts to recreate forests - notably in the Philippines - lead to few trees, no secure tenure and the worst kind of erosive shifting cropping on steep slopes. Mixed agro-forestry could do much more to combat global warming as well as to protect soil and and could also provide a land reform route to complement the exceedingly politically difficult one of redistribution of existing cropped land and thereby benefit the environment of rural landless or illegally hill cropping poor households.

The carbon monoxide emitting - basically coal, oil and, in the South, wood burning - side of the global warming dialogue may be more a short versus long term issue than a North-South one. The lethal air of - e.g. Manila, Mexico City and Seoul is of concern to their governments and the last at least has spent considerable financial and policy resources (subsidised subways, high car and gasoline taxes) trying, rather unsuccessfully, to address it. But, even more than in respect to fluorocarbons, they perceive Northern industrialisation as having required a low cost polluting period with emission controls, smokeless zones, etc., part of the fruits of development to be consumed after industrialisation and high income levels had been achieved.

The Southern historical perception may well be irrelevant to the present. But unless it is addressed seriously by technological research and transfer prioritisation or - less probably - by carbon dioxide emission quotas based on population and saleable among countries - continued deadlock is likely.

Threats to heritage on the global agenda focuses on species diversity both as to flora (e.g. tropical rainforests, fragile desert ecological zones) and fauna. The cases put are overlapping: a) diverse species include ones which may be valuable; b) something is lost socially and aesthetically when species or settings cease to exist; c) extinction of species is a moral abuse of nature/creation.

None of these points raises particular inherent problems of perspective divergence between North and South albeit the particular lists may vary and the form reverence for nature takes relative to use varies significantly (e.g. a hunter-gatherer for survival reasons wishes to preserve species diversity but also sees clearing areas wildlife reserves of one species - homo sapiens - to do so as a denial of his heritage of using them).

The divergences turn on how much territory needs to be devoted to species preservation, to what other uses - if any - it can be put, how to resolve conflicts (e.g. between crocodiles, children and washerwomen in rivers passing through populated areas) and who is to pay for preserving the global heritage of humanity on what basis.

Species diversity preservation in a context of relationships either unaltered by human presence or with uses limited to research, low intensity viewing and - perhaps - traditional hunting and gathering does limit land use. If land is scarce and heritage areas do occupy high quality land (either may or may not be so depending on the context) trade-offs arise. A selective logging/replanting long rotation can preserve a tropical forest as a sustainable source of livelihood and of biomass and also as a consumer of carbon dioxide protecting against the greenhouse effect. "Untouched wilderness" is not needed for that purpose, but is necessary to preserve species and species interaction diversity. Muddling the two does create tensions - to propose 5 to 10% of forests be preserved as "wilderness", 50% converted to controlled, sustainably renewed harvesting patterns, 20% put into agro forestry and 20% to field cropping and non-agricultural uses may often be an acceptable basis for planning, whereas an implication that all should be kept untouched leads to an explosive reaction to a threat to the livelihood heritage sustainability of both farmers and forestry workers (as well as of national exports to reduce external dependence).

The question of balancing uses is a complex one which needs to be faced technically and pragmatically not emotionally and à l'outrance. This may be even more true in respect to fauna as illustrated by crocodiles.

Crocodiles are an endangered species, but to Africans living in areas with substantial crocodile populations their children appear to be the endangered species and crocodiles the aggressor. The bottom line is that crocodiles and human beings cannot coexist on the same land or, more important, in the same water. There is a perfectly practicable way

forward: a.) provide wildlife sanctuaries large enough for wild animals to live naturally, b.) together with managed environments with intensive commercial viewing potential (e.g. Namibian tourist game ranches) and c.) crocodile farms to meet the demand for skins which is inherently not different from that for other kinds of leather if it does not threaten species survival, d.) while protecting rural households from interference by crocodiles with their livelihood and human environment which in effect means making those areas crocodile free.

Extreme cases are the anopheles mosquito and the tse tse fly - the carriers of malaria and of both animal and human sleeping sickness respectively. Despite some rumours to the contrary, neither is - unfortunately - an endangered species. In Sub-Saharan Africa malaria kills about three million children a year and animal sleeping sickness endangers at least a million household livelihoods as well as keeping millions of hectares under quite unlovely scrub bush. Unless the human species is the only one of no concern (an odd viewpoint for people) or human environment is inherently less important than natural ecology, defence of the right to survive of the anopheles (or egyptensis) mosquito and the tse tse fly outside controlled laboratory environments in climates fatal to them if they escape is hard to justify. Certainly attempts (which have happened notably in respect to the tse tse fly as a 'protector of open space and game') to do so are met with a combination of incomprehension and fury by Africans which does damage to the prospects for dialogue on areas - e.g. crocodiles - in which mutually acceptable solutions are fairly clearly feasible.

The cost argument is quite simple. If species diversity is a common human heritage, the costs of preserving it are a common human obligation. It is usually argued that most key areas are in the South (presumably because most in the North have already been destroyed). But the South is also poorer so that both on cost per person and cost as a proportion of national income tests it would bear a higher share of the cost than the North if no resource transfers were made. Thus on even proportional, much less progressive, taxation principles it has a case for being paid a proportion of the costs of heritage preservation.

The case is strengthened by the fact that the main medium term beneficiaries of species and ecology diversity preservation will be Northern viewers, researchers and enterprises and that the basic threats to

some species are market threats driven by Northern demand even if the actual physical damage is done in the South by Southerners. This is a contentious area in two different ways.

The Northern position is strongly against the South hampering research including creating barriers to sending specimens abroad for research, reproduction and genetic engineering either by access limitations or by high fees. That stance is oddly at variance with the growing body of intellectual property law which creates monopoly rights in the products of such research including their sale back to the country from which the key species came. Free access for us, monopoly prices to you is not self-evidently a normatively sound principle and certainly not one the South can be expected to welcome. Whether substantial support for on site or in region research combined with obligatory royalty payments if species were commercialised or used as an input into genetic engineering would be a way forward is unclear but at least worth exploration.

The Northern stance in respect to exhibition of rare species (whether orchids or skins or shells) in destructive ways for Northern markets is rather different. The South is expected to halt the trade - often by no means easy or cost free - while the North is not seen to be at least equally obligated to take action against importers/purchasers. (This may be a misperception, but the laxity or at least porosity of Northern controls often justified by technical and cost considerations makes it relatively convincing.) No obligation is accepted to provide resources for enforcement let alone for targeted livelihood enhancement to dry up the pool of poor households providing the field level poachers, plant uprooters and reef blasters/shell collectors. Some grace and favour payments are made, but on a relatively small scale and with no acceptance of a mutual obligation principle.

Threats to amenity are not usually stated openly at global or national level but are cloaked in more appealing "heritage preservation" garb. They are nonetheless real and create Southern (and poor Northern) suspicions as to the true motivations and concerns of conservationists. They certainly played a major role in the origins of the conservationist movement, e.g. the Sierra Club. At that stage they were elitist - preserving pristine nature for the affluent who could afford to enjoy it.

In the South there is a suspicion that much conservationism is still about preserving playgrounds in the poor South for the rich North. This is not necessarily resented as such - most Southern countries and many Southern workers do perceive tourism (Northern playground provision) as a desirable 'on-shore export'. The resentment is not so much about tourism - even limited access millionaire tourism can be very lucrative - but to a sensed hypocrisy in arguments for nature which are actually for tourist amenity preservation.

Southern threat to amenity priorities do exist. Among them low cost access to natural parks and preservation of urban open spaces (parks and low density commercial/governmental areas with trees) rank high in several African countries. The main users of the second and potential beneficiaries of the first would be low to lower middle income Africans. These items, which have an ecological as well as a human environmental base, are not now on the global agenda. Worse, the main threats to centre city open spaces in, for example, two East African capitals have come from embassy as well as foreign press empire and hotel chain efforts to secure parts of them as development sites.

This quick overview suggests not so much that global and South national agendas are diametrically opposed as that inadequate attention is being paid to:

- a. separating sustainability (e.g. anti-global warming) and preservation (e.g. species diversity) goals because of their very different implications for acceptable uses;
- b. seeking to facilitate transfer of state of the art environmentally friendly technology to the South at costs which do not grossly impede production and livelihood development;
- c. recognition that human livelihood concerns (e.g. land to grow food) are valid and cannot be swept aside by ecological idealism (or reductionism);
- d. acceptance that national environmental priorities and action toward them are just as important - and of greater medium term impact on most people - as global agendas and that failure to address the South's

agendas seriously is a barrier to mobilising South support for global issues;

- e. realisation that contexts matter - the human environments of countries as well as their ecological patterns vary enormously;
- f. serious examination of acceptable cost and benefit sharing mechanisms;
- g. looking squarely at the fact that on the face of it the South is now being asked to act to save the world - including the North - from the consequences of past Northern eco-vandalism while basically Northern market forces are allowed (or even encouraged) to erode Southern environmental protection efforts.

IV.

Transforming Conservation into Sustainable Development

Conservation and preservation carry overtones of freezing (or reversing) uses. Sustainable development implies the acceptance (or requirement) of use changes so long as they do not lead to irreversible ecological or human environmental degradation. In some cases sustainability does require preservation - e.g. wilderness areas to protect bio-diversity. In others - e.g. harvesting fish or trees in a context allowing or providing for regeneration sustainability is compatible with enhanced use. Therefore, sustainable development would appear both the more general goal and the one to which the broadest coalitions of supporters can be rallied. If this is to be achieved, several issues have to be tackled on a case by case, contextual basis. Each is contentious but usually in terms of trade-offs and compromises which allow for reasoned dialogue, agreed compromise and sustainable progress which posing narrow either or positions and engaging in a diatribe of the deaf do not.

The first main question is how much of what kind of change is acceptable where and under which conditions. In respect of some fragile environments virtually none. In other cases - e.g. - use of fluorocarbons - change is needed precisely because present use levels are incompatible with environmental sustainability. But in other cases more intensive and different use is sustainable and seeking to block it environmentally (and

probably more narrowly ecologically) damaging. The case of cut over former forest land in the Philippines has already been cited. Another is Ghanaian tropical forests.

These fall into two groups - national protected forests and "stool" (local governmental) forests. The latter cannot be protected because past political history's record of reactions to efforts to remove them from chiefly control means no conceivable Ghanaian government will attempt to prevent their use or to subject them to compulsory acquisition. In fact, most of them are largely cut over and/or are being nibbled by farmers opening up homesteads to produce needed rural livelihoods and food. Attention to agro forestry and field cropping techniques with relatively high carbon dioxide absorbing and soil preserving characteristics is possible, keeping the land under forests is not.

The national forests can be protected and their protection - consistent with sustained or enhanced timber yield - is a governmental priority. The broad parameters are 25 year usehold leases with 5 selective cuts at five year intervals and requirements as to felling, transporting and replanting. From a commercial and carbon dioxide absorption perspective this could upgrade the forests. Combined with incentives to export wood products (lumber and veneer through furniture parts) it could make conservation and export expansion march hand in hand.

The key barrier to achieving that end is finance: for research, for enough well trained forestry personnel, for high enough pay to foresters to give some protection against bribery, for vehicles and fuel to provide foresters with mobility to inspect and enforce contractual regulations. Until Ghana's economy is stronger, it needs continued assistance (building on past- WFP and World Bank support) to articulate, implement, enforce what basically is a sustainable development strategy consistent with the global warming agenda point. Shotgun criticism based on near total lack of knowledge either of the "stool"/state land division or of the existing forest protection/development strategy is in no way helpful to Ghana or to the global agenda.

Species protection/bio-diversity is a goal which cannot be met within the present strategy. But in fact Ghana has quite limited forest areas of serious interest from this perspective. If two or three areas of - say - 10,000 ha each were identified, it is by no means clear Ghana would object

to their being closed to all uses other than research and low density, low impact visits. In the context of significant support for sustainable harvest enhancement in other forested areas, such agreement would in fact be highly negotiable.

The Ghana case raises the basic question: Who pays? When? How? In principle - and in the long term - Ghanaian forest users can be expected to meet the costs of contractual obligations (including replanting and the Ghana government (out of tax revenue from incomes and profits generated from forest use in general and contract fees in particular) to meet the forestry service research, personnel, monitoring and enforcement bills.

In the short term, there may be a need to phase in higher contractual obligations by giving interim royalty/concession fee rebates. There certainly is a need to augment Ghana government resources. So long as the basic human and social investment/basic service budgets for water, health, education are palpably inadequate (by the World Bank's guide-lines as well as in terms of Ghanaian aspirations) radical increases to the forestry budget will be normatively problematic and politically untenable (especially with governance accountable to an electorate clamouring for the services) unless they carry with them substantial external "matching funds".

Ghana forestry is not atypical of many environmental protection cases. However, other categories arise. The first is that in which the need for protection enforcement - e.g. against poachers - is largely generated by Northern demand. (Largely not wholly - ivory and, especially, rhinoceros horn demand has a substantial Southern component, but not in the countries where there are elephants or rhinoceri to protect.) Here either the North should crack down on the demand end and/or finance much of the supply choke off. The issues are - on a lower key - remarkably similar to those surrounding the drug trade (cocaine, heroin, opium that is - not pharmaceuticals). The second is that in which Southern protection and access to Northern users can be expected to generate Northern production and profits - e.g. Southern species fed into Northern plant breeding and genetic engineering. In this case a claim for more than full cost is reasonable on pure market as well as normative principles.

The final distinguishable category is technology transfer to make non-ecologically/environmentally damaging urban and industrial development in

the South both practicable and cost efficient. Here the bottom line is not so much normative as practicable - if Southern industrialising countries are to halt/reverse use of fluorocarbons and release of combustion pollutants then they will in fact need technological access at low cost to ways and means of doing so without seriously impeding production growth or rendering it significantly higher cost.

The Southern case for substantial payments has not been helped by attempts to use the environment as a beast of burden on which to load all transfer payment needs, hopes and desires - as exemplified in the South Commission's environmental paper. A systematic examination of types of transfers and of individual cases would seem likely to be more fruitful if the richer third of the world is willing to pay a share of global/national environmental priority agenda cost equivalent to its share of global income (and arguably global benefits from implementation). If it is not willing then the global agenda will simply not be achieved whatever the rhetoric on any side.

Idealistic (even if rational) global tax or transferable pollution right certificate schemes are not - at least in the short run - helpful to securing resource transfers. Even were such supra-national taxes and licenses generally agreed in principle and the "free rider" problem evidently soluble (neither of which is the case) dialogue on details and getting a system up and running would take the best part of a decade. Ad hoc agreement on payment guide-lines at a global forum, a rough sharing agreement (e.g. under OECD auspices for the North) and case by case/country by country quasi contractual agreements would be much more likely to produce significant results between now and 2000.

Fairly clearly not all aspects of sustainable development can in practice be financed under a globally agreed environmental rubric. Poverty reduction and absolute poverty elimination are environmental goals. However, to seek to put them en bloc into the global environmental transfer payment system will not work, whether it should or not.

However, there is an area in which linkage - at least at the level of joint consideration - would be desirable and perhaps feasible. That is support for victims of natural calamities and man-made catastrophes. This is currently financed as humanitarian (human environment) survival relief. It is inadequately conceptualised and operated in respect to early warning based damage reduction (e.g. enabling drought victims to stay in home areas

by timely provision of food and water at rural distribution points) and to rehabilitation and future vulnerability reduction. While the basic case for a broader approach is a general poor persons' livelihood rehabilitation and human environmental one there are distinct minimisation of ecological damage (soil, pasture over-use; local deforestation and erosion; neo-desertification) aspects.

Who benefits? may appear to be a question with the evident answer - "almost everyone". But if when, how and when? are appended to it, the questions' answers become much less self-evident especially, but not only, in the South. For two reasons more attention should be given to articulating specific contextual answers.

The first, is that proportions of benefits are at least one component in agreement on cost sharing.

The second, is that saleability of environmental measures which entail costs requires demonstrating benefits which are immediate and concrete enough to convince those who can (and usually will) otherwise block the implementation of the environmental agenda. Unless poor people in the South as well as less poor in the North see the net effects of proposed changes as positive they are likely to block them and certain not to be enthusiastic, self-driven implementers. This is not a matter of less concern about ecology and sustainability but of concern about livelihood losses (at the extreme survival prospects) in the absence of clearly understood, tangible countervailing gains.

V.

Conflicting Contexts and Perspectives: Ivory

Ivory illustrates how different contexts and perspectives may lead to head-on clashes even among governments and bodies all committed to conservation. Ivory is now a CITES - Annex 1 listed product banned from international trade together with items carved from it. Both the ban and its continuation have divided African countries - by no means along pro- and anti- conservation lines. The division can be illustrated by Tanzania and Zimbabwe.

Tanzania favoured adoption and supports continuation of the ban. It has attempted - with game warden equipment and fire power inferior to that of poachers - to protect elephant and rhinoceros with limited success. Because much poaching and exporting is trans-border, it sees little success through unilateral action and doubts poaching can be stopped or radically decreased unless the post ban collapse of world market ivory prices can be sustained by a continued ban.

Tanzania does view elephants (and other game) as economic assets as well as part of its heritage:

- a. a key element in tourism
- b. part of the attraction of photographic and (limited) hunting safaris.

This perception is held by the residents of many areas near game reserves as well as by the government. It leads - under present circumstances - to:

- a. seeking external assistance from the larger, richer portion of the global community to help protect the Tanzanian wildlife portion of the global heritage;
- b. acceptance of the loss of revenue from "dead" (tusks collected from elephants who died of natural causes) ivory sales by the government because a legal ivory market provides a cover for illegal transactions.

Zimbabwe was a vehement opponent of a blanket ban and is committed to its amendment to permit trade in ivory from countries with adequate conservation policies and results. Except for the probable reaction of Northern states on issues not related to ivory, it would have begun exporting again unilaterally.

Zimbabwe sees itself as penalised, despite effective conservation, for the weaknesses (and blind eyes) of others and as asked to bear costs to benefit others with no compensation. This has not greatly weakened its commitment to conservation in Zimbabwe, but it has aroused grave suspicion that Northern ecological initiatives in general are either a new form of hegemonic interference or, at best, an initiative to achieve global ends with benefits skewed to the North and costs to the South.

Zimbabwe's game wardens have been effective in protecting the elephant - albeit not the less numerous and more valuable to poachers - rhinoceros. Given their pattern of shooting to kill suspected poachers on sight, one may well raise human rights questions about their tactics, but it is a fact that heavily armed poachers are dangerous to well armed wardens backed by helicopters like Zimbabwe's and often lethal to less well equipped weaker ones like Tanzania's. The service is now weakening, partly because of general fiscal stringency but partly - at least in Zimbabwe's opinion - because the CITES' ban has starved it of revenue.

The revenue from "dead" ivory and that from culling to avert excess herd build-up damaging to reserves (and of rogues damaging cropped areas) was a significant source of funding for the game protection service and natural parks more generally. It has vanished since the ban (which Zimbabwe has observed while stockpiling tusks).

The spread effect of this is to weaken various initiatives to educate and share economic benefits of wildlife with villages. While Zimbabwe acknowledges the key revenue flow is from tourism, it sees no reason that the ivory and products (leather, artifacts) derived from natural deaths and culling should not be built up as a supporting flow for conservation spending, village welfare and craft livelihoods.

Zimbabwe's proposals that ivory and ivory products from countries with sound protection and viable herds be licensed clearly does pose problems of policing. Most observers (including several African countries) see them as insuperable. While Zimbabwe disagrees, it probably would be less vehement had it been offered ecological agency or bilateral aid grants either equivalent to or a substantial proportion of the income lost as a result of the CITES ban.

The initial core opposition to the ban was led by South Africa, Zimbabwe and Botswana - all with viable, protected herds, probably requiring annual culling. The support of Namibia and Mozambique (where war and the cover it provided for poaching has created survival crises for elephants) related more to a feeling of obligation to Zimbabwe and Botswana than to their domestic positions and neither has been prominent in calling for renewed exports. Malawi's position is somewhat different (and more opaque) as it has ineffective, non-prioritised protection and dwindling herds and no particular sense of solidarity with Zimbabwe.

VI.

Conflicting Contexts and Perspectives: Indigenous Minorities

No issue is more controversial than that of the land rights of indigenous minority peoples. On two points there is little doubt. First, most indigenous minorities have (in most cases) suffered massive loss of land and therefore of livelihood and ability to sustain their social and cultural systems both under colonial rule and subsequently under national majority (or majority member non-democratic) rule. Second, the culture and social relations of most indigenous minorities are tied to certain specific sites and land areas, loss of which has had devastating social and cultural as well as economic impact on their members.

Beyond that there is limited agreement. Because land has cultural and sacral meaning, because most indigenous minority systems are land extensive (at the extreme hunting and gathering) and because the numbers of group member or trusted external specialists understanding and able to negotiate effectively with the majority system are usually very small (to nil), indigenous minority groups tend to make what appear to majorities to be unreasonable, maximalist demands and to be slow to grasp opportunities for negotiation.

There is a similar discontinuity between a relatively to totally romantic vision (owing more to La Nouvelle Heloise than to reality) and an almost equally overblown Hobbesian one of short and unpleasant lives. (Neither is shared by most members of most indigenous minorities.) The ecological and livelihood balance of most indigenous minority cultures cannot cope with primary health care (which most want) without additional land or altered (often radically altered) livelihood technology. With few exceptions formal education disintegrates such societies by taking their most energetic youths from them but the alternative of near isolation in what look suspiciously like "human game reserves" is little more appealing. Per contra indigenous minorities are not "naturally" anomic, shiftless, indigent, drunkards - those characteristics result from the theft of land, livelihood and dignity. Culturally these peoples are neither simple nor unsophisticated, but their technological limitations and the rigidity of their cultures renders many so fragile - as societies and as individuals -

as to make almost any form of interaction with other cultures dangerous and problematic.

The term "indigenous minority" is a somewhat artificial construct whose objective correlative varies contextually. It clearly is not perceived as including all the people in - e.g. - Kenya or Nigeria or Tanzania where none has a majority nor to relate to strong, but minority, peoples such as the Ndebele in Zimbabwe. In much of the Sahel it includes nomadic pastoralists, but in Tanzania and Kenya the Masai people are perceived either as not a national minority or as a borderline case because they have been able to hold much of "their" land (indeed to acquire new in Southern Tanzania), to adapt their livelihoods and to acquire a respectable degree of political leverage. Subjectively the definition does include substantial powerlessness and extreme difficulty in technical and cultural adaptation without livelihood and economic collapse.

The complexity of the human rights and environment issues involved can be illustrated by relations between the Botswana Government and the Basarwa people (previously derogatorily called Bushmen). The historic Tswana/Basarwa relations were of dominance and dependence but not of slavery or denial of common humanity - many Tswana (including elite members) have acknowledged Basarwa ancestors. The practice of holding Basarwa households as near slaves was not a Tswana custom but is more associated with the Immigrant Herero (the Herero emigrants from Namibia after the German war of annihilation) and some of the immigrant European Limpopo Valley farmers.

The independent Botswana government is well intentioned, relatively paternalistic and baffled in its relations with the Basarwa as communities or as peoples (as opposed to defending their individual rights). Most are either no longer primarily hunter-gatherers or find that livelihood is increasingly precarious in the face of increasing population and needs on the one hand and constant or shrinking land availability on the other. Indeed a majority are basically underpaid workers with Tswana, Karanga or Herero cattle herds or on European (or Botswanan or European ancestry) farms and their attempts to hold their cultural and social relations together are, at best, eroding. Another minority are relatively unsuccessful pastoralists occasionally with some crop growing.

Initially the government supposed making provision of health, education, water and calamity (drought) relief universal would solve poor Basarwa's basic problems as much as those of other poor rural residents. It has come to realise this is not the case. However, how to address livelihood and community issues baffles it. To recreate a hunting-gathering base would require massive transfer of pastoral land to hunting country - possible good for game but, by concentrating cattle on a smaller area, hardly for overall ecological sustainability. Politically that is unfeasible and normatively it does pose a conundrum: do the Basarwa have a right to insist on a way of life requiring at least ten times the hectareage per household of the pastoral way of life of the plurality of rural Batswana households?

If Basarwa communities are to be given a viable future - and health care to go beyond "grab and jab" to real interaction - then there has to be an economic base other than hunting-gathering and/or near total dependence on quasi migrant, low wage labour for most Basarwa households. The evident candidate is pastoralism - partly for ecological reasons, partly because it appears least far from Basarwa tradition. However, remaining hunting-gathering land is marginal to sub-marginal for cattle (it may be less unsuited to karakul sheep or game ranching) and the Basarwa link to herding is as dependent, grossly exploited labour. To date efforts at building up Basarwa villages with pastoral livelihood bases have mixed and problematic results - positive enough not to abandon the effort, but limited enough to raise doubts how many of necessary and possible answers have been found.

The problem is exacerbated by the real difficulty in communication between two very different perceptions of life by Basarwa communities and by the relatively rational, bureaucratic (in the Weberian not the perjorative sense), technologically optimistic view of Botswana's energetic and relatively efficient civil service. It is easy to fault the Government for paternalism. However, the questions of how to relate to and how to enable Basarwa to make possible choices (a return to 1750 hunting-gathering plus modern primary health services and rural water points is not one of them) are not subject to obvious or easy answers. But both right to development and right to decent human environment concerns require continued - and more successful - efforts.

VII.

Ecology, Economics and Structural Adjustment

Two developments in respect to ecology campaign foci over the past decade and especially the past five years are greater stress on economic considerations and especially market based "polluter pays" type articulations of goals and seeking to tie ecological soundness promotion to World Bank lending, in particular structural adjustment. Both of these approaches have some (quite possibly overestimated) potential, but both also have problematic elements.

As already stressed, environmental concerns are not wholly ecological and have community, national and regional agendas whose long term basic complementarity should not be allowed to obscure significant short run tensions and trade-offs. In that setting iterative formulations at all three levels with a process of dialogue and trade-off to achieve consistency is probably the least unsatisfactory basic operating technique. Economics can - to a degree - illuminate present and future cost/benefits of trade-offs but it is not particularly helpful at creating or sustaining (as opposed to providing part of the content for) the bargaining process.

Further, macro economics and micro natural science are uneasy partners. The first deals in broad principles and monetary aggregates from which particular micro impacts are deduced. The latter starts with contextual physical data and processes and builds up propositions about more general outcomes. At present neither has a particularly impressive track record on predicting (or dating) environmental outcomes especially in cases lacking a substantial body of historical data and context specific analysis.

Careful application of macro economic principles to specific environmental questions usually gives the answer "it all depends". This is not a useless answer, if it also specifies what it depends on because that is useful for picking out ways of studying the specific case. However, it does mean hopes for quick read out answers without detailed case by case study are overblown.

For example, higher interest rates shift the balance of economic advantage to low capital cost/low construction time approaches. In the case of power it reduces the attractiveness both of nuclear and of hydroelectric power -

presumptively with opposite ecological implications. (Among non-conventional sources it reduces the attractiveness of tidal, wave and - probably - solar power but may favour windmills.) The probable chief gainer is natural gas fired generation (especially if the gas is an already available and currently unused by-product of oil extraction). The short term ecological implications of more gas (and less coal or oil) fired thermal power are ecologically sound but, a.) gas is a finite, non-renewable resource and b.) in the longer term it may be ecologically as well as economically more prudent to reserve it (apart from otherwise flared associated gas from petroleum fields) for chemical (e.g. fertiliser) production.

To take another example, lower subsidies on inputs will reduce their usage. In the case of chemical fertilisers, the environmental implications almost certainly diverge sharply between high fertiliser intensity farming in crop surplus areas (e.g. Western Europe, North America) and very low fertiliser intensity farming in food (and rural livelihood) scarce areas (e.g. African household sector agriculture). In the latter case, fertiliser related soil and water pollution is low and the practicability of sustainable intensive, permanent cultivation without higher than present chemical replacements is low. But at present and even more at 2010 household/land ratios that shift from long rotation/low input cultivation is a human environmental necessity. Less fertiliser is likely to mean more soil degradation.

Natural science approaches have rather different limitations. Much available data is so context specific that its applicability is not general. To put it differently, counter intuitive outcomes are not infrequent. For example, to concentrate livestock at any one time on a small proportion of grazing land would seem intuitively to be a recipe for pasture degradation, soil erosion and - perhaps - water table sinking. In fact under a controlled, small paddock, frequent rotation system in several parts of semi-arid Southern Africa precisely the reverse results: carrying capacity is increased, secular pasture improvement set in motion, erosion controlled and - less uniformly - water table recovery enhanced. There are perfectly standard scientific reasons for this counter-intuitive result, but they require study of the specific ecology and ecological dynamics of the case, not generalisation from different micro ecological settings.

Designing market mechanisms to articulate/implement policy goals is often likely both to be more effective and lower cost than using administrative devices. Assuming agreed levels of sulphur emission from power stations can be agreed, issuing transferable emission allowance certificates together with imposing draconic penalties for over-emission may be the optimal available implementation route in Northern industrial economies. (It is one for which a standard neo-classical micro, and perhaps macro, economic case can be constructed.) The danger lies in assuming all issues can be dealt with in this way. Some - e.g. catastrophic risk (Bhopal and Chernobyl) - cannot. For others - e.g. individual vehicle emission levels - pass or fail road-worthiness tests are likely to be more functional than graduated licence fees. Markets are means not magicians.

The World Bank's role in environmental protection has begun to develop a life of its own. Having built up an environmental cadre and put environmental audits into many project evaluations it has provided itself with a built-in environmental lobby. However, initially the Bank began to pay attention to ecological and human environmental (largely indigenous minority rights) issues because Northern and - less frequently but vide the Philippines and India - Southern NGOs saw it as an accessible target whose funding of major projects gave it substantial environmental leverage which it was either neglecting or using in damaging ways.

That was, and is, a remarkable triumph for the environmentalists. Except for a handful of country cases in which major funders used all of their leverage, the Bank has otherwise been very much a self-accountable band of Platonic Guardians (not always in agreement with each other) very successfully resistant to outside pressure. But it is a problematic achievement if nationally grounded environmental priorities accountable to national majorities with human rights safeguards for individuals and indigenous minorities are the goals. External NGOs are even less accountable to Southern people than Southern governments. The World Bank while recognising that only "nationally owned" programmes (in any field) are sustainable finds it remarkably hard to cooperate in their construction rather than seeking to ventriloquise them. Massive, intrusive conditionality imposed by rich funding bodies (as most NGOs are quick to recognise in other contexts) is not a way to mobilise broad, internalised Southern support, sustained strategic articulation or whole-hearted implementation. A more balanced approach of advice, technological transfer

(to increase design and implementation capacity), refusal to fund the environmentally unsound and - perhaps - a special IDA window (additional to normal country 'quotas' or 'ceilings' which do in fact exist even if with considerable upward and near total downward flexibility) for financing projects directly related to environmental sustainability, vulnerability reduction and rehabilitation might generate more securely based progress, less suspicion and lower risks of serious conflict.

"Structural Adjustment and Environment" is a linking arising (particularly in Sub-Saharan Africa) from the ubiquitous nature of Structural Adjustment Programmes and their visible (or to hard line critics naked) impact on policy, practice and external resource flows. For the World Bank it is an entry point to exert leverage (and to placate its ecological critics?). For environmentalists it is a bandwagon to climb on to gain attention. For African negotiators it is an irritating complication that cannot be ignored but must be taken seriously.

Analytically the linkage is either fairly marginal or unsound. As noted, macro economic analysis (the core of structural adjustment design) can provide a partial agenda of detailed questions but not read out answers. It assuredly has little power to identify what new programmes should be undertaken based on national ecological and environmental priorities. It can - once such an agenda is constructed from the micro up - help evaluate economic ways, means, costs and benefits but that is very different from initiating design.

Second, conditionality in Structural Adjustment implies cutoffs of funding well beyond rejecting a particular unsound project. Do environmentalists seriously wish to halt Ghana's economic recovery through massive withdrawal of external transfers to force changes in a forestry policy they do not appear to understand and which is arguably sound in principle but grossly underfunded? If so, the term "ecolonialism" is rather more than a rhetorical epithet - colonialism almost always constructs glosses to explain why it 'really' is in the best interests of the colonised.

Actual ecological/environmental content in particular national Structural Adjustment Programmes (as opposed to large, freestanding projects) is both mixed and - at least in the vast majority of cases - peripheral. Arguably anti-poverty/Social Dimensions of Adjustment in some SAPs is an exception.

However, it is treated purely on a human environmental level and not related to ecology in any systematic way.

Initially SAPs had no overt ecological content. Even now the number of environmental conditions in Policy Framework Papers (which can run to 50 pages and 150 conditions) is minute, mostly relating to sustainable forest use. There are environmental glosses on (deductive analyses of) some country programmes, but these appear to be very much parallel papers after, and with minor influence on, strategic formulation. The number of serious ground up SAP environmental assessment (ex ante) or audit (ex post) studies in SSA still seems to be stuck at zero. In fairness, countries are not exactly pressing for more PFP pages or conditions - except in some cases (e.g. Mozambique) on the poverty front. But some (e.g. Tanzania) have done some environmental assessments and strategy exploration of their own and would - if additional funding for articulation and implementation had been clearly on offer - have been willing to discuss specific SAP-Environmental links.

This is not to say SAPs and PFPs do not have environmental/ecological consequences but that they are not consequences resulting from any overall strategies or coherent assessments. Again Ghana forestry illustrates.

The Bank broadly backs Ghana's long rotation/sustainable replanting approach to closed forest management and its use of incentives to enhanced pre-export processing. It has provided some credits which have been crucial to both and is presumably willing to evaluate further proposals.

But some forestry sector deductions from its macroeconomic market freeing policy are in fact at variance with implementation of the two pronged strategy. The Bank has proposed shorter duration logging concessions with no right either of first refusal or meeting highest offer at subsequent tender for new/extended concessions. Shorter concessions create incentives for less selective logging and for doing as little forest protection/replanting as possible. So does not giving a firm which has protected and replanted either an option to renew or to meet the highest bid if new lenders are called at the end of each 25 years period.

The Bank also opposes restraints on raw log exports which Ghana has used to limit wasteful cutting of certain species and to encourage sawmilling and veneer production. In practice, the Bank has accepted Ghanaian arguments

but more by turning a blind eye than reaching a formal agreement on guidelines.

A related issue concerns monitoring export prices - which the Bank may not oppose in principle but in practice would object to almost any conceivable institutional follow-up. The problem is contextual. The plurality of logging and milling is in the hands of a minority, citizen (multi passport) community. Their traditional family economic life style involves expatriating profits (investible surplus) and often themselves to the overseas invested surplus on retirement. This poses severe macroeconomic flow problems for Ghana. Given the existence of capital account exchange control, it results in frequent massive transfer pricing (often to family member firms abroad) with negative fiscal and forex problems. It is also an objective fact that these firms are - in a majority of cases - slaughter cutters not sustainable foresters and with the impending exhaustion of stool lands are making a push to get into "closed" forests by short term/winner take all concession tendering (probably with agreed rings rigging bids where no large foreign, joint venture or indigenous firms seem likely challengers). This is, in the context of Ghana an ecological set of issues not just a set of ethnic tensions. The Bank could enter into dialogue on the expatriation of investible surplus by citizens - transfer pricing (at least in terms of fiscal impact) - enterprise bad practice fronts without becoming involved on the ethnic front but to date appears to have avoided doing so.

The conclusions available from a review of economies - ecology and structural adjustment are not new nor unique to environmental issues:

- economic analysis is a useful (but limited) servant but a tyrannical master
- marrying natural and social scientific analyses and approaches is potentially fruitful but usually time consuming and rarely easy
- market mechanisms (even in support of non-market goals) may be useful, low cost instruments so long as they are perceived as that and no more
- while the World Bank should be concerned with ecological/environmental issues (especially as they relate to sustained development) it is not a plausible proxy World Environmental Adjudication Organisation

- that structural adjustment and environmental protection are both important (albeit in rather different ways since the former is primarily about medium term means and the latter relates to long term ends) does imply mutual recognition and attempts to achieve consistency but not that the two should be amalgamated
- using overall financial leverage to force policy changes not directly related to nor necessary for the effective use of the proposed transfers is normatively highly problematic and practically Southern animosity generating in potentially counter-productive ways.

VIII.

Explorations Toward Sustainable Progress

That ecology is on major agendas is no longer in doubt. That the current combination of apocalyptic presentations, separation of human and 'natural' environmental issues, diatribes of the deaf and attempted coercive action by many parties is a sustainable way to achieve environmental protection and rehabilitation is very much in question.

Certain guide-lines toward a more fruitful set of dialogue and negotiations which would both broaden the base of support for ecological initiatives and create a context more conducive to positive action include:

1. Treating ecology as an aspect of environment embracing the human (including livelihood and quality of life) aspects as well as the natural.
2. Articulating a Right To Survival relating to global emission levels, local-national-regional environment disintegration menaces, species diversity and shared responsibility over time for rendering the right effective.
3. Relating the Right To Survival to Right To Development at local, national, regional and global levels via sustainability.
4. Accepting that livelihoods are key to survival and that, therefore, ecological protection approaches hostile to present and short run

household or national livelihood concerns have little chance of sustained implementation.

5. Realisation that both priorities (which environmental threats are most urgent and damaging) and perspectives (by location and occupation) on environmental issues vary legitimately with none having a monopoly of normative right or objective wisdom.
6. Acceptance of the fact of uncertainty as well as of that of danger in respect to most ecological threats and of the validity of social as well as natural science concerns, instruments and processes.
7. Recognition of the realities that the bulk of environmental damage has been done by rich countries whose per capita ecologically damaging actions (at home and abroad) remain dominant, but also that rapid industrialisation without environmental protection in poor countries will have very serious negative consequences globally as well as nationally.
8. Resulting - given the implausibility (normatively or practicably) of halting industrialisation in the South - in a global need to make effective, affordable access to eco-friendly technology available in both South and North.
9. Moving to the construction from the bottom up of local and national environmental agendas to complement top down global and regional ones with both processes taking livelihood considerations into account.
10. Creation of sets of negotiating fora based on:
 - a. acceptance of common environmental concerns;
 - b. and the need for coordinated actions;
 - c. including cost sharing transfer payments from richer (and potentially disproportionately benefiting) to poorer countries and communities.
11. Initially proceeding in a set of fora with a few global - e.g. in respect to ozone layer rehabilitation and global warming control - and others regional or bilateral to achieve early forward momentum.

12. But also seeking to institutionalise the environmental protection process including evaluation of threats and instruments to meet them and monitoring in order to set guide-lines and contexts for negotiations.

13. And based on clear recognition that resource constraints are ecologically destructive (e.g. to forest and land in the level of poor households; to forest preservation and sustainable management at that of poor countries) but that, when resources are deployed to make sustainability consistent with improved livelihood in the short as well as the longer run, a much broader participation can and does ensue yielding results which cannot be achieved simply by proscription and coercion.