

## **The Environment and Christian Ethics** by Michael Northcott, 1996

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### **1. Frogs, floods and famines: the environmental crisis**

#### **Global warming**

Climate change is already serious at a local level, for example when deforested areas lose their microclimate regulating sunlight, precipitation, and temperature, or when tropical cities become unbearably hot without high-energy air conditioning.

The temperature of the earth has risen by between 0.3 and 0.6°C degrees in the last 100 years. Two thirds of this rise is caused by CO<sub>2</sub> from using fossil fuel. More CO<sub>2</sub> comes from burning forests. Methane from agriculture, Nitrous oxide from power stations, factories and cars, and CFCs are produced in smaller quantities but have a much more dramatic global warming effect.

A 'business as usual' scenario would result in a rise of 3°C by 2100, causing a sea level rise of 65cm. Places like Mauritius, Maldives, Bangladesh, London, Venice, Bangkok, Hong Kong, and Singapore would be badly affected. If wealth continues to increase, the problem will be much worse, for example when the Chinese economy reaches the point where ordinary people can afford cars.

#### **Pollution**

The known life on the universe lives on a thin skin no more than 12km thick.

Ozone depletion causes skin cancers and eye cataracts, but also threatens plankton (at the bottom of the food chain) and blinds animals. Air pollution in cities causes rises in asthma and immune deficiency. Sulphur dioxide and nitrous oxides return as acid rain: by 1988, 52% of German forests were showing signs of damage, and in susceptible species like silver fir 80% had died.

Water pollution can be caused by oil, human waste, chemical waste, silt from logging. Polar regions are polluted with dust from degraded agricultural areas. Shellfish in the North Sea contain significant amounts of waste metals, and fish show genetic damage, disease, and reproductive disorder. The river Avon flows through beautiful English countryside but its fish are not safe for consumption because of the 19 sewage works along its banks, and pesticides and fertilizers from intensive agriculture.

Land is polluted by intensive agriculture and by waste. DDT caused the demise of peregrine falcon in both Britain and the USA, but its replacements such as dieldrin are even more toxic. Despite this, fungicide can be sprayed on wheat in Britain only 10 days

before it is harvested. The UK's policy of 'dilute and disperse' means 50-100,000 hectares of land is contaminated. The US passed retrospective legislation forcing companies to clean up land they had contaminated, which caused the collapse of various insurance companies as the real cost of their activities was discovered.

### **Soil erosion and deforestation**

Erosion of topsoil is life threatening. 21 million hectares are rendered uneconomic each year, as 24 billion tons of irreplaceable topsoil are washed into the oceans. Intensive wheat production removes one to two inches of topsoil for each harvest, which would take hundreds or thousands of years to replace.

Before colonialists arrived, Africa was lush and its people of strong physique. Intensive farming and cash crops has reduced sub-Saharan Africa to chronic famine, while surpluses flood the market, often returning to Africa as food aid, depressing prices and reducing incomes of poor farmers.

Deforestation and unsustainable agriculture probably caused the demise of ancient civilizations – Ur, Jericho, Mesoamerica, the Indus Valley, the Roman empire.

1% of virgin tropical forest is destroyed every month by logging or burning. Only forests in 'backward' Zaire and New Guinea remain relatively untouched. Hardwood is taken for cement moulds, chipboard, plywood, chopsticks and furniture. Even if only the largest 2% of trees are taken, 25% of the forest is destroyed in the process: it cannot be 'sustainably managed' in this way. 'Shifted' cultivators – peasants whose land has been expropriated for cash crops - destroy much more forest through slash-and-burn agriculture, not having the skills to live in the forest sustainably as indigenous forest people do.

Canada and Scandinavia will soon have destroyed all their original forests except for small reserves. Much of the US and Russia had forest which has been clear cut, and China is likely to run out of harvestable forest in the next decade. Deforestation is responsible for a third of global warming. But the commercial timber lobby is so strong that it was impossible to agree a forest convention at the Rio Summit in 1992.

### **Species extinction**

God asked Adam to name the animals, and today we are still doing it, as new species are continually discovered. A natural extinction rate is about one species per year, but an estimated 10,000 per year are lost through human activity. The more species there are in an ecosystem, the better use it can make of the sun's energy and nutrients; in a damaged river or forest the system is less able to renew and sustain itself in the face of a challenge such as drought, which may then cause it to collapse.

*'Biodiversity is not just an ecological principle, an economic variable or a scientific discovery - it is the astonishing exuberance of the creation itself.'*

### **Population and natural resources**

In 1650 the population of the world was around 500 million, and doubling every 240 years. In 1970, it would double every 30 years. The world's population is now around 5.6

billion people, projected to rise to 11 billion by 2100. [*According to a recent article in New Scientist, these predictions are now out of date. Since 1994, falling fertility in Europe, the spread of birth control across the world, and AIDS in Africa, have caused demographers to suggest instead that the world population will peak in the next fifty years, before beginning a potentially drastic decline.*]

Globally, the UN population fund estimates that world food production could sustainably feed around 5.5 billion people if they were all vegetarians, or 2.8 billion if 25% of their calories come from meat (as in the west). Meanwhile, consumption is always rising: it is estimated that we have burnt more stored energy and consumed more goods since WW2 than all our human predecessors.

## **Environment and development**

It is the rich who cause ozone depletion, global warming, toxic waste, and deforestation, but it is the poor who suffer from the resulting soil erosion, flooding and drought. Peasant farmers can solve many of the problems, through modern and traditional methods of soil conservation, intercropping and animal husbandry, but too few have adequate education or large enough areas of land to practice them.

Urbanisation is a great problem in the developing world: Mexico City, Manila, Sao Paulo, Calcutta all have over 10 million inhabitants, and are environmental disasters. Around 60% of third world city dwellers live in squatter areas or shanty towns. The needs of the cities denude the rural hinterland. Industry is less well regulated, so the first world has exported its most polluting and exploitative industries there.

Inequitable systems of land tenure mean that the poor are forced to degrade their land to survive. The problem has been made worse in the last 15 years by the 1.3 billion dollar debt, which has forced third world economies to increase cash crop and primary production, heightening pressure on land. The trickle of wealth which returns as aid is often used for prestige development projects such as the Navada hydroelectric dam in India, which can be environmentally disastrous, and displace thousands more people.

The dominant model for development pushed by the IMF and World Bank is industrialisation and agricultural intensification, driven by multinational companies, to bring them into global commodity market. This is said to be sustainable because poverty causes environmental degradation. Their opponents argue that development can only be sustainable when driven from below, by people who have regained control over their lives, land, politics, and economies.

## **Hope for the earth**

Local protest is very important in having rivers (the Mississippi, Moyer and Danube) restored to their natural courses so they remove pollutants and absorb rainfall naturally; in getting compensation for forest tribes whose home has been destroyed; in preventing the construction of new roads and quarries; and in inhabitants regaining control of their land, for example in the Scottish Highlands. Religious leaders are beginning to realise that wasteful consumerism and disregard for the earth is a sign of deep spiritual malaise, and the solution lies not in technology but in a renewed way of life.

## **2. The origins of the environmental crisis**

Was it population explosion, the economics of growth, pursuit of progress, the modern scientific method, Christian doctrine about subduing the earth, Cartesian dualism of reason *v* nature, or the dominance of men which caused the environmental crisis?

### **The agricultural revolution**

Hunter-gathering is seen as unproductive, since it takes less food from the environment than it could provide. However, it has a low environmental impact, hunter-gatherers have large amounts of leisure time (far more than a modern European) and malnutrition and disease is rare. But it involves a very large amount of land to support a small number of people.

Agriculture was necessary to the emergence of cities, but the cities' excessive, often military, demands turned the surrounding land to desert and brought them to ruin: Mesopotamia, Mesoamerica, the Indus Valley, the Roman empire, sixteenth-century Zimbabwe, the American dust bowl. European civilization has kept growing by globalizing. In the process of appropriating the world's riches, it has exported its own weeds, diseases, animals, and people.

Patrick, Ninian and Columba have a lot to answer for: their monastic form of Christianity brought an agricultural ideal centred on domesticated sheep rather than people, and aiming to tame nature. However, monastic agriculture was also about a sustainable relationship with nature, communal self government, and a good stewarding of God's gifts. This was transformed after the Reformation.

### **The commodification of nature**

With the rise of the money economy, land and labour were commodified and traditional values of kinship and place were broken, and thus the link between humans and nature. The church was not happy about these shifting values, but as a large landowner and economic player it was deeply implicated in the changes, which compromised its ability to stand against them. It reconciled its theology and economics, and although radicals like the Franciscans and Dominicans protested, they were disposed of in the Reformation.

Ideas of natural justice and economic equity were replaced by positive law to protect individual rights to property. But the individual property owners of today are only the inheritors of the people who enclosed the commons or cleared the Highlands. What is now protected by law was originally taken by force.

Protestantism secularized nature by denying the sacred significance of places of pilgrimage, relics, bread, and wine, and by locating divine activity entirely within the self. Nature was said to be irredemably fallen and only useful as a resource for the elect.

In the new system, Adam Smith said that we 'have turned the rude forests of nature into agreeable and fertile plains, and made the trackless and barren ocean a new fund of subsistence. The rich are led by an invisible hand to make nearly the same distribution of the necessities of life, which would have been made had the earth been divided into equal

portions among all its inhabitants'. Riches, greed, and pride in possessions became virtuous, and this ethical shift is one of the strongest roots of the environmental crisis.

### **Science, technology, and the mythology of progress**

Kant said that morality and purpose exist only in human reason, while nature is 'unfinished' and purposeless. Whatever their own religious beliefs, Kant's amoral universe and Newton's mechanical one created a prevailing atheist cosmology. It is this reasoning which allows us to abuse animals because they have no reason or moral status, and to conceive of blowing up the moon to improve the earth's climate.

We live in a risk society, in which we embrace new technologies which increasingly threaten ecological breakdown and meaningful human life: nuclear power, computerized foreign exchange, genetic engineering. [*New Scientist again: the polio virus has just been synthesised using easily available materials and genetic information on the internet.*] Once these have been embarked upon it is very hard for any nation or even group of nations to go back – the ecological crisis is also a crisis of political democracy. We need to find new ways to make collective decisions and measure costs and benefits.

### **The moral climate of modernity**

The prevailing utilitarian ethic of expressing good as the greatest happiness for the greatest number, measured in cost-benefit terms has serious deficiencies. In one study of happiness, poor Cubans were reported to be as happy as rich Americans, and rates of life satisfaction were very similar in India and Japan. A survey in Britain suggested that there was a diminishing sense of life quality as affluence increased in the 1970s and 1980s.

### **Modernity and ecology in conflict**

In pre-modern Europe, work and land were seen as part of God's creation ordinance, and so were subject to objective and religious ethical standards. Money was kept subordinate to real human relationships and needs, for example in restrictions on usury.

Money causes a denial of relationality. People who own two or three houses do not feel that homeless people have any sort of claim on them personally. Even modern conservation can destroy relations between humans and nature: whereas in the past people would have lived off and preserved forests or fens, now they are excluded from nature reserves. We have lost the ability to inhabit ecosystems without destroying them.

Marx thought technology would eventually result in material abundance for all, but Malthus thought there were finite resources which had to be divided up. In the end, the more 'simplistic' Malthus is proving more right.

### 3. Environmental ethics

#### Consequentialism

Consequentialism means judging the rightness or wrongness of an action by its consequences, rather than intrinsic goodness or badness, with the criteria of pleasure or pain. It is humanocentric, materialist, utilitarian, and very popular with governments. Consequentialist decision making does not judge well between different groups – rich and poor, human and nature, different nationalities. It does not have anything to say about community between different groups, ecosystems, biospheres, the global village, only competing individuals.

#### Deontology

*[deontology, I discover, is the branch of ethical theory concerned with rights and duties, and is not apparently linked to ontology, which is the branch of metaphysics to do with the nature of being.]*

Rights ethics is an example of the Kantian categorical imperative, which says that actions are good only if they are always good: for example, cutting down trees for firewood might be good for me, but if everyone does the same, we are all poorer. It is often confused with consequentialism, but is not the same: for example, the utilitarian would argue that the benefits in terms of heat and light for a whole city brought by building a new hydroelectric dam are far greater than the loss for a hundred or so tribal people whose homeland is submerged; but the rights ethicist would reply that it is never permissible to deprive someone of their home and livelihood.

Rights ethics can be extended to animals, on the grounds that they are sentient, which would mean that they cannot be hunted or farmed any more than humans can. But again, this fails to speak of ecosystems or relationships. Is it morally wrong for a lion to kill a deer? And is it morally right to leave the Cairngorms and African nature reserves to ecological destruction caused by the explosions in red deer and elephant populations?

#### Ecoentric ethics

This puts the ecosystem at the moral centre, with the individual always subservient. For example, the 'Land ethic' argues that a helicopter should not be sent into a pristine wilderness to rescue a mountaineer, and famine victims should not be given aid as they must die so the land can recover. The 'Gaia hypothesis' sees the earth as an organism, overcoming the tendency to entropy and persuing life: if humans continue to unbalance these processes, Gaia will throw us off, readjust to the new conditions, and go on. 'Ecosophy' argues that self-fulfilment comes through persuing harmonious relationships with other humans and nature.

These approaches to ecology are not easily reconciled with Christian theology. With their emphasis on the oneness of nature and tendency towards panentheism, they make the mistake which the Christian doctrine of the Trinity avoids, of suppressing diversity into one. They do not leave any special place for humans in their philosophy, which also puts it at odds with Christian doctrine.

Perhaps surprisingly, panentheism does not tend to encourage caring for the world, because it reduces the concept of evil and ascribes disasters to fate or God's will. Most Japanese adhere to some form of Shintoism, which is pantheistic, but Japan is one of the most rapacious nations, with very little environmental protest.

## **Christian approaches**

**Trinity:** Jurgen Moltmann argued that God is distinguished from Creation as the Father Creator, but present in it as the Son and Spirit. The Spirit both works through different things to create new possibilities of being and is the holistic principle which harmonizes everything and creates community. The sabbath is the crown and final destiny of creation.

**Love:** As God loves the whole creation (consummated in Christ's incarnation), so we should love nature, while legitimately satisfying our needs from it. Modern love of animals is therefore not sentimentality, but a sign of holiness and grace: St Antony and St Francis loved animals out of their deep love for God.

**Sacrament:** The Earth is a sacrament of divine, a means of grace. God is revealed in bread and wine.

**Atonement:** Christ has paid for our sins against creation as well as others so we are liberated from guilt about it. Animals are included in the Hebrew covenant community, and sharers in redemption.

**The order of creation:** Hebrew sacrifice is about restoring created order through the life-blood. The prohibition on eating blood was the only Mosaic law the Jewish Christians told the Gentiles to keep (Acts 15.28). The sacrifice of God is the ultimate restoration of the created order: Christ redeems the whole of creation.

Hebrew law involves duties towards the land which is to be tended and loved. Humans, animals and the land need regular sabbaths. Middle Eastern land was fragile, and neglecting the sabbath resulted in desertification and famine, as the prophets pointed out. The Jubilee law limits the acquisition of land and wealth. Forgetting that the land is a gift from God and he waters it and makes it fruitful, and worshipping idols instead of keeping his laws about justice and land use, leads to ruin. Western economic relations depend on the concept of absolute land ownership, but this was not thought of in Hebrew or other primal peoples.

#### 4. Creation, redemption, and natural law ethics

Christ vindicates the natural order of Hebrew world: he is the *telos* of creation, redeeming it by restoring the fundamental harmony and goodness which was spoiled by the fall. This is why Paul gets so interested in the body: it is not dross, to be ascetically eschewed, but the temple of the Holy Spirit, to be treated with reverence. The Holy Spirit puts right the natural order beginning with the body, then the household (in contrast to Roman sexual and social mores), and then the whole of creation.

*'Though God is the transcendent and supreme originator of the cosmos, and lord of all life, in the death of Christ God takes into the divine being the suffering and frustration which are the lot of creaturely being after the fall of humanity.'*

Christian emphasis on persons is different from modern individualism because whereas the *individual* is a disconnected location of moral meaning, the *person* is important because they are loved by God (relation is the beginning) and they part of a community. This is particularly clearly enunciated in John's *Logos* doctrine (Hebrew *wisdom*).

##### **Trinitarian creator**

Irenaeus developed a theology of nature against early Christian Gnostics. Moral value is located in relationships: life in community is modelled on the Trinity. This was resurrection theology standing against Hellenic and Roman denigration of the body; but soon after this, mainstream Christianity became Hellenized and fundamentally shifted. This led to two movements, Christian asceticism, and Augustinian emphasis on the inner life of the soul. For Augustine, grace only works in the human will and reason to bring it to knowledge of God, so the rest of creation is beyond redemption: although he is arguing against the Gnostics, the only area of ground he wins from them for Christian redemption is the human soul. This still leaves nature good for nothing but remaking in reflection of human needs.

Jesus is a man in supreme harmony with the natural world: he encounters God in the mountains, begins his ministry with water and wilderness, can calm the storm, change water to wine, and heal disease, nature is his main teaching aid, and his death is marked with earthquake and darkness.

Paul affirms conscience: 'when Gentiles who do not possess the law carry out its precepts by the light of nature, then, although they have no law, they are their own law; they show that what the law requires is inscribed on their hearts'. This suggests that there is a natural relationality between the 'new creation' of Christ and the natural order. The Christian ethic is not just for Christians

##### **Natural law**

Aquinas is the fullest writer on Christian natural law theory. Like Paul and the prophets, but unlike Augustine, he argues that much truth about God and morality can be known from reason and observation of the natural order. Being itself is the essence of divinity ('I AM'), so everything which exists manifests God. But it is not pantheism: God is present in all things in that all things are ordered for his purposes. Nor does it see creation as atheistic, like nominalism (saying that physical things are arbitrary) or the modern scientific idea of chance in atomic or biological events.

The first principle of natural law, says Aquinas, is that everything seeks after the good. Things also tend towards a natural harmony of interdependence: this reflects the justice of God in the order of the cosmos. Created order is therefore a moral order. The transforming work of grace in humans is the restoration of this order: the principle is of justice.

However, because of his emphasis on reason, Aquinas does say that animals are basically for human use. He also tends to underestimate evil and the fall, which become just part of God's providence in ordering everything. Irenaeus and Isaiah point to a more complete redemption than that. Christ by dying showed that suffering is of fundamental concern to the creator.

Natural law is a good basis for an ecological ethic, and a venerable tradition. It is found in Islam, Judaism and Hinduism, vindicating Aquinas in his claim that it is in the natural order of things. Although Calvin used it in his discussion of human society and justice, it was lost from mainstream Protestantism. However, it appears in Shakespeare (Oberon and Titania's quarrel affects the climate, Hamlet declares that 'the King and the land are one', and in *Twelfth Night* a happy marriage sorts out the cosmos). Richard Hooker argued that natural things tend towards the good, although humans often frustrate this by thinking they know better. His theology is strongly incarnational, and stresses (against the Puritans) the value of the natural as well as the supernatural. His political vision is about self-in-relation and human relationship to the landscape, and this was partly realised in the Carolingian restoration of the parish system, although the rising tide of mercantilism quickly overtook it with enclosures which were no respectors of parishes. More recently Gerald Manley Hopkins and CS Lewis have been part of the natural law tradition.

### **Natural law in ecological perspective**

Natural law survives today standing against capitalism, fascism, communism, laissez faire, globalisation, in the principle of subsidiarity: that local associations of workers or peasants can unite to protect their interests. Unfortunately it has been hijacked by the Pope to oppose contraception.

Enlightenment thinkers such as Kant and Hume eschewed the moral significance of the natural order and located morality only in human intuition. But the historical record suggests that any claim that humans are morally superior to animals is very dubious: for a start, we have a monopoly on war and torture. They say that you cannot derive an 'ought' from an 'is', ie the natural order cannot teach us what is right. But Aristotelian/ Thomist teleology replies that we are obliged to be good because not to be so is to contradict our nature and the order of the universe. Paul says that even Gentiles know through conscience what is good, and we all fail to be good because of sin: 'what I do is the wrong which is against my will and if what I do is against my will, clearly it is no longer I who am the agent, but sin that has its dwelling in me.' The law of God and the law of nature are the same, so to conform to our natures is to be good, but sin which gets in the way.

According to Aquinas, when we are good, we will find happiness, because we will be living the life we are best fitted to live. Hume, however, says that when we pursue happiness, we are being good. But in practice this does not work: although people report finding happiness in sociability, marriage, children, they often look for it in material

possessions. What distinguishes us from animals is that we do not automatically live according to what natural law determines is good for us: we have to choose it through our reason.

Many higher mammals display the things identified as the source of happiness for humans, such as sociability, co-operation to nurture young, play, and altruism. A nasty experiment on rhesus monkeys demonstrated that one of them would forgo food for days when it saw that when it ate, the other one received an electric shock. Inter-species altruism also exists: an elephant was filmed gently lifting to safety with its trunk a small goat in danger of being trampled by the elephant herd. [*New Scientist again: a man was surprised when, as his dog was drowning in a river, a seal suddenly appeared and rescued it.*]

Things which we consider moral goods are not just constructs of human reason, but result from the way things are in nature. Today, however, cultures and social forms are increasingly characterised by encounters between people who will probably never meet again, and mobility means that the impact of human activity on the environment is often out of sight of the perpetrators. Anonymity is a crucial ethical problem.

CSLewis, *The Abolition of Man* is about the loss of natural law. When we abandon the idea that the universe has an intelligible reality to which it is our duty to conform, we give up reason as a guide to morality in favour of sentiment and instinct, and cease to be human.

## **5 Natural law and ecological society**

### **The technological society**

Social power is relocated from the family or tribe to the landowner. Moral value, spiritual significance, and natural necessity are eliminated. Happiness and fulfilment are sought not in God and neighbour but in the new car, computer, or foreign holiday. But technologically advanced societies are experiencing rising crime, depression, suicide, numbers of children who have never known a stable family and who grow up in poverty.

Although technology has brought great benefits in things like healthcare for many of us, this is not the case in the Third World, where standards of health are far lower for indigenous peoples than they were before colonialism. Even in the west, asthma in children caused by pollution, illness caused by unhealthy lifestyles, drug-resistant diseases caused by over-use of antibiotics especially in animal husbandry, are on the increase.

Historicism (belief in inevitable human progress) is profoundly at odds with what we see, and with the Hebrew bible, which says that we can always choose good or evil. Animal rights philosophers say that ascribing rights to animals is the next step in a moral progress which has so far given rights to slaves and then to women. But the way in which animals are supposed to be treated according to ancient codes like the Hebrew bible is immeasurably more humane than the way they are treated by modern farming.

Land is the crucial factor in an ethic which escapes the domination of technology.

### **Natural justice and the gift of land**

In the Bible, Yahweh owns the land, and Adam is given 'radah', vice-regency over it, not absolute rule. Each aspect of creation has its own good which it is designed to realise, but the highest good is the relationality between God and creation, which is possible above all by humans, who are 'in God's image'. The 10 commandments are designed to promote this. When Adam and Eve disobeyed, the openness of the relationship was broken and they hid. The rest of creation is not precluded from relating to God, as the Psalms show, but an order is established where humans can relate most closely.

Aquinas says that justice is the supreme virtue with everyone receiving a fair portion. It applies, he says, not only to humans, but to the way God orders the whole cosmos. Isaiah envisages every household being able to earn its own living without demeaning dependence on anyone else (65.20). This contrasts with the increasingly marketised and unequal society he describes in chapter 10. Scarcity is explained in terms of the abandonment of the covenant and the distortion of the order of creation. Naboth's vineyard (1 Kings 21) is a powerful land story about the rich disregarding the ancestral land laws, resorting to murder and forgery, which resulted in the eventual downfall of the kingdom, because Israel had not looked after the land which had been given to her as a gift, to liberate her from slavery. Jesus too linked righteousness and plenty: 'seek first the kingdom of God and his righteousness, and all these things will be given to you.' He himself provided in abundance: wine, bread, fish. Those who opposed the enclosures in England and the Highland clearances took their slogans from the Bible: 'the profit of the earth is for all' (Ecclesiastes), 'Restore O pray you, to them, even this day, their lands, their vineyards, their olive groves, and their houses' (Nehemiah).

Primal societies tend to function on an economy of gift, which is about abundance: when a hunter kills some game, he holds a feast. This is the main form of exchange of surplus; and it strengthens social relations and ensures that the old and young who do not hunt are cared for. Money economy, however, is about scarcity. A World Bank report once said of Kenya, 'Nature's bounty produces enough to eat with relatively little expenditure of effort. Until subsistence farmers have their traditional lifestyles changed by the growth of new consumption wants, this labour constraint may make it difficult to introduce new crops'. Today Kenya faces terrible food shortages as commercial crops have exhausted the soil or the rain has failed because natural vegetation has been removed.

What are the implications of this for land use today? No development project which removes indigenous people from their ancestral lands in the name of progress is justifiable. Conservation measures which involve creating reserves where tourists can take photographs but local people cannot graze their flocks are not helpful. Conservation programmes are most successful when local people are part of the programme rather than marginalized: if they are driven out they cease to have an interest in conserving the ecosystem and poach animals or cut down forest.

### **The economy of the land**

Aristotle distinguished between *chrematistics* (accumulating wealth) and *oikonomia* (household management, livelihood). He criticised chrematistics because 'it led to the opinion that there is no limit to wealth and property', whereas in oikonomia only enough is required to meet actual needs. If wealth acquisition is limited, there is time left for the 'good life', whereas chrematistics will create scarcity for others, trying to meet their basic needs. Institutions and politics should therefore aim to limit chrematistics.

Chrematistics creates the phenomenon of poverty amid affluence, where the rich want more and the poor put up with nothing because of the promise of wealth in the future. Some environmentalists believe only further economic growth can drive care for the earth; the natural law view is that governments must instead pursue stability and equality.

One way of doing this is to tax the product of the land at a rate close to its rental value. This would tend to reverse absolute ownership of land, end land speculation, and return a lot of it to wilderness. It would allow much more considered use of land, involving governments and communities. Another possibility is community land ownership. This has been done in some American inner cities, where a church has organised the purchase of the land for the community, which is then used for the welfare of the community and environment, such as low cost rented housing and city farms and gardens. Profits from the land is reinvested. The same is happening in Scotland where crofters are starting to buy back land from absentee landlords, and free it from ecological degradation and barren sporting estates, which still represent the act of theft which was perpetrated on the community-owned land in the 18thC. The long-term vision is to restore the Caledonian forest, with its ecological diversity, employment opportunities through timber like furniture making, the reintroduction of mixed farming, allowing some land to be 'unproductive' forest or marsh. Returning the land to the community offers much better prospects for development than the projects of aluminium smelting, steel mills and nuclear power which brought far fewer benefits than was hoped.

## Reforming industrialism

**Regulation:** Trade is not really 'free' at present. There are already many regulations for example about vehicle emissions, housing, and the safety of electrical goods, which could be greatly extended for example to enforce biodegradable detergents or energy-efficient houses, without destroying consumer choice. It is not consumers who would oppose low-energy, long-life products, but producers, who are a powerful force.

**Taxation:** at present most tax is on human work, so labour-saving technologies have an advantage, causing both unemployment and environmental degradation. Shifting the tax burden from productive work towards the consumption and use of energy would have profound social and environmental consequences. This shift would not involve any increase in political control over peoples lives, or increase in public spending, but a rebalancing of government controls over market forces in a more ecological direction. For example, food which has been transported a long distance would cease to have an advantage over food produced where labour is more expensive.

**Bioregionality:** Cars are owned by around 15% of the world population, and while they give individual freedom, collectively they give noise, pollution, delay, disease, danger, crime, dislocated communities. Although a certain amount can be done with regulation, the only way to stop people relying on the car would be to create communities where home, work, leisure, shops etc are all in the same place. In these 'bioregions' the scale of trade can be small enough for feedback from environmental degradation or unequal relationships is soon felt by those who perpetrate it.

## Parochial ecology

An 'international ecocracy' such as might come out of the Rio Earth Summit is ambiguous in that it might subvert the environmental responsibilities and potential of local communities. It involves a myth of human control over natural resources. Most ecological problems are not global but local. Global questions or answers may partly be an illusion created by the ability of a small but growing elite to be in touch with all parts of the world all the time.

Ecological flourishing will be found in the worshipping community of the true God, in which all the traditional Christian virtues have a place. Properly ordered *love*, for God and neighbour, and not for material excess. *Justice*, since oppression of the poor is closely connected with ecological destruction; and which recognises the moral legitimacy of the non-human creation. *Temperance*, to judge what are the true goods to pursue. *Prudence*, to be able to hand on an undamaged world to our children and grandchildren, for example in thinking carefully about mobilizing technologies whose effects are unknown. *Fidelity* to the persons and places who have given us life. *Courage* to bring about ecological reform of our civilization. *Peaceableness*, to challenge individualism and competition.

There is a growing interest in spirituality in the West, but unfortunately it is usually just another product, providing instant inner peace and transcendence with some entertaining worship, not involving duties. But natural law influenced Christianity entails a worshipping community providing mutual support for one another.

How do churches start to make these communities?

- † Recapturing the links between work – science, industry – and liturgy. Ecological justice in the bible is most powerfully represented in the Psalms: these formed the basis of ritual in the monastery. Recovering the singing of psalms would be vital to the ecological renewal of Christian worship.
- † Through ritual which attends to the cycle of the seasons, Christianity can redress the alienation between human consciousness and the natural order caused by frozen and flown food, central heating, artificial light, shift working. Contemporary liturgists like Scott McCarthy have recovered Franciscan liturgies, as opposed to the cerebral ones that have dominated since the Reformation.
- † The local church should be a focus for real care for the local environment, for example by carrying out a land audit of land use, pollution, and ecological degradation in the local area.
- † The greatest danger of ecological apocalypticism is that it engenders a feeling of helplessness: the Christian creation-redemption story of God remaking the complex web from within by his death encourages us to do the same.
- † Learning to thrive within the world as it is while challenging it. This is done by recovering the value of things which do not have a place in the market: stable families, craft and art, hospitality, ritual, and life oriented towards heaven rather than material pleasure.