

# COALITION FOR ENVIRONMENT AND DEVELOPMENT

## Sustainable Cultures – Cultures of Sustainability

### BACKGROUND PAPER 15

by

**Olli Tammilehto**

## **A SHORT HISTORY OF UNSUSTAINABILITY**

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Human beings have inhabited the Earth for hundreds of thousands of years. For most time of their existence humans have not done a great havoc on the planet. Of course early humans killed animals and changed their local or regional environment. But so do practically all other bigger animals. It is important to notice that humans – as other animals – usually killed and otherwise changed the environment much less than they potentially could have done with the given technology. A human group functioned usually as a part of the local biological community. There were many cultural constraints in using and altering the environment.

The great potential of prehistoric humans to damage the ecology was realized in the cases of migration and changing environment. When people moved to new areas they occasionally wiped out species. In South-America, Australia, New Zealand, Madagascar and in Hawaii first settlers wiped out flightless birds and other animals. Stone-age hunters had a role in the extinction of mammoths and other mega-fauna during the last ice age 13 000-9 000 years ago when the ice sheet was retreating. The role may have been slight or significant – the opinions among scientists vary.<sup>1</sup>

Behaviour like that has often led to hunger and other calamities. It may be that such experiences have resulted in cultural evolution during which ecological norms and world views were created. Anyway when European explorers and anthropologists criss-crossed the Earth in the footsteps of the conquest, they found everywhere ecological cultures. Techniques, myths, stories, taboos, ceremonies and conceptions of sacredness were all set for cooperative, non-destructive interaction with other creatures and forces of Nature.

These eco-cultures were not only gatherer-hunters<sup>2</sup> but also horticulturists. Even though they changed the local environment considerably by introducing new plants and taking care of them, the way they did it was ecological and sustainable. In many cases these horticulturists actually increased biodiversity, e.g. in the south-east of North America in the Amazon region and on the slopes of the Himalayas<sup>3</sup>.

These peoples were organized not only in small separate groups but they formed also geographically and population-wise fairly large societies based on confederation of small entities. A well-known example of this is the Iroquois confederation in the Eastern North-America.

Presumably some five thousands years ago most people lived in ecological or fairly sustainable societies. But already then in some of the thousands of cultures which have existed processes had started which would ultimately lead to severe ecological problems. Some peoples adopted land use practices that resulted in severe land degradation, destruction of forests in large areas and desertification. For example, in Mesopotamia, in the area of present-day Iraq, irrigation

1 Goudie 1984[1981],99-101, Haila 1992,193, Ponting 1991, 33-35

2 This term is more appropriate than widely used 'hunter-gatherer' because usually gathering, done often predominantly by women, was more important than hunting.

3 Bradford 1989, Norberg-Hodge 1991, Kvaløy 1992

had increased salinity already by the year 1700 BCE so severely that yields decreased over 60% and wheat cultivation had to be abandoned altogether.<sup>4</sup>

The areas around the Mediterranean used to be covered with forests. Yet by the first centuries CE they had been decimated. In its latter days the Roman Empire had to produce iron in Britain because only there were suitable forests left for making charcoal.<sup>5</sup>

Why were these unsustainable practices taking place? Many explanations have been proposed. Popular ones point to agriculture, civilization or cities and complex society. These explanations capture something of the process, but they do not seem to be accurate enough. The development of agriculture is a misleading account because the line between agriculture and horticulture is fuzzy and there has been sustainable modes of agriculture. To talk about civilization in this context is somehow to yield too much to an out-of-date idea which still belongs to the ideological arsenal of the mainstream. According to it people who have lived outside the cultures leaving behind big monuments and written texts are wild and without culture. Hence we can forgive the environmental and other crimes committed by the cultures described in standard history books because they have made such a contribution in civilizing humanity.

Similar problems appear when explaining environmental degradation with the development of complex societies. In this account it is assumed that sustainable societies were not complex. However, what we know about ecological societies of recent past and remnants of them surviving today, suggests that life in ancient sustainable societies was very complex involving numerous skills and techniques and demanding plenty of information and deep wisdom. Knowledge and technological systems were just so different of the present mainstream that it is difficult for us to recognize them.<sup>6</sup>

In this sense complexity, civilizations and agriculture existed without destructive tendencies. A better explanation for the rise of unsustainability might be the formation of states and other hierarchic social structures. In these structures subjugation of humans by other humans were the norm. The ideal was to get society to function like a machine run by a small elite circle. The creation of these pyramid-like organizations contributed in various ways to ecological destruction.

It is always difficult to oppress people. To facilitate it armies and police forces had to be armed. It was necessary to produce a lot of iron and other metals which during earlier times meant destruction of forests: charcoal was the essential energy source in metal manufacture.

Oppression was of course easier if the subjugated did not rebel. To this end various myths of the unique qualities of the elite were promulgated. Believing to the godlikeness of the king and the high society was easier when the underlings saw with their own eyes them to be very different. Therefore the conspicuous consumption of the elite was necessary which contributed to the resource depletion, too.

However, probably the most important link between unsustainability and social hierarchies was ideological. On the one hand, the members of the elite who got accustomed to subjugate other humans developed easily an arrogant attitude towards nature. They started to imagine that it was possible to subjugate nature – for example by large scale irrigation systems – with impunity.<sup>7</sup> On the other hand, the slaves and other oppressed classes working on fields and forests alienated more or less from materials and forces of nature. Obeying the orders from above they could not any more adjust they work according to their own observations and knowledge. Also the intimate knowledge of local flora, fauna, soil and climate was partly lost when people were moved from one bioregion to another as trophy or merchandise.

Naturally the origin of social hierarchies is obscure because the maldevelopment started in distant prehistory. However, it can be speculated that it all began with some inequities between different groups in societies. Probably male chauvinism of a certain degree created patriarchal structures on which further hierarchies were based. Some old males could recruit young men to obey only them and to form an incipient army by which they could subjugate other members of

4 Goudie 1984[1981],106-, Vogt 1990; see also Ponting 1991,72-

5 Perlin 1989, 110-124, Goudie 1984[1981], 50, Ponting 1991 1991, 75-78.

6 See e.g Kvaløy 1992, Hobart 1993, Apffel-Marglin & Marglin 1990

7 See Bookchin 1982

society.

In some parts of the world the actual state formation is quite recent history. The British anthropologists of the 19<sup>th</sup> century could follow it in Africa. According to their account the state with its hierarchies did not rise smoothly and naturally but people fought heavily against their kings to come and tried to prevent state formation.<sup>8</sup>

Unsustainable as they were, in the old agricultural states there existed, however, some physical and ideological factors that limited their destructiveness.

All food, fodder and fuel had to be produced on the fields and forests of the state or empire. This set limits to unecological land use practices. Even though agriculture was not always sustainable in the long run, in the shorter term it was obvious that you had to maintain production capacity of fields and forests in order to survive. This restricted, for example, urbanization and industrialization. Often people had to move back into the countryside just to make life possible. This happened, e.g., in the 18<sup>th</sup> century China when production per hectare was increased by using more human labour<sup>9</sup>.

People who worked predominantly on the fields and forests found their spiritual world there, too. Fields, forests, crofts and homesteads were populated with spirits and gods. Even though the need to legitimate domination changed and corrupted the spirit population, it nevertheless remained mostly this-worldly. Therefore nature was sacred to a certain degree which limited its exploitation.

However, both of these limiting factors collapsed in Europe during the modern times because of the confluence of ideological and political changes and natural conditions.

The ideological change in question has a long history. Some nomadic people in the Middle East were moving or forced to move from place to place. They lost the intimate spiritual relationship to certain geographical location and moved their spiritual entities outside the world we live in. In a long historical process three big monotheistic religions with a transcendental god developed: Judaism, Christianity, and Islam.<sup>10</sup>

Yet for many centuries the spread of these religions did not change radically our relationship to nature. Partly this was due to syncretism: old beliefs coexisted with the new. For example many nature deities incarnated as Catholic and Orthodox saints. On the other hand a certain amount of sacredness were bestowed to natural objects because they were created by God.

Thus the dualism between nature and spiritual world created by these religions was not uncompromising at first. Nevertheless a tendency towards dualistic thinking was created and it took shape in some monasteries and among some fanatic sects. Partly on the base of this in 16<sup>th</sup> and 17<sup>th</sup> century Europe an extreme form of dualism between nature and spirit, between material and reason and between nature and culture was created. Apart from Christianity and Judaism this new doctrine was rooted in certain currents and interpretations of the philosophy of ancient Greece, particularly in platonism and neo-platonism according to which only the spiritual has value and real existence. The ideological development had also political reasons. Scholars developing doctrines and practises destined to become science wanted to demarcate their activities from that of the church in order to avoid conflicts with the Christian doctrines and church powers. For the same reasons manufacturers and merchants preferred the material world purged of spirits and sacredness.<sup>11</sup> In many European countries reformation strengthened the dualistic tendency, too.

Especially important in developing the dualistic world-view was French philosopher René Descartes (1596-1650). For him non-human nature had no value as itself. Animals were like automatic machines free to exploit, torture and kill. Even human body was like machine. However, humans differed from animals because a small organ inside the brain called pineal gland connects the body to the spiritual world. Human soul which otherwise was quite separate and different from body could somehow find its abode in that gland.

The dualistic ideology facilitated the European conquest and pillage of other continents.

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8 See Sigrist 1994

9 See Pomeranz 2000

10 See e.g. Turner 1986[1983]

11 See e.g. Berman 1989[1981], Plumwood 1993

Slavery and genocides could be legitimated when many indigenous peoples were classified as savages and therefore being a part of nature. Through the combination of slavery, colonialism and exploitation of sailors Britain could already in the 18<sup>th</sup> century develop a system where a great part of food calories were acquired by trade instead of cultivating its own fields.<sup>12</sup> When more and more food was produced in far away locations and when less and less people got it directly from fields and gardens, ideological separation from nature was reinforced by concrete reality. Exploitation of nature was made ever easier and this opportunity was eagerly used by the rising capitalist class.

The food system was becoming more unsustainable in other respects, too. More and more food was consumed in cities but the lavatory and other wastes were not taken back even to the nearby farms – in contrary to the practice in the big cities of Asia. The natural nutrient cycle was thus disrupted. The result was a rapid fall in soil fertility which was widely discussed in 19<sup>th</sup> century Europe and North America. Solutions resorted to were technical fixes like “guano imperialism”.<sup>13</sup>

The next step was to decouple from natural energy flows: solar radiation, wind and water streams. This was done first by moving to coal as the main source of heat, locomotion and industrial energy. Coal was known for thousands of years but its use was small-scale and local. Even where coal was available wood was preferred because it was easy to perceive malignant nature of coal smoke. When wood got scarce and expensive in the early modern Britain, poor people started to use it for heating. However, it was too dirty for industrial use. In the 18<sup>th</sup> century a series of innovation made the industrial use of coal possible. But these changes did not do much to purify the smoke coming out of the chimneys. And when coal burning increased rapidly, heavy pollution of the environment started in earnest. At the same time it meant the opening of one of the most important carbon sink. Its formation hundreds of millions of years ago was crucial in the development of the low carbon dioxide atmosphere suitable for humans and most other present species. Global warming started but it was first dampened by the heavy dose of other emissions which had a cooling effect.

Increasingly energy intensive social system was taken a further step away from sustainability when agriculture was transformed from energy source to energy consumer. Industrial made artificial fertilizers started to be used in the 1850's in Britain. Around the same time steam engines were introduced to ploughing and other agricultural tasks. Apart from pollution and decrease in the quality of food, this new system had a serious environmental effect: it began to deplete another important carbon sink, the soil.

The new industrial-capitalistic social system created enormous disparities and unfathomable misery and suffering. As a consequence strong workers' movements were created. Inside the movements thinking and debate on alternative non-capitalistic social systems were intense. From Marx to Kropotkin unsustainability of the contemporary system was discussed and eco-social alternatives proposed<sup>14</sup>.

To curb the rising tide of social change the powers that be had to devise a new way to rule. The new order, later to be called fordism, was invented during the first decades of the 20<sup>th</sup> century. It was based on mass production of relatively cheap consumer items the types and models of which were changed regularly and the necessity of which was inculcated to people by the new propaganda system working on subconscious level.<sup>15</sup> The mass consumerist society was heavily based on oil. Production energy was more and more derived from oil, consumer-items contained increasingly oil-based materials and the most important of them, car, was run by oil. Besides increasing greenhouse gas emissions this meant that hundreds of new chemicals was introduced to the human environment every year. The effects of many of these chemicals were completely unknown. Surprise effects kept appearing, as for example ozone hole found in 1985. Resulting general pollution may prove to be even more dangerous than climate change: chemicals spread all over the biosphere are even more difficult to pull back than carbon dioxide in the atmosphere.

After thousands' of years progress in unsustainability humanity is now on the brink of

12 See e.g. Pomeranz 2000, Linebaugh & Rediker 2000

13 See e.g. Foster 2003, Duncker *et al.* 2007, Brüggmeier & Rommelspacher 1989[1987]

14 See e.g. Foster 2003, Kropotkin 1974

15 More on this phase of history in my other essay in this volume “History and Politics of Overconsumption”.

ecological catastrophe. It may be caused by rapid climate change. According to leading climate scientists, if the emissions do not decrease rapidly enough a self-perpetuating climate change starts which ultimately leads to the death of billions of people, the loss of most biodiversity and most of the planet becoming uninhabitable<sup>16</sup>. Eco-catastrophe may also come about as the consequence of weakening of ecosystems crucial to the life on earth. According to the Millennium Ecosystem Assessment most of the ecosystems of the world have been seriously affected and their ability to render essential services have weakened<sup>17</sup>.

Yet these catastrophes can still be averted. As this historical analysis has tried to show the unsustainability of human societies is not an inevitable consequence of human nature or general greediness of men and women. Instead it is result of hierarchical social structures where majority of humans are subdued and exploited along with other creatures and object of nature. These structures are so much against human nature that people are suffering under them even mentally<sup>18</sup>. Thus the essential task in stopping the development of unsustainability and saving us and other species from a catastrophe is to build social movements that can break up these structures and construct new democratic societies everywhere on Earth.

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<sup>16</sup> See for example Solomon *et al.* 2007, IPCC 2007, Hansen *et al.* 2007

<sup>17</sup> Millennium Ecosystem Assessment 2005

<sup>18</sup> See Rosenthal 2006

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