Environmental Crisis - Human Dimension

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"There is enough on earth for everybody's need,
but not enough for anybody's greed."
Mahatma Gandhi

Imagine there is a frog which is sitting in a pan full of water on a burning gas stove. The water is warming up and soon will start boiling. The frog is warming up accordingly but is unable to feel any discomfort. The question is: "What should happen or what should be the force to make the frog jump out of the water before it's too late?" Let me suggest the answer: the frog does not have a chance to escape unless there is a noticeable threat coming from outside or a superior order to evacuate. The problem is that we do not consider global warming to be a decisive threat like for example an asteroid colliding with our planet on a given day and time simply because no one can give us the exact deadline and there is still no global government which will give us orders. Let's hope the extraterrestrials will help.

In other words we don't believe something really bad will happen, we don't believe we will die. Now getting from frogs to humans and assuming that we are more sensitive and sensible than frogs let us see what we can and should be doing in the wake of the global catastrophe.

When faced with a change in our environment, we have just three choices: move or migrate, adapt or degenerate, and perish. In the wake of a disturbance, such as draught, famine, epidemics or any other natural disaster, animals including humans always react in one of these three ways. Two of the choices offer survival and if these options are not available an individual, tribe and finally mankind will face death and extinction. At the current rate of resource use, pollution output, and overpopulation it is very unlikely that the planet Earth will continue to exist in its current state for much longer.

In case of chronic disturbances such as resource depletion or pollution humans normally would move to a better habitat. First they move within the country and if it does not help they cross the country borders in order to leave polluted area for a better environment. Clearly environmental migrations will grow but it is also clear that tensions resulting from massive migrations will grow in proportion. When we amount to 9-10 billion in just 40 years there will be very little place to take refuge and the receiving party will offer no welcome kits.

Human biology makes it possible to adapt to quite a range of changing conditions; however, such flexibility has its limits. If we go beyond those limits we loose biological sustainability and face extinction. Those who are unable or unwilling to move, have no other choice but adapt, weaken and finally degenerate. One may argue that humans have been migrating and adapting to new conditions thru centuries. There is much difference though between adaptation to different natural conditions and adaptation to unnatural conditions such as polluted soil, water and air. In current conditions created by technogenic civilization our resources for adaptation to a new unfriendly environment rapidly decrease.

The essence of environmental problems in the modern world lies in growing contradictions between the human productive activity and the stability of the global environment and its numerous ecosystems. Human wealth basically comes from agriculture, manufacturing, and mineral resources. Everything in our complex modern society is built around the exploitation and use of mineral resources and ever growing consumption, be it energy, automobiles, food, pesticides or plastic bags. But only recently did we realize that practically every economic activity produces the destructive effect on the environment.

The harms include deaths from disease, droughts, floods, heat and intense storms and damage to cities and villages from rising oceans, adverse impacts on agriculture, first social and then political and military disputes. In the event of a cataclysmic disturbance, acute or chronic, it is unlikely that the global population will be able to cooperate. It is likely that primal instincts will take over and cause a rift among humans in which case there would be fighting instead of cooperation.

Challenges

The most intensive impact on the environment started in the last quarter of the XIX century but only recently did we come to an understanding that such a development presents a threat to our

biological existence. Only recently did we realize that every global problem of the modern world, be it energy, food or demography is finally an environmental problem which applies to all of us.

What other important discoveries did we make? We also realized that there must be limits of growth and that those limits arise mainly due to depletion of natural resources. As a result the developed countries responded by turning over to other countries' resources thus generating the continuing "resource wars". It all started with colonial conquest and continued through the second half of the XX century when there were 73 military conflicts and wars, almost all driven by greed to control resources of oil, diamonds, copper, cacao, coca, and even bananas. It should be no surprise if new and even greater resource wars will take place.

By far more vital and dramatic discovery, however, was the understanding that there exist limits of our existence. It took us some twenty years since the end of the WWII to realize that mankind is no longer immortal. And only recently did we realize that if we maintain the same pace of economic development the global environment may react in such a way that mankind would not be able to outlive the first quarter of the current millennium.

Who has contributed the most to overconsumption and pollution? The more developed nations with 23 percent of the population, who use about 66 percent of the Earth's resources or the less developed nations whose populations will double again in 30 years, who will run out of food and water first, and whose pollution due to coal burning, lack of emission controls, misuse of pesticides, and toxic waste from under-regulated industries, will only worsen with the increase of population?

There is no need to prove that a human population of 6 billion is not sustainable. The world population has doubled in the last forty years. The present global population is about 30% more than the Earth's biological capacity to sustain present standards of living, but growth may not even stabilize at the projected 10 billion by the year 2050. The animal population is not sustainable either – no living community can indefinitely sustain a loss of 70,000 species a year. As our population grows, the number of extinctions will increase. Our population might become stable at 12 billion but that does not mean the rest of the living community would be stable.

If we ask the developed countries to cope with natural, biosphere-friendly cycles they will have to reduce their overall consumption by ten-fold and the U.S., by fifty-fold. It is evident however

that there will be no immediate response. The world needs to immediately reduce by 1/2 its carbon dioxide emissions, yet United Nations' member countries have only agreed to reduce it by 5% by 2012.

For quite a while we have been doing our best creating an economy whose output is inflated by drawing down the earth's natural capital. The challenge is to deflate the global economic bubble before it bursts when it will affect the entire world. To avoid this, urgent action must be taken to reduce energy and water consumption, stabilize emissions to a sustainable level and address population stability, particularly in developing countries.

It is probably for the first time since the Noah Flood that mankind is facing a truly global threat. Since then never in the history of mankind there were anything similar to such numerous and impending threats to its existence as today. The whole world has entered the critical phase in its history and it’s time to ask the fundamental question about the cause of it.

Anthropocentrism vs. Ecocentrism

The modern economic development has its foundation on the anthropocentric concept of human domination of nature which proclaims the man to be the main driving force and the owner of the planet. It all started since the so-called Renaissance when nascent “humanists” decided to put man in the center of the universe and proclaimed him as the Lord displacing the Creator. The key question here was how man and nature correlate. In line with the thrust of scientific development of his time, Francis Bacon advocated scientific methodology to manipulate nature for human benefit. The experimental method of the sixteenth century was reinforced by the mechanical philosophy of Rene Descartes, who saw that through method we could "render ourselves the masters and possessors of nature". Thus Nature was degraded and put at the service of Man. This concept created the basis for the technocratic thought and finally technocratic ideology which has the objective to dominate over nature and transform it in every imaginable way. The industrial revolution was in fact the media which helped to reform and finally change the traditional concept about Man’s place and role in the world.

The traditional view of the world, and especially of man’s status within it, was cast into doubt during the modern era as a result of at least two scientific revolutions: the theory of evolution in the nineteenth century, and the emergence of biotechnology in the twentieth. The evolutionary

approach challenged the notion that species are eternal by reasoning that all biological species - including man - evolve and change their forms over time.

Moral and ethical norms were overshadowed by economic and financial interest. In fact Man has got full authority to do anything while pursuing these interests without limits. At the same time this concept made it possible to ignore the remnants of traditional moral concepts and aspects in social and environmental practices. The universe and the being received a simplistic explanation, with the centric position being occupied by the evolution theory with its quantitative transformations.

Classical science, which is still very dominant, has developed into a dualist paradigm in which the scientific observer is separate and distinct from his or her observations. This has contributed to a conception of the world consisting of independent material objects, each having independent properties, with the behavior of the whole explainable by the behavior of its constituent parts. This science represents the source of absolute truths on which to base decisions and is often regarded as the most respectable way to know nature.

Nature is viewed as separate from humanity, machine-like and reducible to basic components, which can be known objectively and predicted. Nature is also perceived as an inanimate warehouse for all kinds of resources and semi-products which should be appropriated by Man according to his will. All that remains of man's essential nature is his ability to fashion his own form. Because of this, the nature of man ceases to be a constant and eternal truth becomes fluid. The freedom given to man does not manifest itself in a need to fulfill a certain role in the world, as is required of other creatures, but rather in the ability to construct himself according to his own choices.

It is largely accepted that humans are the center of all value. Accordingly, anthropocentrists would argue that since all value originates from humans, non-human entities and objects have value only in relation to humans. A further understanding of anthropocentrism defines value as the satisfaction of human preference. This type of aggressive anthropocentric approach is the real philosophical cause of the environmental crisis.

Three most significant and pressing factors contributing to the environmental crisis are the ever increasing human population, the energy crisis, and the abuse and pollution of the earth's natural systems. These and other factors contributing to the environmental crisis can be directly linked to

scientific, anthropocentric views of the world. The perception that value is located in, and emanates from, humanity has resulted in understanding human life as an ultimate value, superior to all other beings. This has driven innovators in medicine and technology to ever improve our medical and material conditions, in an attempt to preserve human life, resulting in more people being born and living longer. In achieving this aim, they have indirectly contributed to increasing the human population. Perceptions of superiority, coupled with developing technologies have resulted in a social outlook that generally does not rest content with the basic necessities of life. Demands for more medical and social aid, more entertainment and more comfort translate into demands for improved standards of living. Increasing population numbers, together with the material demands of modern society, place ever increasing demands on energy supplies. While wanting a better life is not a bad thing, given the population explosion the current energy crisis is inevitable, which brings a whole host of environmental implications in tow.

We normally perceive science as a tool that can be used to provide the ecological insights needed to save the Earth and its natural values. Instead, billions of dollars are spent each year on applied research in biotechnology, chemistry, the military, industrial agriculture and the like. Every day we hear appeals to “massive mobilization of resources to develop the innovative technologies and support the deployment and use of all the best technologies and expertise”.

The anthropocentric strategy designed to transform certain elements of the environment without taking into account the complexity of the environmental system as a whole produced changes in quite a number of factors which have already reduced the overall quality of the system and require additional efforts, energy and resources to neutralize those negative factors. Many present efforts to guard and maintain human progress, to meet human needs and to realize human ambitions are simply unsustainable - in both the rich and poor nations. As a matter of fact our achievements will always bring contradicting results: while pursuing the short-term goals we will always get a by-product which we did not expect. These consequences are rather contrary to what we tried to achieve and may easily cross out the positive results.

This human-centered research increases short-term profits and competitiveness and improves industrial output, defense capability, health, comforts and food production. At the same time we learn daily of the collapse of fisheries; the depletion of soils; the contamination of groundwater, freshwater and soils; the death of lakes; the destruction of Earth's ozone shield; the slow poisoning of entire landscapes by chemicals produced through research; the acceleration of deforestation; the extinction of thousands of species; global warming; the increasing misery of

people in impoverished countries; the dramatic increase in ecological refugees fleeing ravaged lands.

With the full knowledge of influential governments and corporations, millions of species, natural ecosystems that have sustained life on Earth for several billion years are being weakened, degraded or eliminated. Novel chemicals such as hormones and pesticides are being deliberately added to the human food supply. Genetically modified foods are widely used in food production without public consent. In short, while the Earth and its inhabitants are in big trouble, our governments and captains of industry continue to finance the very kinds of research that contribute to deepening of the environmental crisis.

Leaving environmental problems in the hands of science would, therefore, effectively result in a narrow understanding of the problem, and hence a limited and short-sighted solution. In this light, science should not be viewed as the ultimate source of hope for the future, and clearly should not be given full responsibility for addressing the environmental crisis. That is why the concept of sustainable development produced by modern economic science may be accepted just as a technical transitional response but not as an overall solution.

The new model for science needs to be ecological - not economic and exploitive. At stake is not only the Earth, most of its more complex and beautiful life forms and ecosystems but also the quality of humanity's existence on this beautiful planet. The guiding principles that should set the priorities for today's science are these: the intended research should provide a more sympathetic understanding of fundamental values of nature; it should provide people with an understanding that we all, from bacteria to humans, are responsible for the stability of the planetary ecosphere.

What other threats do we have in store for us? Rationalistic and destructive approach to nature so noticeable in modern science and technological trends produces another effect: while we cripple nature and environment we also cripple our own nature what leads directly to man’s enslavement. It is not an exaggeration. After enslaving nature man enslaves another man and finally himself. Indeed, the technocratic media first separates us from nature but at the same time ties us up to it even stronger creating new needs until it cultivates the mega-need to satisfy every need by means of a technical mediator.

While submerging into hostile, artificial environment humans are losing their natural qualities. With the decrease of physical labor and increase of intellectual labor humans get weaker, new

diseases, birth defects, addictions and phobias appear. Our senses as well as our immune system deteriorate; stress, insomnia, depression, and different allergies overwhelm us. If we look at growing numbers of people in the developed countries who can no longer live without constant medical support it will be only possible to call such life “artificial”. In other words we are converting ourselves in weird creatures whose physical abilities are no longer needed since there is always a robot around.

Humans cannot stop changing nature around them but they must stop changing it in an irresponsible way without considering environmental laws. That is why another commonly accepted option for dealing with the crisis at hand is that of environmental policy, legislation, and regulation, which can curb the effects of environmental pollution and improve the quality of the environment. Unfortunately individual governments largely have been reluctant to formulate such policies. It would be politically suicidal for the government to include such policy recommendations because they would eventually contradict the competing political programs dedicated to increasing GDP and the prosperity of the individual voter. Clearly then, placing the burden of responsibility on either science or government policy will do little to correct the situation as long as the values which motivate our actions remain unchanged.

The point is that we all contribute to the crisis this way or the other, and we are thus all responsible for what happens to the world around us. Accepting responsibility entails not only an acknowledgement that our individual actions contribute to the environmental crisis, but also that we are accountable for our actions.

If the risks of climate change are to be averted we must change and change radically - in our allocation and deployment of our resources, economic, human and institutional - in our mindsets and our behavior. The crucial challenge of our time is civilization redesign - the environmental crisis therefore has an anthropological dimension. This implies that we will need to re-evaluate our cultural and social models turning away from a culture based on consumption and possessions. The environmental imperative calls to redefine the very meaning of the individual and collective human behavior.