

ON THE NEED FOR A GLOBAL ECOLOGICAL TURN-AROUND

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SUMMARY

Regarding the possibility of a global ecological governance, the UN Conference in Rio de Janeiro 1992 was expected to be a milestone. It brought the concept of sustainable development into the debate, established the UN Commission on Sustainable Development, and led to three basic international conventions: on climate, biodiversity, and desertification. However, in the 30 years since that conference it has not been possible to systematically align development paths in the world in such a way that essential planetary boundaries were strictly respected. As a result, threatening ecological trends persist that indicate huge environmental policy challenges – at the national, the regional, and the global level. In view of these trends, it is essential to place the term „ecological turn-around“ into the focus of policy-making, because only then can and will fundamental economic and social transformations processes be initiated. However, such processes present complex policy challenges that so far have scarcely been reflected upon in the political discourse. Apart from that, the responses to the call for a global ecological turn-around are quite diverse, not always complementary, and not always harmonious. In responding to the UN General-Secretary’s alarming declaration: „The state of the planet is broken“, it seems that there are four major global challenges to address: There is, first, strong need for a comprehensive Re-Naturalization of Planet Earth. There is, second, the need for a far-reaching De-Materialization of economy and soci-

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ety to respect planetary boundaries and to prevent collapse. There is, third, the need for a drastic De-Carbonization of the energy systems to prevent climate catastrophe. And as all this requires sweeping system change there is, fourth, the need for a peace-devoted Earth System Governance. In this paper, four basic historic studies are presented and discussed which pick up – though in different form – these strategic elements and shed light on the history and diversity of the arguments raised concerning the need for a „global ecological turn-around“. Especially, they will be looked at for the chances to revive several forgotten ecological ideas in the coming future.

Keywords: limits to growth, global environmental overload, great transformation, global environmental governance, environmental collapse or planetary cooperation

1. PROLOGUE

„Who carelessly spreads the virus, endangers the life of his grand-parents. Who carelessly emits CO₂, endangers the life of his grand-children“. With this actual parallel after the outbreak of the Corona Pandemic Professor John Schellnhuber (PIK) pointed out that in both cases – in the Corona crisis and in the Climate crisis – inter-generation fairness and mutual solidarity are essential. Besides and beyond that, the Corona Pandemic articulates again the need for and the urgency of a global ecological turn-around:

1. The worldwide loss of biodiversity leads to a dramatic decrease of undisturbed living spaces, and to the extinction of many endemic species – the „specialists“. Survivors – respectively winners – are the so called „generalists“ (like many bat species) who are the hosts of potentially dangerous Corona viruses.
2. The intensive mass animal farming with its high emissions not only accelerates climate change and the destruction of living spaces but also increases the probability of additional new viruses that are dangerous to human beings.
3. The Corona crisis also reveals that humans cannot boundlessly claim mastery over nature. This recognition demands, as our good old friend Ivan Cifric often pointed out, a new global ecological ethos, a deep contemplation on a more careful relation of man, society and nature, as well as the general discernment that our economic system is not autonomous but must be conceived as part of the overall earth ecosystem (see e.g. Cifric 2018).

The Corona crisis put the whole world in a kind of quarantine, in which every individual, every business enterprise, and every state institution is confronted with the question: „How do we intend to live and work in the future?“ The treatment of the

Corona Pandemic has shown, that where there is a political will, many things can quickly be changed. But at the same time, it has also shown that protecting the natural environment and saving the climate system unfortunately still do not get the same priority treatment as the current pandemic.

2. LIMITS TO GROWTH AND ECOLOGICAL OVERSHOOT

Regarding the possibility of a „global ecological turn-around“, the UN Conference in Rio de Janeiro 1992 was thought to be a milestone in environmental governance. It brought the concept of sustainable development into the debate, established the UN Commission on Sustainable Development (CSD), and led to three basic international conventions: on climate, biodiversity, and desertification.

However, in the 30 years since that conference it has not been possible – despite minor steps forward in some areas – to systematically align development paths in the world in such a way that essential planetary boundaries are strictly respected. As a result, threatening ecological trends persist that indicate huge environmental policy challenges – at the national, the regional, and the global level.

Indicators of resource use and environmental impact are important for describing the actual ecological situation. By introducing the terms „ecological footprint“ and „ecological rucksack“, progress was made in measuring the renewable biological capacity and the natural resource use associated with production and consumption. Actually, these indicators reveal cases of massive overstepping of certain boundaries, of limits to growth and ecological overshoot, both showing time and again the urgent need for system change.

In view of these trends, it is essential to place the term „ecological turn-around“ into the focus of policy-making, because only then can and will fundamental economic and social transformation processes be initiated. However, such processes present complex policy challenges that so far have scarcely been reflected upon in the political discourse. Apart from that, the responses to the call for a global ecological turn-around are quite diverse, not always complementary, and not always harmonious.

In responding to UN General-Secretary Antonio Guterres' alarming declaration: „The state of the planet is broken“ (Columbia University, December 2020), it seems to me that there are four major global challenges to address: There is, first, strong need for a comprehensive Re-Naturalization of Planet Earth. There is, second, the need for a far-reaching De-Materialization of economy and society to respect planetary boundaries and to prevent physical collapse. There is, third, the need for a drastic De-Carbonization of the energy systems to prevent climate catastrophe. And as all this requires sweeping system change there is, fourth, the need for a peace-devoted Earth System Governance.

In the following, four basic historic studies shall be presented which pick up – though in different form – these strategic elements and shed light on the history and diversity of the arguments raised concerning the need for a global ecological turn-around. Especially, they will be looked at for the chances to revive several forgotten ecological ideas in the future. I must confess that it is a very specific selection of relevant studies, meaning that there may exist other powerful ideas which could be presented here, for instance the studies on specific system change (like Speth & Courrier et al. 2021), and studies on big ideas for a sustainable future (like Esty et al. 2020). But let us look now at the four selected historic studies which I think to be of high relevance for our main theme.

3. A SOCIAL CONTRACT FOR A „GREAT TRANSFORMATION“

The German Advisory Council on Global Change (WBGU) in a flagship report substantiated the need for a great global transformation, requiring the conclusion of a social contract for sustainability (WBGU 2011).

A „social contract“, this hypothetical construct of classic contract theory, from Thomas Hobbes and John Locke to Jean-Jacques Rousseau, is re-interpreted by the WBGU to mean that individuals and civil society, states and the community of states, business and academia take collective responsibility for the avoidance of climate catastrophe and for an active ecological conservation of Planet Earth.

A „great transformation“, the term coined by economist Karl Polanyi in his analysis of the first industrial revolution, is re-interpreted by the WBGU in normative terms: A radical transition of national economies and the global economy within specific „planetary guard rails“ should prevent overshoot and the collapse of the global ecosystems.

That’s a great prospect, no doubt. But many questions remain, the major ones: How can a new social contract come into being? How can a great transformation be defined and get under way? The WBGU in its report presents some basic ideas about the first question, and a great number of ideas about the second one...

Unsustainable situations, the WBGU says, can easily „tip over“. The new democratic movements in several countries are seen as evidence of that insight. The carbon-based world economic model, the WBGU concludes, is an unsustainable model because it endangers the stability of the climate system, and brings the natural life support systems for future generations in deep trouble. The transformation towards a low-carbon economy and society, in the view of the WBGU is therefore as much an ethical imperative as was, for instance, the historic abolition of slavery. However, for this transformation to happen, the structural transition of economy and society must be made ecological in the most suitable way. How can such „ecological turn-around“ take place, how can it succeed?

Primarily, the WBGU advocates improving and intensifying the practised climate policy in three major transformation fields: a) energy, b) urbanisation, and c) land use.

Several „measure packets“ with major strategic leverage are presented to accelerate the transformation towards a low-carbon economy and society, especially the following ones:

- „a pro-active state with extended citizen participation“,
- „global carbon pricing“,
- „promotion of renewable energies“,
- „sustainable urbanisation“,
- „climate-compatible land use“,
- „internationalisation of climate and energy policy“,
- and an „international cooperation revolution“.

All in all, these measure packets are a „major coup“. The WBGU report is full of thought-provoking ideas and manifold recommendations for action. Is something lacking? I guess, its the idea of how the work performed by scientists can reach not only the governments, the elites and major decision-makers, but also society at large: the Germans, the Europeans, the global citizens, so that it can truly be initiated: the much needed „great transformation“.

4. ECOLOGICAL TURN-AROUND – EVERYWHERE?

The German JAHRBUCH ÖKOLOGIE (German ecology yearbook) took a different, more pragmatic approach to the question (*Wende überall?* 2012). Whether a profound transformation of economy and society (an ecological turn-around) is possible and probable is narrowed down by a strong hypothesis: „There will be some pioneers, many laggards, and a great number of dunces“.

This compelling „triple image“ emerged when analysing the latest developments in Germany, in the sectors of energy production and use, transport and mobility, agriculture and food, business and academia, as well as concerning the issues of environmental awareness and basic ecological culture, i.e. of changing people’s hearts, minds, and actions.

A systematic comparison of the current turn-around dynamics reveals certain similarities but also major differences:

Phasing out, switching and moving – these are central topics of the debate (at least in Germany): phasing out nuclear power and brown coal; switching over to cleaner and softer technologies; moving to renewable energies: solar, wind, water, biomass, geothermal energy.

The 2011 resolution by the German government and parliament to *phase out* nuclear power by the year 2022, and the 2019 resolution to *phase out* coal by the year 2038 met with strong approval from civil society.

Switching is successfully promoted by setting new technical standards; however, it is hindered by the vested interests many companies have in retaining their economic position.

Moving to renewable energies is met with great approval by numerous new actors (particularly in the fields of solar- and windenergy), by many municipalities and cooperatives (especially wind and biomass), and by millions of homeowners and tenants who have taken action themselves (green roofs, photovoltaics).

In contrast to the energy sector, nothing similar has been occurring so far in the *transport* sector, which lead to postulate a new, different strategy, the „mobility turn-around“, i.e. the necessary merger of energy and transport activities.

In spite of a number of successes in the organic and fair trade segment, the *agriculture* and *food* sectors so far turn out to be highly resistant to necessary ecological change.

Although it was impossible to detect an ecological turn-around in the *economy* as a whole, in recent years many companies demonstrated how sustainability-oriented entrepreneurship could look like and be installed.

The question concerning the ecological turn-around in *academia* resulted in a strong philippic against the antiquated disciplinary structures and interests which have stifled transformative ecological research and education, or only enabled it to thrive in a number of private institutes but not in the public university system at large.

Pioneers, laggards and dunces thus is the prevalent pattern when analysing the development of various sectors and areas in Germany (and probably in many other countries as well); at the same time, it is the answer to the question concerning the status and dynamics of the „ecological turn-around“ at the national level.

No doubt, the answer would likely be similar when contemplating the question of the ecological turn-around at the global level; but here, the basic questions are asked and answered in a different way.

5. GLOBAL ENVIRONMENT OUTLOOK

The latest GLOBAL ENVIRONMENT OUTLOOK by the United Nations Environment Programme (GEO 6) describes the status of and the trends in the various segments of the global ecology (UNEP 2019). There has been further deterioration, rather than improvement in the majority of the ecological segments considered in the extensive study. This especially, when compared with GEO 4, and to an even greater extent compared with GEO 1.

This deterioration is the case for globally relevant emissions (in particular CO₂ emissions) and global resource utilisation in general, for renewable resources (above all fisheries), and for non-renewable resources (such as metals) in particular, which have reached a historic maximum, leading to overuse and overshoot.

Twelve years ago, the basic pattern of the global overload of the ecosystems and the overuse of resources was already confirmed by the United Nations' INTERNATIONAL RESOURCE PANEL. In an initial report (IRP 2011), individual attempts of decoupling resource consumption and environmental impacts from the gross domestic product (GDP) were identified, but no appreciable, let alone impressive achievements could be found.

„Industrial metabolism“ has increased tremendously over time (see Ayres & Simonis 1994). In the past 100 years, the global extraction of building materials has increased by a factor of 34, that of iron and minerals by a factor of 27, that of fossil fuels by a factor of 12, and the use of biomass by a factor of 3,6. This expansion of the consumption of natural materials and their use for industrial production has led to considerable and serious ecological contamination and destruction: to air pollution, climate change, soil degradation, water shortage, and a massive loss of biodiversity, to name just a few effects. It is clear, that only an *absolute* decoupling of the use of these materials from the GDP could help protect resources in general and relieve the over-strain (the impacts) on the natural environment.

Although some elements of a *decoupling strategy* were identified in the two industrial countries (Germany and Japan) investigated in the study (IRP 2011), only very modest successes were discernible. In the two case studies on developing countries (China and South Africa), there was neither a strategy nor any measurable success found regarding resource decoupling and impact decoupling.

6. GLOBAL ENVIRONMENTAL GOVERNANCE

Despite the numerous conferences held and the international treaties signed since the 1972 UN Stockholm Conference on the Human Environment – i.e. over 50 years – it is apparent that the institutions and mechanisms by which states govern (and the majority of people control) their relationship with the natural environment are utterly insufficient. The evidence of this allegation was already detected at the United Nations Conference in Rio de Janeiro in 2012 („Rio+20“). Therefore, two central themes had been placed on its agenda: a „green economy in the context of sustainable development and poverty eradication“, and an „institutional framework for sustainable development“.

The United Nations Environment Programme (UNEP) had worked hard on these topics, giving experts from developing and industrial countries two years to contemplate on a solid concept. The result was a report containing a compromise in terms of both language and content: „Green economy“ was understood as a method of production that „increases well-being and leads to more social justice, while simultaneously reducing environmental risks and ecological scarcities.“ That was not a bad starting point for an „ecological turn-around“, as well as for a „global social contract“, and a „great transformation“ - one might think. But the realities were far away from such optimism...

At the Rio conference in 2012, these definitions were not seriously brought up for discussion to flesh out or compare terms, but was loaded with all kinds of prejudices – as it still is nowadays. The international community of states did however agree to support the concept of the „green economy“. This agreement was made despite fierce opposition from large sections of the fossil-based industrial economy, as well as from sections of civil society, who saw (or wanted to see) in it a kind of neo-colonialism, protectionism, or the conditionality of financial support. The outcome document of the 2012 conference (Paragraph 56) ends with this judgement: „green economy should be used as an important tool – in accordance with national circumstances“.

„Green economy“, in this form, does not concern the goal of minimising resource use and eliminating pollutant emissions, of reducing the use of energy and lowering per capita carbon emissions – as one could have defined it. No, it is not an overarching goal but simply a tool! And this tool, above all, is to generate further quantitative economic growth. Economic growth may help alleviate the poverty that persists in the world, but what will an enforced growth strategy mean for the global ecosystems and the natural resources?

All the same might be remarked about the relevant global institutional issues: According to the outcome document, the United Nations Environmental Programme (UNEP) is to be strengthened and enhanced; but it will *not* be transformed into a specialised agency of the United Nations – like the WHO, the ILO, or the FAO. This potential political innovation was blocked in Rio 2012 by the USA in particular, but also by Canada, Japan and Russia.

Still, the UN General Assembly now can decide on membership in UNEP and on a better financing of its programme. Also, the possibilities UNEP has to assume environmental policy coordination and to act as an early warning system against deteriorating environmental problems were to some extent improved. But UNEP did definitely not gain the competences necessary for an effective global environmental policy. And in this way, there was again no promotion for basic parity between economic and ecological interests in this world.

Considering the reasons for the international community of states' *incapacity* to act effectively, which emerged again and again in regard to environmental issues, three major governance problems are discernible:

1. The horizon of the G7 and the G20 meetings has increasingly become narrowed down to short-term crisis management.
2. Regarding the major powers, the USA has not taken up (yet) a leading role on environmental issues. Europe, which ought to take on this role, is not (yet) sufficiently coherent from an environmental policy perspective. Russia has a highly resource-intensive, polluting economy. And China is still building additional coal-burning power plants.
3. The geo-strategic repositioning of the world – waning powers in the West, rising powers in the East – acts as an impediment to the globally necessary integration of economic and environmental issues, of a „global ecological turn-around“.

The WBGU succinctly summed up this striking predicament following Rio 2012 in these words: „The result is an international crisis of leadership and confidence, a *G-Zero World* in which no leading power effectively is taking the initiative, and no coalitions capable of taking action are emerging.“

7. OUTLOOK: ENVIRONMENTAL COLLAPSE OR PLANETARY COOPERATION?

In view of the dangerous current environmental trends and of the political deficiencies mentioned, one is instantly reminded of Jared Diamond, who has systematically analysed the historic collapse of societies. His book „Collapse“ (2011) revolves around the simple question why people and societies do stupid things. Diamond answers this question with a theory of „four stages of disastrous decision-making“:

- 1) It could be that a society fails to anticipate a problem;
- 2) a society does not want to perceive the problem;
- 3) a society may perceive the problem, but does not make any serious effort to solve it;
- 4) the elites of a society seal themselves off from the consequences of their actions, hampering transformation and accelerating the collapse.

Jared Diamond, however, is cautious about the question of transferring knowledge on historical cases of collapse to the present epoch. After all, there are differences between the past and the present – not just concerning the problems themselves, but also concerning the reactions to them. His remaining optimism rests on the modern possibilities of communication.

Unlike in the past, he says, we are now capable of learning from other societies that are distant in terms of space and time. He does not say that we should, no, he believes that we will (!) decide in favour of using this unique advantage.

With Ivan Cifric we might add that all this will work only on the basis of a new global ethos, a deeper contemplation on a more careful relation of man and nature.

In order to strategically back up such structural optimism, the WBGU in its report strongly advocated better planetary collaboration in the future – and called for no less than a „revolution in international cooperation“ to achieve it.

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