

ORIGINAL ARTICLE

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# Reflections on the call for a global “ecological turnaround”

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## Abstract

This paper is about excessive overuse of resources and about serious environmental impacts, and the need for a global ecological turnaround. Ideas about a social contract for sustainability are being discussed, and examples given of resource decoupling and impact decoupling. Global environmental governance is seen as being insufficient and in need of vigorous reform. It seems that only through improved planetary cooperation can a collapse of the global ecosystems be prevented and global sustainability be secured.

## Abstrakt

Die Konferenz der Vereinten Nationen 1992 in Rio de Janeiro markierte einen Meilenstein in der globalen Umweltpolitik. Der German Advisory Council on Global Change (WGBU) begründet in seinem jüngsten Hauptgutachten die Notwendigkeit einer großen globalen Transformation, wozu ein neuer Gesellschaftsvertrag zu schließen sei. Die “Große Transformation”, das Konzept des Ökonomen Karl Polanyi für die Analyse der ersten Industriellen Revolution, wird vom WGBU normativ umgedeutet: Ein radikaler Umbau der nationalen Ökonomien und der Weltwirtschaft innerhalb spezifischer “planetarischer Leitplanken” soll die Überforderung und den Zusammenbruch der globalen Ökosysteme vermeiden helfen. Zur strategischen Absicherung eines solchen strukturellen Optimismus plädiert der WGBU in seinem Gutachten für eine planetarische Zusammenarbeit - fordert dafür aber nichts weniger als eine “Internationale Kooperationsrevolution” ein.

**Keywords:** Ecological turnaround, Limits to growth and overshoot, Social contract for sustainability, Global environmental governance, Collapse or planetary cooperation

## Limits to growth and ecological overshoot

The United Nations Conference in Rio de Janeiro in 1992 represented a milestone in global environmental policy; it brought the concept of sustainable development into the debate, and led to basic international agreements on climate, biodiversity and desertification. However, in the more than 20 years from that conference it has not been possible – despite successes in some areas – to systematically align development paths in Germany, Europe and the world such that important ecological limits are observed and strictly respected. Threatening ecological trends persist which indicate how huge the environmental policy challenges are – at the national, regional and global level.

Indicators of resource use and environmental impact play a key role in describing the global ecological situation. With the concepts “resource intensity”, and “ecological footprint”, attempts have been made to measure the renewable biological capacity and the natural resource use associated with production, respectively. These indicators reveal cases of massive global overstepping of boundaries, limits to growth and/or ecological overshoot, both underpinning the call for a “global ecological turnaround”.

It seems important to place the term “ecological turnaround” into the focus of policy-making, because only then will fundamental economic and social transformation processes be initiated. However, such processes present enormous political challenges that have scarcely been reflected upon as yet in a broader social discourse. Besides this, the responses to the call for a global ecological turnaround are diverse – not always complementary or harmonious.

Four examples are given below to shed some light on the diversity of the arguments raised in favour of an ecological turnaround.

### **A social contract for a great transformation**

In its latest flagship report, the German Advisory Council on Global Change (WBGU) substantiates the need for a great global transformation, requiring the conclusion of a new 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 interpreted by the WBGU to mean that individuals and the civil society, states and the international community of states, business and academia take collective responsibility for the avoidance of climate disaster and for the ecological conservation of Planet Earth.

The “great transformation”, a term coined by economist Karl Polanyi in his analysis of the first Industrial Revolution, is reinterpreted in normative terms by the WBGU: a radical transition of national economies and the global economy within specific “planetary guard rails” should prevent overshoot and the collapse of global ecosystems from happening.

How can the new social contract come into being? How can a great transformation get under way? The WBGU produced several ideas about the first question in its report, and a great many ideas about the second question.

The democratic movements in the Arab World are seen by the WBGU as evidence that unsustainable political situations can easily “tip over”. The carbon-based world economy is an unsustainable economic model because in the long run it endangers the stability of the climate system, and with it the natural life support systems for future generations. The transformation towards a low-carbon economy and society is, the WBGU continues, as much an ethical imperative as was the abolition of slavery and the condemnation of child labour. However, the structural transition of economy and society is also essential, the WBGU concludes, for the long term survival of human beings. But how should such an “ecological turnaround” look like – and how could it succeed?

The WBGU advocates primarily intensifying the practised climate policy in three transformation fields: (a) energy, (b) urbanisation, and (c) land use.

Ten measure packets with major strategic leverage are to accelerate the transformation towards a low-carbon economy and society. These ten packets include: “a

proactive state with extended citizen participation opportunities”, “global carbon pricing”, “the promotion of renewable energies”, “sustainable urbanisation”, “climate-compatible land use”, the “internationalisation of climate and energy policy” and: an “international cooperation revolution (!)”.

Even after having conducted comprehensive work, scientists continue to think there is further need for research. Hence, more research is called for on the transformation process itself and more emphasis on specific transformative research.

All in all, the WBGU report seems to be a major coup. It is full of thought-provoking ideas and manifold recommendations for action. Is something lacking? Above all, I think, an idea of how the work performed by scientists can reach not only the Cabinet level, but also society at large, the Europeans, the citizens of the world, so that it can truly be initiated: the “great transformation”.

### **Ecological turnaround - everywhere?**

The Jahrbuch Ökologie 2013 takes a different, more pragmatic approach to the question of what the ecological turnaround is and should be (Leitschuh et al. 2012). Whether a profound transformation of economy and society is possible and probable is narrowed down with a strong hypothesis: There will be pioneers, but also laggards and dunces.

This compelling triple image emerges when analysing the latest developments in Germany (and probably many other countries), be it in the sectors of energy; transport and mobility; agriculture and food; business and academia, or in the question of awareness and culture – of changing people’s hearts and minds. A comparison of the current turnaround dynamics reveals certain similarities but, above all, major differences.

Concerning the issue of *energy*, the Triple Disaster of Fukushima (“3/11”) sparked a lively, but also controversial debate in Germany. The international impact of this debate led the New York Times using the German term *Energiewende* instead of translating it into English – as has been long ago the case with terms such as “kindergarten” and “rucksack”.

*Phasing out, switching and moving* – these are the central topics of the debate: phasing out nuclear power; switching to relatively cleaner coal and gas energy; moving to renewable energies: solar, wind, water, biomass and geothermal energy.

The 2011 resolution by the German government and parliament to *phase out* nuclear power met with overwhelming approval from civil society. *Switching* is being promoted by setting new technical standards, but also by the vested interests of the (few) large companies in the energy sector have in retaining their economic position. *Moving* to renewable energies is met with enormous approval by numerous new companies (particularly in the fields of solar, wind and geothermal energy), by many municipalities and cooperatives (wind and biomass), and by thousands of homeowners who have taken action themselves (solar).

In contrast, nothing similar has been occurring so far in the *transport* sector, which led to a different kind of turnaround in the yearbook: it was redefined as the “mobility turnaround”, and postulated as a necessary merger of the energy and transport turnaround.

In spite of a number of successes in the organic and fair trade segment, the *agriculture* and *food* sectors turns out to be highly resistant to change, such that the relevant contribution in the yearbook mutates into a new, demanding plea.

Although it proved to be impossible to detect an ecological turnaround in the *economy* as a whole, the example of two sectors demonstrated what successful sustainability-oriented entrepreneurship could look like.

The question concerning the turnaround in *academia* resulted in a true philippic against all too antiquated disciplinary structures and interests, which have stifled transformative ecological research and education, or only enabled it to thrive in places.

*Pioneers, laggards and dunces*, that is the pattern found when considering the development of various sectors (and areas) in Germany – it is the answer to the question concerning the status and dynamics of the “ecological turnaround” at the national level.

The answer is likely to be similar when contemplating the question of the ecological turnaround at the global level. But here, the question is asked differently.

### **The global environment outlook**

The latest Global Environment Outlook (GEO 5) by the United Nations Environment Programme describes the status and trends of the various segments of the global ecology (UNEP 2012). There has been a further deterioration, rather than an improvement, in the majority of the ecological segments considered in this extensive study, compared with GEO 4 – and to an even greater extent compared with GEO 1.

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

The basic pattern of a global overload of ecosystems and an overuse of resources is also confirmed by the United Nations' International Resource Panel. In an initial report (IRP 2011), some individual attempts of decoupling resource consumption and environmental impacts from the gross domestic product (GDP) were discovered, but no appreciable let alone impressive achievements of absolute decoupling could be found.

Over 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 (IRP 2011). This expansion of the consumption of natural materials and their use for industrial production has led to considerable ecological contamination and destruction: to air pollution, climate change, soil and water degradation, and a loss of biodiversity, to name just a few of the effects. Only a complete, absolute decoupling of the use of these materials from the GDP could help protect the resource base and relieve the strain on the natural environment.

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

### **Conclusion**

Both industrialised countries and emerging and developing countries continue to be on a collision course with nature and the environment; there cannot (yet) be any talk of a real and drastic ecological turnaround. There are many reasons for this, such as lagging people's

environmental awareness and their short-term economic interests, but also – and perhaps above all – a policy that is (as yet) unable to really cope with global environmental challenges. Especially, there seems to be a fundamental contradiction between global governance for ecological stability and national governances for economic growth.

### **Global environmental governance**

Despite the numerous conferences held and the many international treaties signed since the first 1972 UN Stockholm Conference on the Human Environment i.e., over the past 40 years it is apparent that the institutions and mechanisms by which humans govern their relationship with the natural environment are utterly insufficient. Disturbing evidence for this allegation could be detected at the United Nations Conference in Rio de Janeiro in June 2012 (“Rio + 20”).

Two central themes had been placed on the agenda: “green economy in the context of sustainable development and poverty eradication” and an “institutional framework for sustainable development”. The United Nations Environment Programme (UNEP) worked hard on this topic, giving experts from developing, emerging and industrialised countries 2 years to contemplate on a solid concept. The result was a report containing a compromise in terms of language and content: The green economy is a method of production that “increases well-being and leads to more social justice, while simultaneously reducing environmental risks and ecological scarcities.”

Not a bad starting point for an “ecological turnaround”, for a global social contract and a great transformation – one might think. But far from it. This definition was not seriously brought up for discussion to flesh out or compare terms, but was loaded with all kinds of prejudices. It seems that we no longer live in times of rational discourse; the political mood is poisoned, and mutual international trust got largely lost.

However, the international community of states did agree to support the concept of the “green economy” in Rio in 2012. This agreement was made despite fierce opposition from large sections of the fossil-based industrial economy, as well as other sections of civil society, who saw (or wanted to see) in it a kind of neo-colonialism, greenwashing, protectionism or the conditionality of financial support. According to the Outcome Document (paragraph 56), “green economy” should be used as an important tool “in accordance with national circumstances”.

“Green economy” in this sense does not concern the goal of minimising resource use and pollutant emissions, of reducing the use of energy and lowering per capita carbon emissions – as one could have defined it – but is supposed to be a “tool”. And this tool is to generate further economic growth. So, national politics have been caught again in the hegemony of economic growth. That growth may (in some way) help alleviate the poverty that persists in the world to this day, but what will happen to the natural ecosystems and the natural resource base?

All the same with the institutional issue. According to the Outcome Document of “Rio + 20”, UNEP is to be strengthened and enhanced. But it will not be transformed into a specialised agency of the United Nations – like the WHO, ILO or FAO. This potential political innovation was blocked again in Rio by the USA in particular, but also by Canada, Russia and Japan.

The UN General Assembly is now to decide on universal membership in UNEP and better financing of the programme. The possibilities UNEP has to assume environmental

policy coordination and to act as an early warning system for deteriorating environmental problems may be reinforced in this way. But UNEP will definitely not gain the competences necessary for effective global environmental policy in this way – and there will be no promotion of a parity between economic and ecological interests in this world.

Considering the reasons for the international community of states' structural *incapacity* to act, which emerged again at Rio 2012 with regard to environment and sustainable development, three major governance problems are discernible:

- (1) The horizon of the G8 and the G20 countries has increasingly become narrowed down to short-term crisis management.
- (2) The US government is no longer capable of taking on a rational leading role due to internal ideological blockades. Europe, which ought to take on this role, is not (yet) sufficiently coherent from an (environmental) policy perspective.
- (3) The geostrategic repositioning of the world – waning powers in the West, rising powers in the East – acts as an impediment to the globally necessary integration of environmental protection and sustainable development.

The WBGU succinctly summed up this striking predicament following Rio 2012: “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.”

### **Collapse or planetary cooperation**

In view of these developments, one is reminded of Jared Diamond, who systematically analysed the historic collapse of societies in his book “Collapse” (Diamond 2005, 2011). This book revolves around the question why people and societies do stupid things. Diamond answers this question with a theory of four stages of disastrous decision-making processes:

- (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 social and political elites of society close themselves to the consequences of their actions, hampering transformation and accelerating the collapse.

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

In order to strategically back up such structural optimism, the WBGU in its report strongly advocates planetary collaboration – but calls for no less than a “revolution in international cooperation” to achieve it.

**Abbreviations**

FAO: Food and Agriculture Organization; GDP: Gross Domestic Product; ILO: International Labour Organization; IRP: International Resource Panel; UN: United Nations; UNEP: United Nations Environment Programme; WBGU: German Advisory Council on Global Change; WHO: World Health Organization.

**Competing interests**

The author declares that he/she has no competing interests.

**Acknowledgement**

The author would like to thank Mrs. Teresa Gehrs for translating the text of the lecture from German into English.

Received: 28 January 2016 Accepted: 22 March 2016

Published online: 25 May 2016

**References**

- Diamond, Jared. 2005. *Collapse. How societies choose to fail or succeed*. S. Fischer: New York.
- Diamond, Jared. 2011. *Kollaps. Warum Gesellschaften überleben oder untergehen*. Frankfurt am Main: Erweiterte Neuauflage.
- German Advisory Council on Global Change (WBGU). 2011. *World in transition. A social contract for sustainability*. Berlin.
- International Resource Panel (IRP). 2011. *Decoupling natural resource use and environmental impacts from economic growth*. Geneva.
- Jahrbuch Ökologie. 2013. *Wende überall? Von vorreitern, nachzüglern und sitzenbleibern*. Stuttgart: S. Hirzel Verlag.
- United Nations Environment Programme (UNEP). 2012. *Global environment outlook (GEO 5)*. Nairobi.
- Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen (WBGU). 2011. *Welt im Wandel. Gesellschaftsvertrag für eine Große Transformation*. Berlin.

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