

# Challenging “The Dilemma of Growth”: the Key to Prosperity without Bankrupting Nature

Commentary on “Bankrupting Nature: Denying Our Planetary Boundaries” by Anders Wijkman & Johan Rockström

By Satoshi Kojima



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The Club of Rome, the widely known NGO on the global environment, has recently restrengthened its efforts to warn people about the potentially fatal crisis that humankind is now facing. Its 1972 report titled “Limits to Growth” drew the attention of people worldwide to the limits of environmental resources for the first time in history.

After a long silence since its publication, the Club of Rome published a report titled “A Global Forecast for the Next Forty Years — 2052” last May and then followed that with another report titled “Bankrupting Nature” in December.

Both reports encourage us to embark on an adventure to save nature from current human civilization, which is on the verge of destroying it as a result of development. This adventure can be compared to the one made by the heroine Nausicaa in the *Valley of the Wind*, a popular *anime* film of 1984 by Japanese animator Hayao Miyazaki.

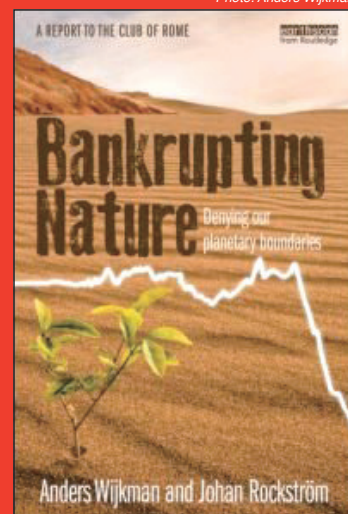
In particular, the second report may appear from an initial glance at its title simply to be antagonistic towards human economic activities. However, the authors do not deny the value of economic growth, telling us that de-growth is no solution as it would mean the collapse of our social, financial and economic systems.

The main thrust of the second report seems to be so-called “green growth” and to achieve this it proposes a kind of circular economy, with industrial systems that are efficient and waste-free. Products should be designed for longer use, reuse, disassembly and refurbishment. Materials should be used and recycled, thus reducing the demand for mining and new manufacturing, while increasing demand for reuse, recycling, maintenance and repair. This would help create jobs at local levels.

Japan SPOTLIGHT, on behalf of the Japan Economic Foundation, the Secretariat of the Japanese National Association of the Club of Rome, following the featuring on the first report “2052” in the Sept./Oct. 2012 issue, is now highlighting the report “Bankrupting Nature” by presenting the commentaries of two distinguished environmental experts. Both of them work for the Institute for Global Environmental Strategies (IGES), a leading Japanese environmental think tank.

We hope you will enjoy reading them.

Photo: Anders Wijkman



Anders Wijkman and Johan Rockström, “Bankrupting Nature – Denying our Planetary Boundaries”, Earthscan/Routledge, November 2012.

## Convincing Warning Based on a Combination of Scientific & Political Arguments

This book presents a convincing warning to human society and deserves to be widely read by global citizens who are worrying about pervasive poverty, degrading nature and the current inertia of global society in the face of these pressing crises, and who are looking ahead to the future of mankind.

Each topic covered by this book may not be novel. For example, the planetary boundary approach, proposed by one of the authors, Dr. Johan Rockström, tries to define “safe operating space” for

human beings by quantifying the limits of the carrying capacity of the Earth in terms of several very important biophysical processes that provide a basis for human activities (this book lists 10 processes) such as a climate stabilization process and nitrogen cycle. This approach is getting wide recognition and was discussed at the international negotiation process of the Rio+20. Similarly widely known already are anthropogenic climate change and the functional incompetence of the international policy process on climate change negotiations. Neither is it an entirely new idea to take an integrated approach in tackling the problems of food, fossil fuel, water, climate change as well as rapidly increasing populations in

developing countries taking into account the complex linkages among these issues.

This book is, however, successful in sending a convincing warning message by covering a wide range of topics and combining powerful arguments, supported by data and real experience, using two different disciplines: one is by a scientist (Johan Rockström) who stands at the forefront of the challenge to quantify the biophysical limits of nature that underpin human activities, and the other is by a politician (Anders Wijkman) who has dealt with international environmental issues, including climate change and chemical pollution, as a member of the Swedish Parliament and the European Parliament. For example, this book tells us, based on the recent findings from planetary boundary research, that we already exceed planetary boundaries not only in terms of climate change, which often represents global environmental problems, but also in terms of nitrogen and phosphorus cycles as well as biodiversity. On another front, this book analyzes the prolonged covert fight over the restriction on tobacco between science and politics (in this case lobbying from the tobacco industry) as a similar case to the current situation on climate change issues. These arguments demonstrate the real danger of the abuse of scientific uncertainty for holding back necessary actions. Supported by these fact-based analyses, this book is of great significance in sending a strong alert about the current bankrupting of nature.

### **Proposed Solutions Provide Useful Reference, but Book Offers More**

This book proposes a variety of solutions to these problems which serve as a useful reference. In particular the authors' criticism of the current financial system is important. They point out the complete failure of the current financial system to account for long-term climate and environment risks that would violate planetary boundaries. They also raise the issue of the excessively large credit volume that is several times more than the production of the real economy. Against these problems, a strong call is made for redesigning the financial system "so that it better serves society as a whole". Their proposal of a circular economy, which is based on the sales of services rather than those of goods and on the maximum use of recycling and reuse, deserves wide attention. These ideas provide us with a useful reference, but their serious thoughts on the dilemma of growth are even more insightful.

### **Dilemma of Growth, a Conundrum to Sustainable Development**

"The Dilemma of Growth" was first discussed in the influential report "Prosperity without Growth" by Tim Jackson in 2009. The dilemma is: the economic growth that developed countries have achieved may be unsustainable given environmental constraints such as planetary boundaries, while de-growth may destabilize the social and economic system. This dilemma becomes particularly serious if one recognizes, as the authors point out, that "China and other developing countries have every right to development and

modernization." To understand this clearer, we could rephrase it as "China and other developing countries have every right to pursue a lifestyle and economic performance in line with that achieved in developed countries." The main obstacle to global sustainable development within planetary boundaries is the fact that developed countries have yet to realise a lifestyle and economic performance that can be pursued globally without exceeding planetary boundaries. Given the fact that developing countries have the right to pursue GDP growth until they catch up, it may be apparent that GDP growth of developed countries is not a solution but a real problem.

### **Decoupling Approach: Politically Attractive but Unlikely to Solve Dilemma**

A politically appealing solution to this dilemma in developed countries is technological innovations to decouple GDP growth from resource consumption and/or environmental impacts through drastic improvement of efficiency. However, it is unlikely that efficiency improvement alone can achieve sustainable production and consumption given the roles of GDP growth in the current economic and social system. The current systems including the financial system, pension scheme and employment system are designed to be dependent on GDP growth. Even developed countries, where the consumption level is too high to be sustainable, need to pursue GDP growth by forcing people to consume more through excessive marketing. "Robust enough" growth of GDP is necessary to avert system collapse such as recessions. This system design makes faster GDP growth a must and a virtue for society, and consequently gives a very strong incentive to accelerate GDP growth. In this circumstance, it seems natural to utilize the fruits from efficiency improvement for faster GDP growth rather than to reduce resource consumption and/or environmental impacts. The rebound effect is the inevitable consequence, not in fact a paradox, of a society dependent on GDP growth.

### **Necessity to Liberate Our Economy from Relentless Growth**

It seems more feasible to transform the system design so it is free from GDP growth. In the words of Professor Tim Jackson, "there is an urgent need to develop a resilient and sustainable macro-economy that is no longer predicated on relentless consumption growth. For the advanced economies of the Western world, prosperity without growth is no longer a utopian dream. It is a financial and ecological necessity."

### **Decoupling Approach Can Be a Solution if We Change Rules of the Game**

Having now formulated the question of sustainable development to ask how to attain a high quality of life given planetary boundaries, as well as making sure that our social and economic systems are redesigned so as to be independent from GDP growth, we could then see that a decoupling approach underpinned by technology

innovation could offer a real solution. It means that we take advantage of technology innovation to extend the possibility frontiers given environmental constraints, not to mitigate environmental constraints. This approach will not only bring the right solution but also give a strong incentive for innovation. We are more creative when we believe that any innovation could improve the quality of life, rather than when we are fearful that insufficient innovation may result in the collapse of global society. Developed countries, endowed with capacity and financial stock, can recommend their own green economy models to less developed countries only after achieving a high quality of life within planetary boundaries.

### **Sustainable Development Requires Forward-Looking Innovative Thinking**

Those are my personal thoughts in response to the problems raised by the authors. They are nothing more than reference opinions, as are the solutions presented by the authors. The most important message of this book is manifested in the following words of Chief Oren Lyons, a Native American Faithkeeper of the Iroquois, whom the

authors quote twice at the beginning and the end of the book:

“We are looking ahead, as is one of the first mandates given us as chiefs, to make sure and to make every decision that we make relate to the welfare and well-being of the seventh generation to come.”

The idea that sustainable development is nothing more than a utopian dream is a concept that could be overturned, if as many people as possible read this book and share its wisdom and sense of responsibility as global citizens. We could make even more progress if we fully grasp what we scientifically know and what we do not based on the broad information in this book, and if we start seeking our own version of solutions anchored by our own value judgement with clear recognition of the real challenge to change our common practice and to transform social systems. There is plenty of leeway to ensure sustainable capacity growth so that we can solve these problems.

JS

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# ***Fundamental Changes Required to Save Nature from Bankruptcy***

## **Commentary on “Bankrupting Nature: Denying Our Planetary Boundaries”, a report to the Club of Rome**

By Xin Zhou



Author Xin Zhou

*Bankrupting Nature*, authored by Anders Wijkman and Johan Rockström, as a report to the Club of Rome, was launched recently.

Ringling powerful warning bells to current unsustainable production and consumption systems, this book clearly showed that human beings are depleting their natural assets, some of which are exceeding or very close to the thresholds of global collapse. Not merely showing pessimistic views about the fate of the continuing conventional economic model that is built on endless material growth and the generation of negative impacts on ecosystems, the authors presented opportunities through the transformation of our economic system and adopting alternative business models, such as moving from products to services or towards a circular economy based on re-use, reconditioning and recycling.

Although this book is largely aimed at policy makers, business persons, economists and scientists, I would rather recommend it to anyone who cares about our children and their children, in particular young people and mothers with young children. As pointed out in the book, “the lack of adequate education about the indispensable role that ecosystems and biodiversity play in the provision of welfare and well-being” and “unwillingness among most people to change habits and lifestyles” are major factors, among others, accountable for the

slow movement towards sustainable development. This book can be a good contribution to help raise awareness and awaken the sense of urgency for taking action.

### **Fundamental Changes of Values & Development Model in Developing Countries**

Supporting many standpoints of this Report, I would like to emphasize the importance of fundamental changes of values and cultures in guiding people’s daily life, habitual formation and attitudes towards nature. Pursuing material richness should be abandoned and the concept of ecological civilization should be respected and be dominant in our values. This is particularly important for emerging economies, such as China and India, and a large number of developing countries which are pursuing the same lifestyles as in the West, as a symbol of “the good life”. Not only are mass production, mass consumption, over-packaging and mass disposal type of societies established in industrialized countries unsustainable and should not be duplicated in today’s developing countries, but also our Earth simply cannot afford a situation whereby those in developing countries consume in the same way as

an average American or European. Our planet has its boundaries. Education of children and young people is therefore extremely important in developing countries.

Based on the messages from the Report, the Environmental Kuznets Curve should not apply to emerging and developing countries because the underpinning theory of emissions path of a peak and then a downward trend with an increase of income is dangerous. The serious way in which our natural world is bankrupting itself cannot leave any room for the pattern of “pollute first and clean up later” for developing countries, even under a fast peak scenario. In order to save nature, we must conclude that there is no time to allow developing countries to repeat the same mistakes and correct them afterwards. In this respect, emerging economies together with other developing countries should take the lead in exploring new economic models from the beginning, based on lessons learned from conventional economic models introduced by industrialized countries and experiences of new business models such as moving from material possession to use and share, zero emissions and circular economy. Current policy trends in developing countries have indicated certain political concerns over local pollution problems and ecological and health damage. However, they still do not depart far from the conventional development model. International organizations should concentrate on assisting and channelling funds to steer developing countries in this direction.

### **Material Richness Does Not Necessarily Bring Happiness**

Indeed, in 2008 there were still about 1.3 million people living on less than \$1.25 a day (PPP) and one-quarter of the world's population currently lives without electricity. The Report emphasized that developing countries have every right to develop and modernize, and called upon rich countries to hold back their material growth to leave room for a rising living standard among poor countries. However, part of this should be given to satisfy the basic needs which are supplied by new economic models with low-carbon and resources in poor countries.

When basic human needs are satisfied, more material possessions do not buy us much more happiness. As pointed out in the book, GDP as a measure of economic development is misleading. GDP is realised by expanding the production scale and consumption scale, which will lead to development based on material growth at the costs of resource depletion and ecological degradation. Other indicators on human welfare, giving more value to happiness and spiritual fulfilment, should be developed and adopted. There are many local initiatives in developing countries taken in this direction. For example, in recent years there is a ranking system every year showing the Urban Happiness Index in Chinese cities.

### **Opportunities in the Developing World to Save Nature**

There are many opportunities to save nature by taking actions in emerging economies and developing countries. Mitigation by

reducing fossil fuel consumption to stabilize the GHG concentration in the atmosphere and prevent global warming is both costly and relies on taking actions on the margin. If we give more respect to the precautionary principle, we may need to gradually phase out fossil fuels from our energy mix to avoid irreversible climate disasters hitting the next generations. It is both costly and difficult to transform current energy systems and infrastructure in industrialized countries which have been built on conventional fossil fuels. However, new investments in renewable energy to produce low-carbon electricity such as wind, solar and hydro in developing countries are cheap and infrastructure can also be built easily because all these can be started from the beginning. As exemplified by Nordhaus and Shellenberger in their book “Break Through”, “smart grids” may cost millions of dollars for an American city to install, simply because the electrical grid was not designed to handle distributed, intermittent power sources such as renewables. However, the developing world could build smarter electrical grids from the start, on a more local scale and with better handling of renewable energy. Many cases in China and India have already shown great potential to alleviate energy poverty, generate economic benefits and create new jobs by investing in renewable energy. International aid groups should work to help developing countries leapfrog the conventional energy development path and supply electricity directly from renewable energy sources.

The book stressed the necessity to use a holistic approach in science and to link poverty reduction with the issues of climate and the environment, and highlighted the strength of an integrated systems perspective of world development. I would like to add another dimension to the perspective that industrialized countries and developing countries should fulfil different tasks, despite facing the same planetary boundaries. Developed countries should devote themselves to transforming their current economic model and lifestyles while developing countries should make their own contributions by establishing new economic models and forming new consumption patterns. The spillover effects of innovation either from developed countries to developing countries or the inverse direction can make both worlds better off. Driving our planet closer to a saturation point is mainly attributable to the industrialization process of developed countries; however, saving our planet may largely, if not mainly, count on immediate and proper actions from developing countries.

Again, I would like to recommend this book to all who care about our children and all future generations. JS

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