

2052 – A Global Forecast for the Next Forty Years

A New Report to the Club of Rome Introduces the Challenges the World Will Face in the Coming Decades
(Follow-up to *The Limits to Growth*)

By *Japan SPOTLIGHT* Editorial Section

Prior to the Rio+20 United Nations Conference on Sustainable Development that took place in Rio de Janeiro, Brazil, on June 20-22, 2012, the Club of Rome, a well-known international NGO working on the global environment which had issued a famous book titled *The Limits to Growth* in 1972, launched a new report entitled *2052 – A Global Forecast for the Next Forty Years*. The author of this report is Dr. Jorgen Randers, one of the co-authors of *The Limits to Growth*. He is trying to answer the question of what our world will look like in 40 years' time, in a year which marks the passage of four decades since *The Limits to Growth* was published.

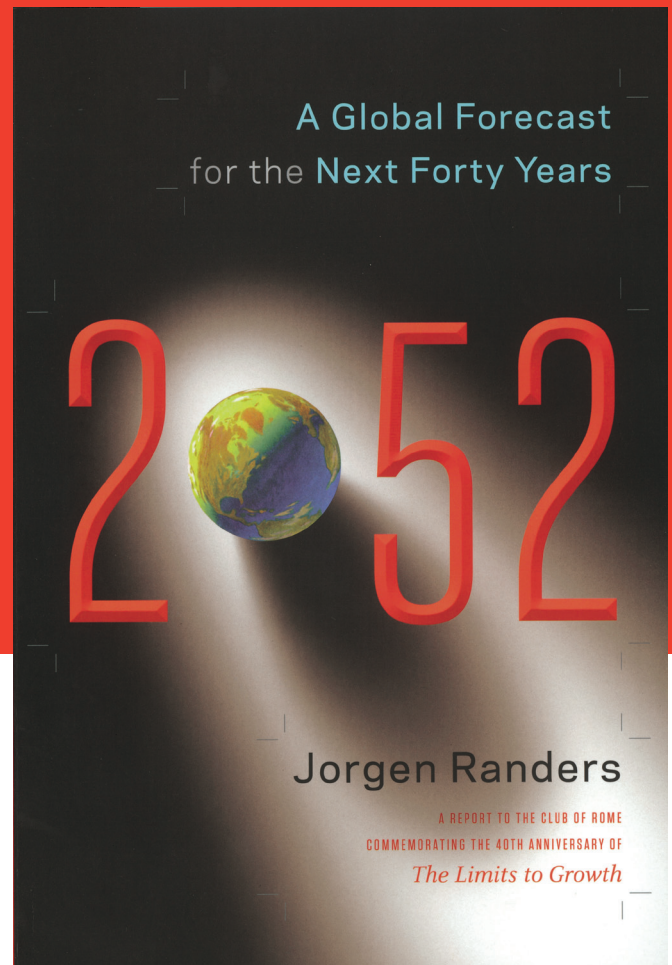
On behalf of the secretary general of the Japanese National Association of the Club of Rome, we would like to introduce the highlights of this report and add some comments.

Jorgen Randers, "A Global Forecast for the Next Forty Years 2052", Chelsea Green Publishing, Vermont, 2012

The Limits to Growth addressed the big question of how human civilization would adapt to the physical limitations of planet Earth. Knowing the reality of 2012, 40 years after its publication, Dr. Randers looks ahead another 40 years and poses the question of whether humanity will rise to the occasion and effectively address the global unsustainabilities we will still face in 2052.

According to Dr. Randers, the process of human civilization adapting to the limitations of the planet has begun during the past 40 years, following the publication of *The Limits to Growth*. Over the next 40 years, efforts to limit the ecological damage imposed by economic growth will continue. However, most notably, the author points out that humanity's next four decades of growth, in terms of global population and GDP, will be constrained not only by such efforts but also by other factors such as a rapid fertility decline as a result of urbanization, a productivity decline as a result of social unrest, and above all continuing poverty among the world's poorest 2 billion people.

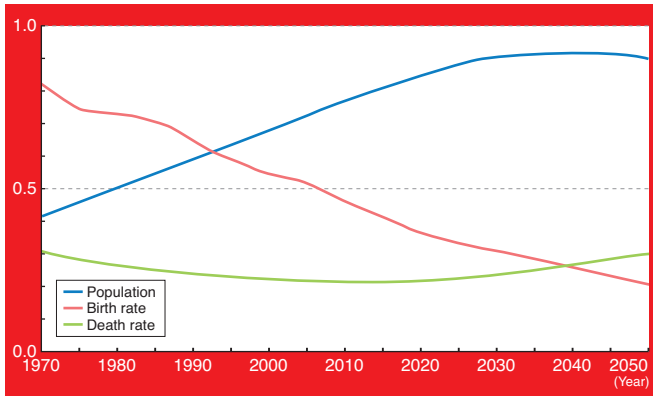
On the other hand, the report mentions that we have been successful in developing highly resource-efficient and also environment-friendly advanced technologies and we will be in command of such technologies to achieve more environment-friendly economic growth in the future, compared to the past 40



years. In addition, there will be a shift of values in the world towards human well-being rather than the simple-minded concept of material growth as measured by GDP, according to the report. Unfortunately, taking into account all the developments of recent years and over the next 40, the author concludes that the human response to the global environmental crisis will be too slow. The most critical factor, greenhouse gas emissions from human activities, will remain so high without a dedicated and forceful human response in the first half of the 21st century that our grandchildren most likely will have to live with self-reinforcing, and hence runaway, global warming in the second half of the century.

CHART 1

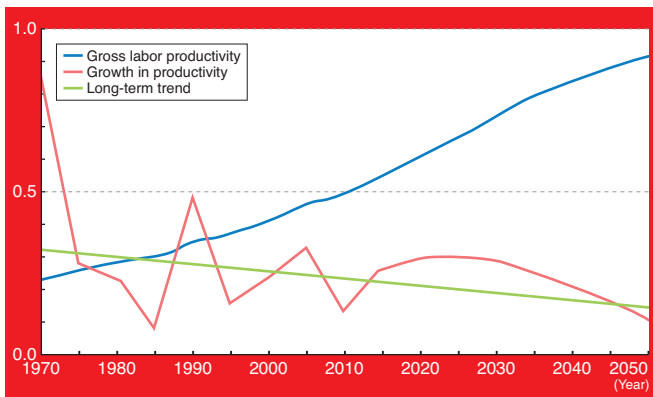
World population, 1970-2050



Scale: Population (0-9 billion people); birth & death rate (0%-4% per year).
Source: "A Global Forecast for the Next Forty Years" by Jorgen Randers

CHART 2

World gross labor productivity, 1970-2050



Note: Gross labor productivity = GDP divided by people aged 15-65 years.
Scale: Gross labor productivity (\$0-\$20,000 per person-year); growth in productivity and long-term trend (0%-7% per year).
Source: "A Global Forecast for the Next Forty Years" by Jorgen Randers

Gloomy Picture of 2052

The report presents a gloomy picture of various aspects of human civilization in 2052 if decisive, unanimous and full-scale worldwide action involving all nations is not taken, and thus constitutes a more serious warning to the world than *The Limits to Growth*.

First, it predicts that the global population will peak at 8.1 billion people just after 2040 and then decline due to a dramatic fall in fertility among an increasingly urbanized population (Chart 1).

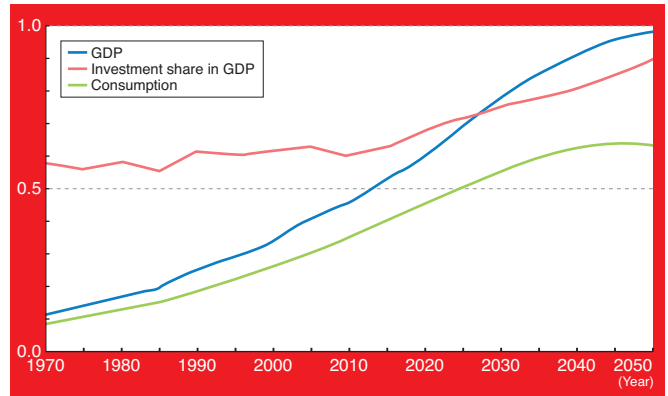
Secondly, since all economies are becoming mature, productivity growth will also decline (Chart 2).

Thirdly, the global GDP growth rate will accordingly decline as well, because it is dependent on the population growth rate and productivity growth rate and also because of the negative impact of extreme weather (Chart 3).

Fourthly, the growth rate in global consumption will slow due to an

CHART 3

World production & consumption, 1970-2050

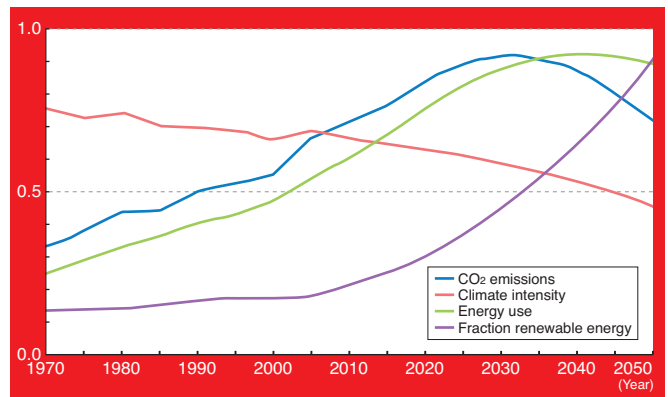


Scale: Consumption & GDP (\$0-\$150 trillion per year); investment share (0%-40%).
Source: "A Global Forecast for the Next Forty Years" by Jorgen Randers

CHART 4

World CO₂ emissions from energy use, 1970-2050

World CO₂ emissions from energy use will still be a full 40% above emissions in 1990.



Note: Climate intensity = CO₂ emissions divided by energy use.
Fraction renewable energy = use of renewable energy divided by total energy use.
Scale: CO₂ emissions (0-45 billion tonnes of CO₂ per year); energy use (0-20 billion tonnes of oil equivalents per year); climate intensity (0-4 tonnes of CO₂ per tonnes of oil equivalents); fraction renewable energy (0%-40%).
Source: "A Global Forecast for the Next Forty Years" by Jorgen Randers

increase in investment to address pollution, climate change, biodiversity and so forth (Chart 3). Such an increase in social investment could be instrumental in preventing climate problems from becoming catastrophic before 2052, but will not be enough to alleviate the fundamental problems (Chart 4).

Fifthly, slow growth in consumption and stagnation in rich nations will lead to increased social tensions and eventually further reduce productivity growth.

Sixthly, the progress of urbanization will reflect an unwillingness to protect nature and biodiversity will suffer.

Finally, in noting the regional diversification in terms of economic performance, the report shows that the US will be the most surprising loser due to stagnant per capita consumption in the next generation. China will be a winner and other emerging economies such as Brazil, Russia, India and South Africa will make progress. The rest of the world will remain poor and all nations will live in an

TABLE
Five regional features

REGION	POPULATION (million people)	GDP (trillion dollars per year)
US	310	13
China	1,350	10
OECD less US	740	22
BRISE	2,410	14
ROW (rest of the world)	2,100	8
SUM WORLD	6,910	67

Note: BRISE: "BRICs" + the 10 biggest emerging nations (Indonesia, Mexico, Vietnam, Turkey, Iran, Thailand, Ukraine, Argentina, Venezuela, and Saudi Arabia).

Source: "A Global Forecast for the Next Forty Years" by Jorgen Randers

increasingly disorderly and climate-damaged world ([Table](#)).

The most important message in this report that policy organizers need to recognize is that the short-term focus of capitalism and democracy will make it inevitable that the wise decisions needed for long-term well-being will come too late. Dr. Randers said at a press conference in Rotterdam on the occasion of the publication of the report on May 8, 2012 that we will need a system of governance that takes a more long-term view than today's predominant short-term political and economic models, the main cause of problems such as global warming. The report attempts to encourage the world to take decisive action to change the paradigm of human civilization and resolve all these challenges to human beings by highlighting the desperate state of affairs in 2052.

Attempt to Be Highly Recommended

This attempt is to be highly recommended, particularly in the following three aspects.

First, it clearly highlights the importance of long-term thinking in economic and environmental policy. There are two elements to this: What is our long-term goal? And how is our long-term governance system to achieve this goal?

Short-term political and economic models today do seem to cause many fallacies of synthesis. Protectionist policies in trade and investment, for example, may have a rationale in the short run, in the sense that they try to secure profits for the protected sectors by raising tariffs against serious competition from overseas rivals. But in the long run such policies overall would raise a country's price levels as a result of the high tariffs on protected goods and even trigger retaliation from its trading partners – and thus a country's exports to its trading partners could be constrained. Therefore, in the long run, such protectionist policies would end up causing a decline in overall national welfare. Such policies or actions based on a short-term rationale that lead to a long-term negative impact on the overall economy are known in technical economic terms as fallacies of synthesis. The issue of the global environment will certainly need such long-term thinking, as the report highlights.

Secondly, it points out that no matter how the global environment may constrain economic growth, global growth will slow down as a result of other factors such as a stagnant global population and productivity decline. The world in 2052 will contrast significantly with the world that *The Limits to Growth* depicted 40 years ago and took for granted would enjoy relatively high growth. Most of our economies will mature and enter into saturation in 40 years from now. Dr. Randers is issuing a much more serious warning to the world than the previous one. In 2052 we will live in a world with a shrinking economy where social conflicts between the rich and the poor will increase within countries, and where conflicts among nations with growing diversity in economic performance will also increase. Thus, it will be increasingly difficult to achieve a long-term consensus in resolving the challenges posed by climate change. What long-term goal is to be fixed and what long-term governance system is to be devised are the critical questions.

Thirdly, the report has made us recognize again the role of NGOs and of individuals in introducing new thinking into the issue of the global environment, since this issue is borderless and interdisciplinary. As the recent Rio+20 meeting has showcased cooperation between governments and NGOs and individual experts, we will need to take maximum advantage of our democratic politics, consisting of a public sector and a civil society, to achieve further cooperation between the two. The Club of Rome and its Japanese association are aware of our critical roles in creating new thinking and new rules to implement effective global governance in cooperation with national governments.

Two Additional Comments

We would like to add a couple of final comments on the report.

First, we should introduce a practical and concrete long-term model to achieve a productive international discussion. Is our long-term goal the reduction of CO₂ emissions or something else? Should our long-term governance system be based upon sharing responsibility among all the nations of the world in accordance with the percentages of their GDP and population, as JEF Chairman Noboru Hatakeyama has proposed on the Club of Rome's website? The very nature of the issue means we do not have much time for discussing matters that are too theoretical. We should be as pragmatic as possible.

Secondly, we should involve more Asians in the Club of Rome's activities. Dr. Randers mentioned that China would be a winner in 2052 in the world economy. Whether this is most likely or not, we should encourage China and the other Asian nations to participate in the Club of Rome's activities, since Asia, and in particular China, will certainly be a center of global economic growth in the future and thus also an important player in the domain of the environment. We, the Japanese National Association of the Club of Rome, are certainly very happy to introduce Asian readers of *Japan SPOTLIGHT* to the activities of the Club of Rome. This is our most important mission as the only national association of the Club of Rome in Asia.

You are welcome to contact us with any inquiry about the Club of Rome at the following e-mail address: naoyuki-haraoka@jef.or.jp JS