

SUSTAINABLE TRANSFORMATION OF HUMAN SOCIETY IN ASIA

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Abstract

The train of human development is going in the wrong direction, and is headed for a terrible crash. From here on, Asia and other emerging regions will be the main drivers. So we must work closely with them to steer in a more sustainable direction, by fundamentally transforming the way we think about, and do, development.

Introduction

The human-nature relationship is out of balance. The stream of scientific warnings this past year – the World Bank’s *Turn Down the Heat* report, the Intergovernmental Panel on Climate Change (IPCC) reports and more – have made clear the severity of this reality. We have seen that human impacts are changing our earth system in ways so dangerous, it could destroy human welfare on this planet.

The implication is grave: *The train of human development is going in the wrong direction, and is speeding towards a horrific crash... If we wish to avoid a tragic end, we must radically change the train’s course in this coming decade.*

And we can only steer away from disaster if we transform the way societies develop. Exciting efforts on this are now sprouting up all over the world, but still our collective effort is, we must admit, far from what the challenge requires. I fear that humanity is losing this fight.

Asia is now driving the train

Our task is complicated by another reality. It is the fact that the train of human development has other drivers now – the emerging economies of Asia, Latin America, Africa and elsewhere, and especially the 2.5 billion people in China and India. In terms of the future growth of human activities and impact, simply put, Asia and the developing world are now driving this train.

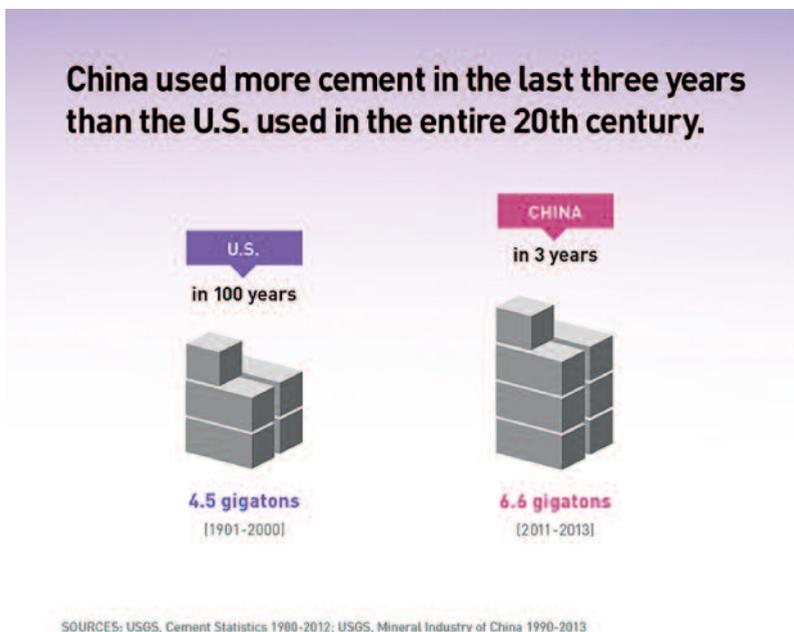
This article will discuss what this means and then offer some thoughts on what we can do about it. But first, I would like to share with you some incredible numbers.

The US Energy Information Administration projects that in the next 30 years, global energy consumption will rise by 56%. Of that growth, half

will come in China and India alone, and 90% will be in non-OECD countries. By 2040, China's energy consumption is projected to double to about twice of the US demand.

On food, some experts project that we will need to increase today's food production by 80% by 2050, in part because the rising middle class in emerging economies is eating more and more meat. The Meat Atlas project that, over the next 8 years, 80% of the growth in world meat consumption will come in the booming economies of Asia and other developing regions, with China and India again accounting for the fattest slice.

In mid-June, Bill Gates tweeted this shocking statistic: in the past three years alone, China used more cement than the United States did in the entire 20th century.



The scale and speed at which the emerging world is developing and consuming resources boggles the imagination. A recent report from the UN Environment Programme thus concluded: "Because of the Asia Pacific region's growing dominance in total world resources demand, the demand curve for the world as a whole has come to increasingly reflect that for the region". The message is unambiguous. The train of development, growth and impact is now being driven by Asia, with China and India at the wheel. And they are charging full speed ahead.

Pursuing prosperity on a limited earth

The whole world would celebrate this without hesitation, were we living on a planet of infinite space and resources. But we obviously do not. Decades of scientific research show that the earth system we live in has only limited resources to supply our needs, and limited capacity to absorb our impact. And we have already gone over those limits. Since 1900, the global population has increased four times, while global resource consumption went up eight times. And the impacts are proving devastating: heating the world, killing species, ruining ecosystems, intensifying disasters, worsening human health... the other pieces in this volume document these impacts expertly.

However, this has not stopped Asia or the rest of the emerging world. They are hungry for development, hungry for more resources, and hungry for a better life. They believe, with good reason, that the rich countries have gotten their share, and are responsible for most of the environmental impacts. It is time for the developing regions to get theirs.

A couple of years ago, at an international meeting in Berlin, I had an exchange that I still remember like it happened yesterday. When I said that the world was over-developed, and that we must turn back, an African colleague, a well-respected leader on sustainability, immediately responded: "Professor Lee, you cannot say that. The people in Africa are miserable. We have to develop. And if that means we destroy the world, well... then we can all die together!"

I am guessing that like me, you would rather not die together. But you can probably understand where my colleague is coming from. The people of Africa, Asia, Latin America and elsewhere want a decent life. And let us be honest: they deserve a decent life, and they will try to get a decent life, one way or another. The question therefore changes from "whether" to "how". How will they develop? How will they give their people a decent life?

We may not know the precise answer to that question, but we do know this: If Asia gets wealthy the old way, by chasing GDP growth at any cost and consuming and emitting massively, like some Western countries have done, then it is game over. Asia represents over 60% of the world's population and the biggest share of future resource consumption and impact. So which way Asia goes could very well decide our future.

It is therefore in the interest of us all to work with Asia and the rest of the developing world on choosing a better course, to steer the train of human development in a new, sustainable direction. And this will effectively amount to the biggest and most complete transformation ever in the way humanity develops on this planet.

The Sustainability Transformation

Since other chapters in this volume address transformations in technology and innovation with more expertise, I will focus instead on a different kind of transformation, one that starts with the way we think about development.

As you know, the Brundtland Commission defined sustainable development as “development that meets the needs of the present generation, without compromising the ability of future generations to meet their own needs”. This definition did set the tone for decades of efforts. But it does not answer two rather fundamental questions: what do we mean by development? And what do we mean by “need”? These two questions are more critical than you think.

In Asia, the dominant view of development is that GDP and consumption will keep on growing. It is the dream that one day, everyone will have a big and beautiful house, personal cars, new consumer goods, foreign vacations, and so on. But is that really what “development” means? Is this really what present and future generations “need”?

A sleeping human can survive on 100 watts, continuously supplied. An average American uses 100 times that, 10,000 watts. A Swiss initiative believes 2,000 watts is the sustainable level. Which is the right level? Asia seems to be aiming for 10,000 watts.

I am not arguing for one right definition of development or one right level of need. There are already many versions of development even just within Asia. Some focus on growing the GDP, and growing shopping malls and condos connected by freeways for personal cars. Others, like Bhutan, focus on growing something else, such as happiness. The problem is with NOT defining development at all, because then anything goes. Countries can freely pursue the versions with sky-high consumption and waste, because it is perceived as being just as valid as any other version. Yet we know this would be disastrous for all of humanity. In sustainability terms, not all versions of development are equal, and we should not pretend that they are.

Sadly, the trends are not good. The UNEP report mentioned earlier observes that in the Asia-Pacific, resource consumption per unit of GDP is not falling. It is rising. If our appetite for resources grows indefinitely, then no amount of technological innovation is going to save us. That is why we urgently need a sustainability transformation, starting with the very way we define “development” and “human needs”. We must be willing to speak the truth, that in matters of development, “anything goes” is not acceptable.

The responsibility of the developed countries

This also has important implications for the developed countries and what they should do. Because the path Asia chooses is so critical, we cannot

leave it up to chance. Instead, the developed countries should actively work with Asia to choose the right direction.

This means 3 things:

- First, the rich countries should admit that the path they took to get rich is not to be followed without careful examination. And they should actively transform their own development, so that they have more credibility by “walking the talk”.
- Second, they should stop encouraging Asia and the developing world to keep spending, consuming and growing, like they have done repeatedly in the media and in international meetings. It is like knowing perfectly well that this train is heading for a crash, but still telling the driver to go faster.
- Third, they should actively work with Asia to find new directions, to identify, test and implement new ways of development that improve welfare but consume *less* resources and lead to *less* environmental impacts. There are already tons of inspiring examples out there, so we know it can be done.

This is a pivotal moment, because Asia is literally choking on the smog of unsustainable development. Air pollution is dominating global headlines and even crossing the Pacific Ocean. People now understand how stupid it is to chase growth while our environment and living conditions are being damaged and degraded.

But the transformation requires full-hearted commitment. We cannot do a few sustainability initiatives here and there, while continuing to promote unsustainable consumption and unsustainable growth with our economic and trade policies.

Future Earth

Before wrapping up, I would like to tell you about a big mobilization of the global science community to drive this transformation. The International Council of Science (ICSU), of which I am President, has launched a 10-year research program together with the International Social Science Council (ISSC), the Belmont Forum of government research funders, UNESCO, UNEP, UNU, and the WMO.

We call this program Future Earth. We think it can make a big difference. And we want to invite you to work with us. Future Earth organizes global sustainability research that produces knowledge and solutions to help societies confront environmental change: To increase resilience and reduce vulnerabilities, and to identify pathways for transition to a sustainable future.

There are three things that make Future Earth different from any previous research program:

- First, governments, businesses and other stakeholders sit at the table with scientists from the very beginning, to ensure that the research is relevant.
- Second, Future Earth brings together researchers of all fields and disciplines, in a way that is more integrated than ever before.
- Third, Future Earth is about producing concrete solutions to the big challenges, like how we can make cities and communities less vulnerable and more resilient.

At this moment, Future Earth is establishing a globally distributed Secretariat with regional centers, and its networks are growing across the world.

Conclusion

So this is where we are. The train of human development and impact is now being driven by Asia and the emerging economies, and they are charging full speed ahead. Where they take us will likely decide the fate of both humanity and nature. We can encourage them to keep accelerating in the wrong direction, as we have often done, or we can help them steer in a new direction, by fundamentally transforming the way we think about and do development.

This is a transformation we must fully commit to with our hearts, words and actions. Every minute we wait, the train gains more speed and momentum towards a terrible crash.