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# Resource Scarcity and Sustainable Development: PPP/CSR and International Cooperative Approach

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## Scarcity: Déjà vu?

- 1972: Club of Rome/'The Limits of growth'
- 1972 – 2007: The contrary: Growth to Glut
- But - Club of Rome in China: Song Jian – One Child Policy as means to limit *population* growth
- Why? Confucius: 'Fear not poverty but inequality; Fear not isolation but insecurity'
- Indeed: Chinese nation grows from 1,3 to 1,7 billion and then sharply reduced *but aged*
- Traditional characteristics of Chinese nation and culture: stability based on agricultural sufficiency in seclusion (Wall)
- Perhaps greatest socio-economic accomplishment on earth in China leads to new characteristics? Globalisation versus seclusion; half of porc, dairy etc from abroad; agriculture produce in rapid decline while Chinese and global populace continues to grow.

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## No 'Limit to Growth': Technology, Trade and Exchange

A flow of new technologies and international cooperation reduced global poverty, reduced the gap between rich and poor and particularly in China lifted hundreds of millions out of poverty

Even under negative global economic growth, China continues around 8% growth

Forever?

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## Water Scarcity Worldwide (I)

- ✓ Global water use has been growing nearly twice as fast as world population for more than a century, and will continue to do so. (UNDP)
- ✓ Global water use will increase by 32% between 2000 and 2025. (UNESCO)
- ✓ Run-off per capita has fallen from 40,000 cubic meters in 1800 to 6840 in 1995 and is expected to reduce further to 4692 cubic meters by 2025.
- ✓ 1.2 billion people live in water basins in which there is an absolute physical scarcity of water.
- ✓ 1.8 billion people will face an absolute scarcity of water; up to two thirds of the world's population will live in water-stressed conditions by 2025.

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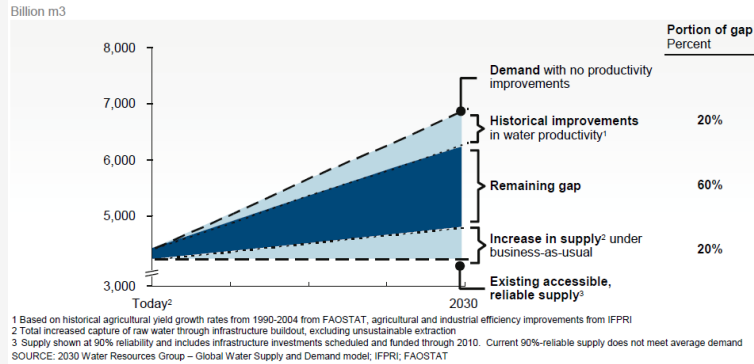


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## Water Scarcity Worldwide (II)

### Business-as-usual approaches will not meet demand for raw water



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## Water Scarcity in China

China supports 20% of the world population with only 7% of its water. On top of that the North China Plain is home to about 42% of China's population but only has 8% of the country's water resources. Each year up to 6 provinces are hit by drought.

Source: Fact and Details

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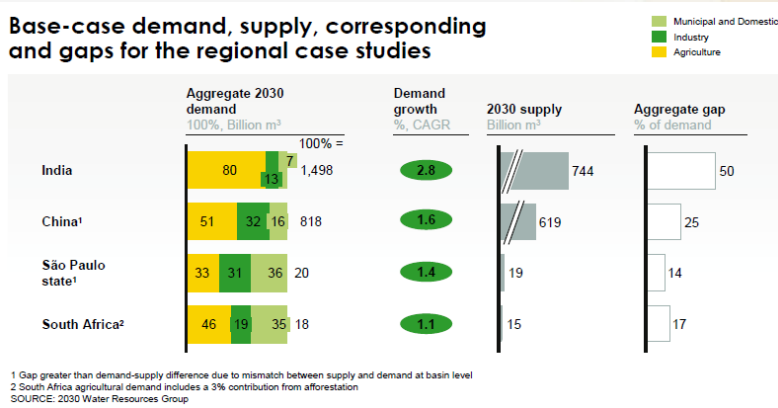


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## The Prospect for Water Scarcity in China

### Base-case demand, supply, corresponding and gaps for the regional case studies



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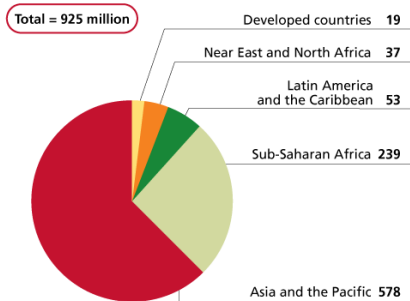
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## Food Shortages Status (I)

Number of hungry people in the world

925 million hungry people in 2010



- ✓ By 2030, demand for food will rise by 50%; demand for meat will rise by 85%.
- ✓ In order to meet this, a 50% increase in food production will be required by 2030, and a 100% increase from current levels by 2050.
- ✓ However, the average annual growth rate will fall from 2.0% in the years 1999 to 2008 to 1.7% between 2009 and 2018.

Source: 2008 World Bank Development Report

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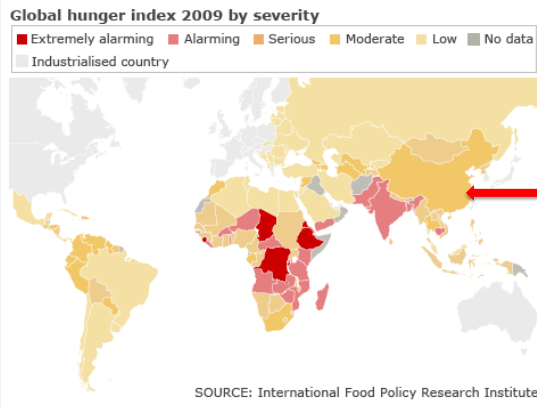
Source: FAO.



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## Food Shortages Status (II)



China is among the countries with serious hunger problems.

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## Fewer Farmers; Less agriculture: Need for new agricultural policies and technology

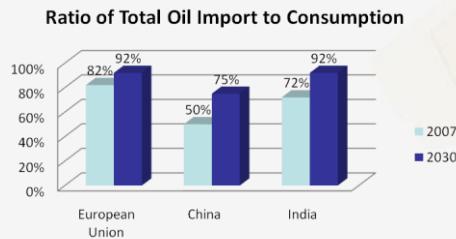
In the first half of this century, as the world's population grows to around 9 billion, global demand for food, feed and fibre will nearly double while, increasingly, crops may also be used for bioenergy and other industrial purposes. New and traditional demand for agricultural produce will thus put growing pressure on already scarce agricultural resources. And while agriculture will be forced to compete for land and water with sprawling urban settlements, it will also be required to serve on other major fronts: adapting to and contributing to the mitigation of climate change, helping preserve natural habitats, protecting endangered species and maintaining a high level of biodiversity. As though this were not challenging enough, in most regions fewer people will be living in rural areas and even fewer will be farmers. They will need new technologies to grow more from less

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## The Prospect for Energy Scarcity Worldwide

There will be a 1% increase in oil demand each year between 2011 and 2030. Demand for natural gas is expected to increase by 52% between 2006 and 2030, from 2.9 to 4.4 billion cubic metres.



Source: International Energy Agency's 2009 World Energy Outlook

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## Mineral Resources Shortage Status

Driven particularly by demand from emerging economies, demand for all types of minerals has increased, including construction, industrial minerals, metallic minerals, high-tech metals and, especially, rare earth elements (REEs), the strategically important materials which form key parts of technologies in the defense, aerospace, and green energy sectors.

The challenges posed by increased demand will be difficult to meet given two considerations.

- ✓ Firstly, market production is currently small and it may therefore be difficult for supply to expand in line with global demand.
- ✓ Secondly, minerals are concentrated in a small number of producing countries, mines, or companies.

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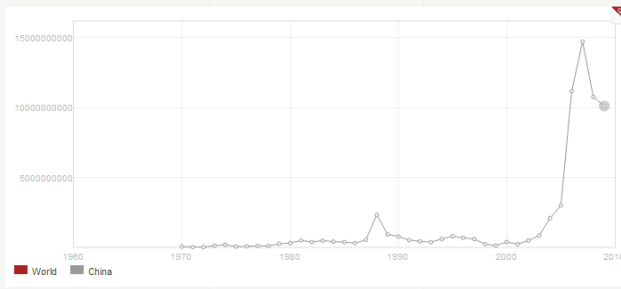


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## Mineral Depletion in China

Adjusted savings: mineral depletion (current US\$) *Source: The World Bank*



Mineral depletion (US dollar) in China was reported at 10,121,429,869.9 in 2009, according to the World Bank.

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## Growing Challenges

Firstly, (aging) **population growth** will ensure continued growth in demand for water, food, energy and minerals. Global population is predicted to reach around 9.1 billion in 2050.

Secondly, **climate change** is likely to seriously exacerbate the scarcities described above. UN Secretary-General Ban Ki-moon argued that “changes in our environment and the resulting upheavals - from droughts to inundated coastal areas to loss of arable lands - are likely to become a major driver of war and conflict”.

Finally, **the meteoric rise of countries such as China and India** will impact heavily upon the scarcity situation. China, for example, is now the world's leading consumer of iron ore, aluminum, lead, nickel, copper, tin, zinc, coal, rice, palm oil, wheat, cotton, and rubber. Will there be enough around?

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## The Club of Beijing: a North-South PPP/CSR win-win

Raw material and other scarcity is clearly global in nature and effect. That requires a global approach. Once again the key elements of this approach will be international trade and technological cooperation. But the new challenges require a reversal of Sunzi. Free after EU President Herman Van Rompuy: we shall all win because we covered not abused each others weaknesses; and because we did not fear but jointly celebrated our strengths. Integrated North-South PPP/CSR approaches with countries and industries from the North and the South may produce the required practical results. Can a new 'Club of Beijing' make this work?

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European and Chinese ambitions can be linked through a PPP/CSR strategy approach

## New Definition of CSR!

“CSR starts where all existing laws and regulations end; it is an organic link between enterprising, profit-making and social development that is conducted as a win-win solution in areas where a company requires something from society that cannot be bought and requires investment in society through a double business plan; one for industry and one for society.”\*

\*Outcome of the Indonesian Presidential MDG Envoy/Paramadina University/PA CSR conference, Jakarta, 12 December 2011

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## PPP/CSR

*Public-Private Partnership (PPP)-Corporate Social Responsibility definition:*

***Contractual profit-oriented collaboration between the public and private sector in order to fulfill public sector's responsibility in providing public services to the citizens while acquiring reduced corporate rates through a combination of Corporate Social Responsibility and Development Aid/third party funding.***

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## PPP/CSR

### Key Advantages

1. Speeds up bureaucratic procedures
2. Internationalises local projects
3. Helps avoid corruption
4. Puts people first

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## Foundations supported & initiated by the PA Group



- ✓ **Sultan Qaboos Academic Chair for Quantitative Water Management, Utrecht University, The Netherlands**
- ✓ **Construction of Children's centre, Yamada-machi, Japan**
- ✓ **Water Management Project, Yunnan, P.R. China**
- ✓ **Yayasan Lambrineu, Lhok Nga, Banda Aceh, Indonesia**
- ✓ **Support to earthquake-stricken school in Baolin, Sichuan, P.R. China**
- ✓ **Tasik Children Foundation, South West Java, Indonesia**
- ✓ **Kofi Annan Business School in cooperation with Vlerick Leuven Gent Management School in Belgium and Hogeschool Utrecht in The Netherlands, now with 15 universities from North and South**

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