



Sustainable development in Asia-Pacific

GEOSS forum

Tokyo January11

Dr. Oyun Sanjaasuren

Global Water Partnership

Mongolia's nomadic livestock herding – sustainable tradition



Mongolia's Altai Mountains



Eagle huntress documentary



Gobi Desert, Mongolia



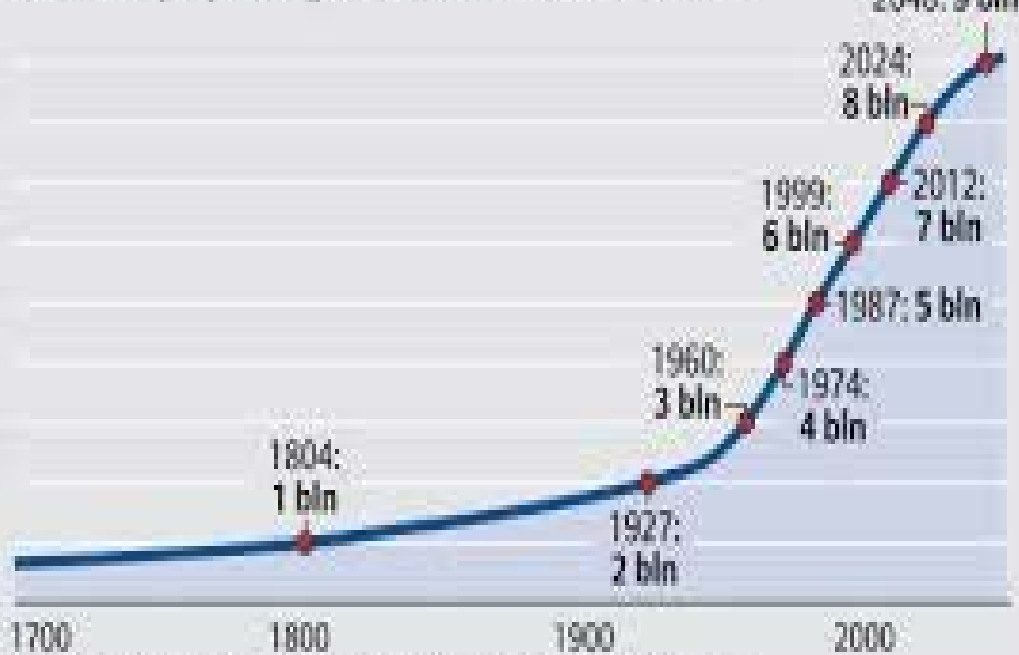
LAKE KHUVSGUL, Mongolia



Global population predictions

POPULATION OF THE EARTH

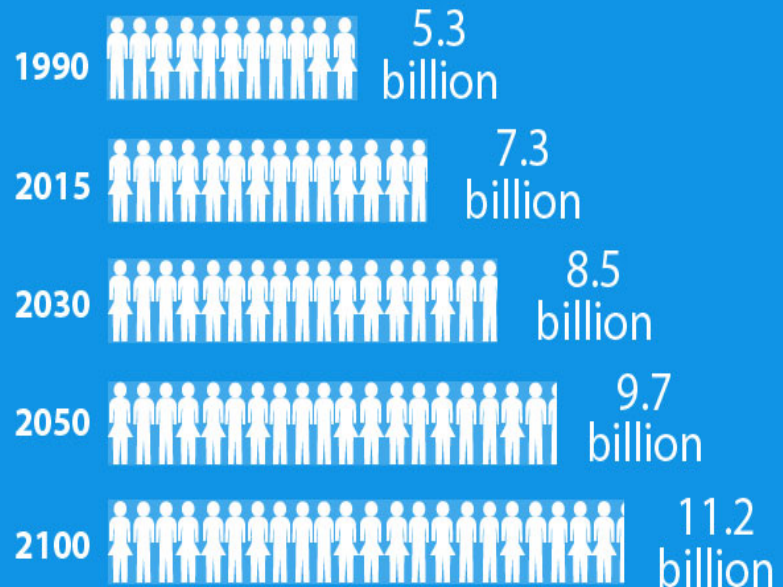
Number of people living worldwide since 1700 in billions



Source: United Nations World Population Prospects, Deutsche Stiftung Weltbevölkerung
For further information please visit: www.knowledge.allianz.com

World Population

Projected world population until 2100



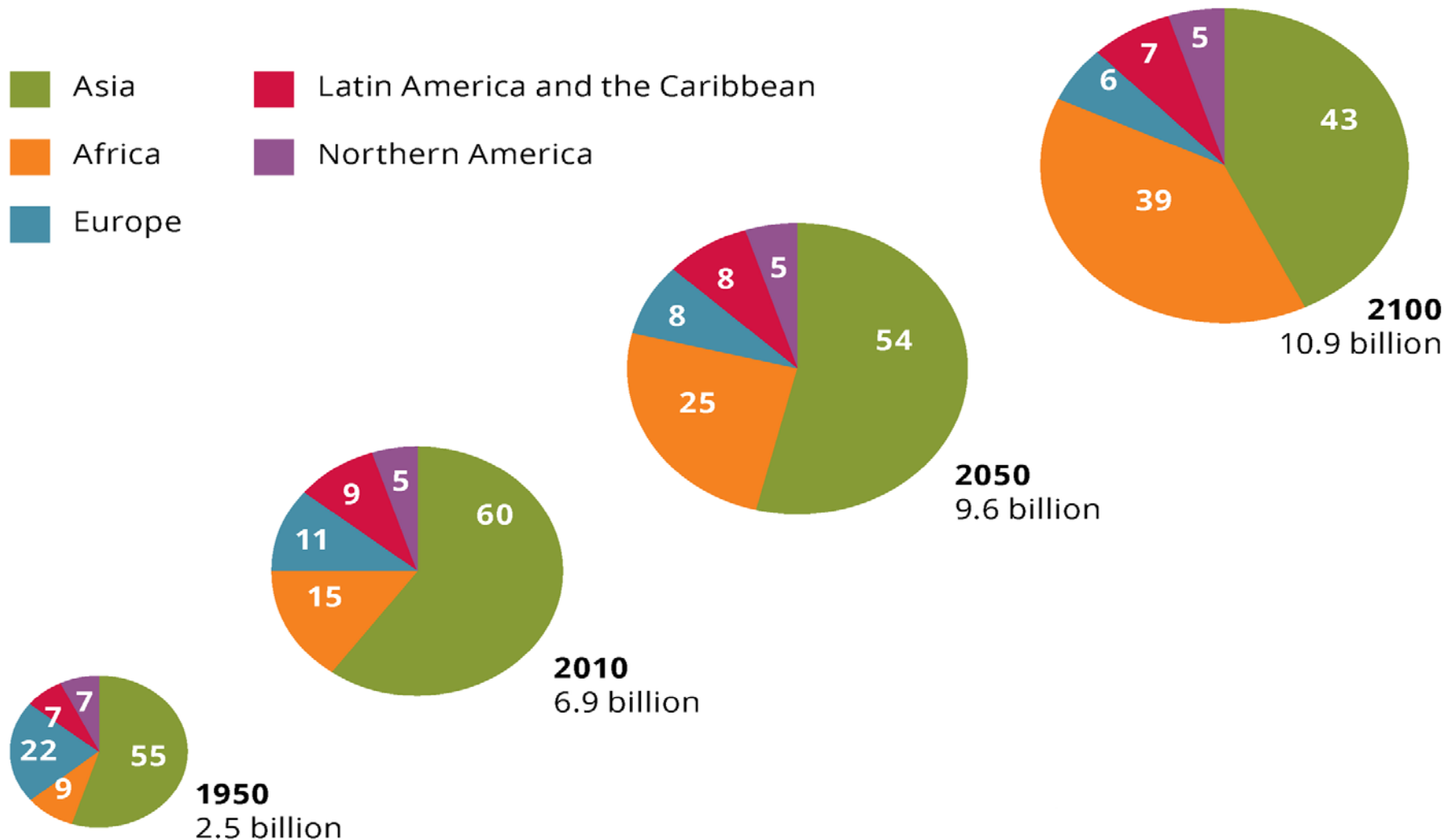
Source: United Nations Department of Economic and Social Affairs,
Population Division, *World Population Prospects: The 2015 Revision*
Produced by: United Nations Department of Public Information



(World population prospects report UN, 2015)

Global population predictions

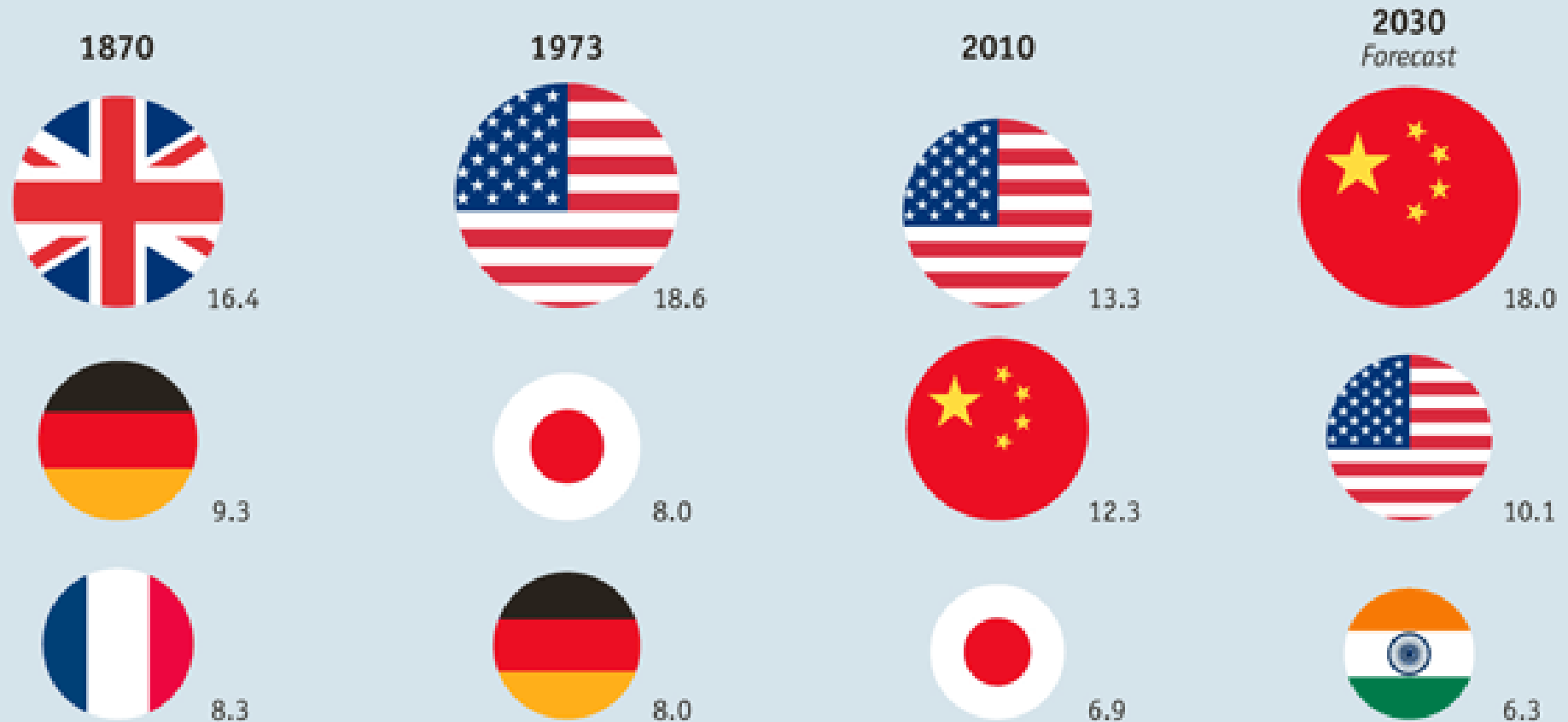
(World population prospects report UN, 2015)



Top three countries by economic dominance

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% share* of global economic power

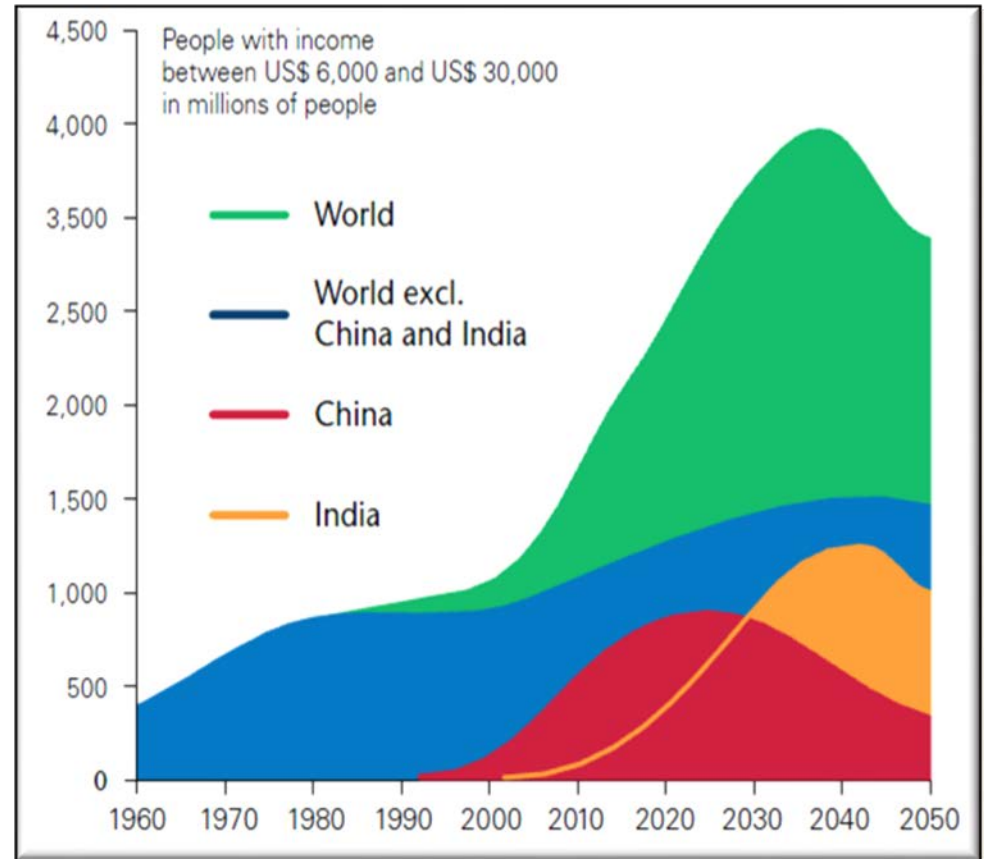


Source: Arvind Subramanian

*Weighted by share of world GDP, trade and net capital exports

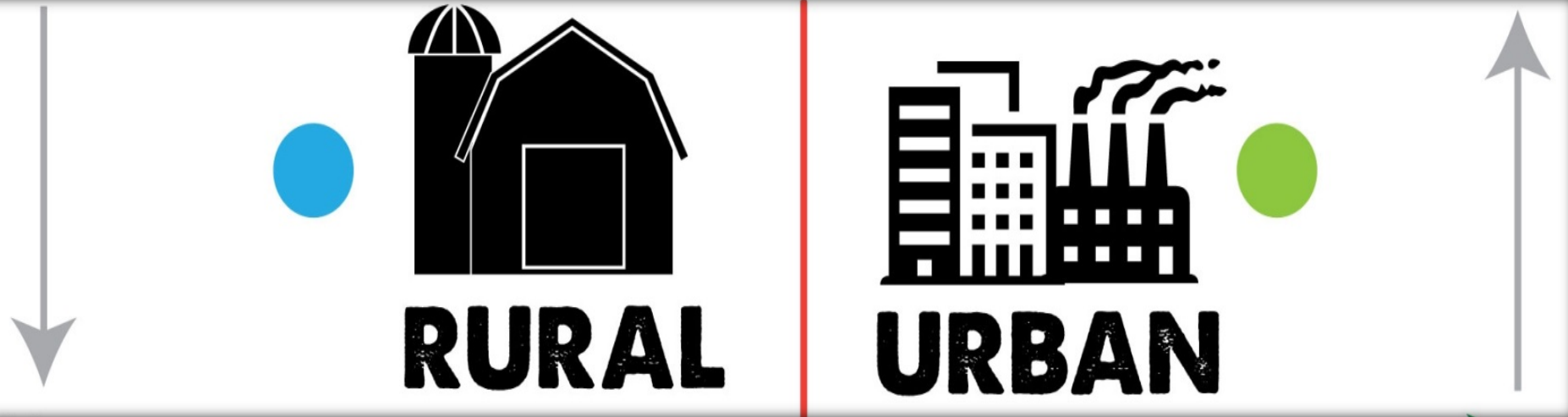
Trend: Goods Consumption Current and Future

- 2030: Middle-class consumers will triple
- 2030: 300% growth of Middle classes in developing countries
- World GDP is projected to grow by 325% between 2007 and 2050
- 60% of GDP is consumer spending on goods and services
- 70 million people each year are entering an income bracket equivalent to between US\$ 6K and US\$ 30K



Source: Goldman Sachs, 2008

Trend: Demographic Pattern: Urban VS. Rural



- Total Population: 7.3 b – 2011: 9.0 b - 2050
- Urban Population: 3.6 b - 2011: 6.3 b - 2050
- Rural Population: 3.4 b - 2011 : 3.0 b - 2050 : 1.6 b - 2100
- Waste: Exponential Growth with increase in affluence



The Rockefeller Foundation-Lancet Commission on Planetary Health:
Report on Safeguarding Human Health in the Anthropocene Epoch (July 2015)

Out of nine planetary boundaries – three already have been crossed:

- Climate change
- Nitrogen cycle
- Biodiversity loss

FACTS – why Sustainable Development

- 60% of the Earth's Ecosystem services degraded in the past 50 years
- Nature resource consumption is expected to rise to 170% of the Earth's bio-capacity by 2040
- Since 2000, the global economy has lost well over \$1 trillion to disasters
- 1/5 of the world's population live under water scarcity. BAU-> half of the world's population could be living in areas of high water stress by 2030. Food-Water-Energy Nexus
- Half of world population live in the cities and is expected to be nearly 70% urban by 2050



Very crucial moment in development where environmental footprints are locked in

PARIS2015 COP21

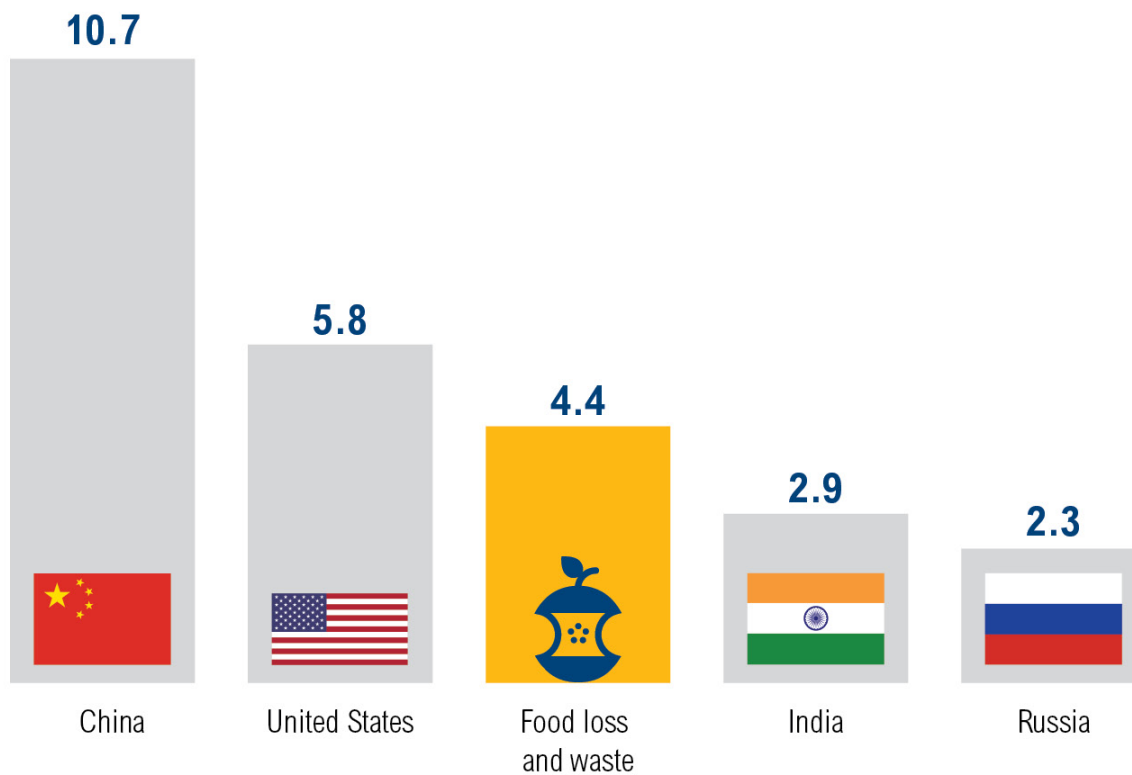


Food is lost or wasted along the entire value chain



Source: WRI analysis based on FAO. 2011. *Global food losses and food waste – extent, causes and prevention*. Rome: UN FAO.

If Food Loss and Waste Were its own Country, it Would Be the Third-Largest Greenhouse Gas Emitter



GT CO₂E (2011/12)*

* Figures reflect all six anthropogenic greenhouse gas emissions, including those from land use, land-use change, and forestry (LULUCF). Country data is for 2012 while the food loss and waste data is for 2011 (the most recent data available). To avoid double counting, the food loss and waste emissions figure should not be added to the country figures.

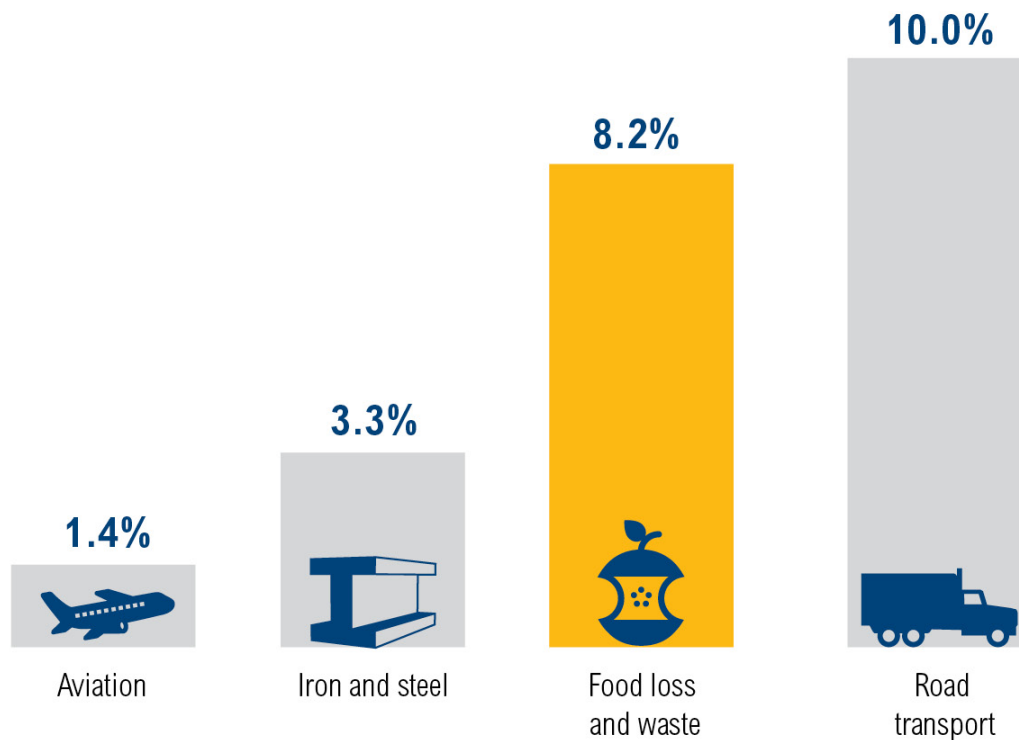
Source: CAIT. 2015; FAO. 2015. *Food wastage footprint & climate change*. Rome: FAO.



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Greenhouse Gas Emissions from Food Loss and Waste Approach the Levels from Road Transport



SHARE OF GLOBAL GREENHOUSE GAS EMISSIONS (2011/12)*

* Sector data is for 2012 while the food loss and waste data is for 2011 (the most recent available). Since the food loss and waste data combines emissions from various lifecycle stages of the food that is ultimately lost or wasted (e.g., road transport, landfills), the food loss and waste figure should not be added to the sector figures in order to avoid double counting.

Source: International Energy Agency (IEA). 2014. *CO₂ Emissions from Fuel Combustion* (2014 edition). Paris: OECD/IEA; WRAP. 2014. *Strategies to achieve economic and environmental gains by reducing food waste*. Banbury, UK: WRAP; FAO. 2015. *Food wastage footprint & climate change*. Rome: FAO.



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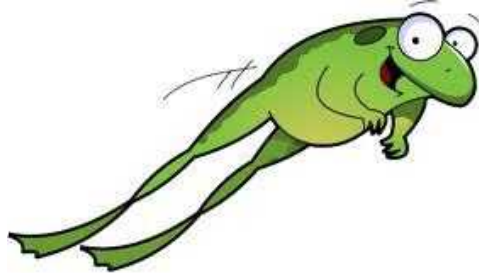


NEW CLIMATE ECONOMY

(2015 report)

It said: "Around US\$90 trillion will need to be invested globally in cities, land use and energy infrastructure between now and 2030 to meet global growth and development objectives. It would cost as little as around 5% more to make those investment choices low-carbon, and fuel savings alone could offset the higher investments. If we make the right choices and take the right actions now, these investments can drive the achievement of climate and development goals together."

LEVERAGE POINTS = PLACES TO INTERVENE IN THE SYSTEM



Places within a complex system,
where small shifts can lead to big
changes in the system

Leapfrogging from brown/unsustainable to greener/sustainable path is crucial

