



Sustainability, Sustainable Development Goals (SDGs) and the Post-2015 Development Agenda

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Outline

- ❑ Brief history recent trends in ‘sustainable development’
- ❑ From the MDGs...
- ❑ ... to a post-2015 sustainable development framework
- ❑ Some issues in respect to the sustainable development framework
- ❑ And some transformative changes for a sustainable agricultural agenda

- ❑ “In the middle of the 20th century we saw our planet from space for the first time.(...) From space, we see a small and fragile ball dominated not by human activity and edifice but by a pattern of clouds, oceans, greenery, and soils...”
 - Brundtland Report (1987): Our Common Future



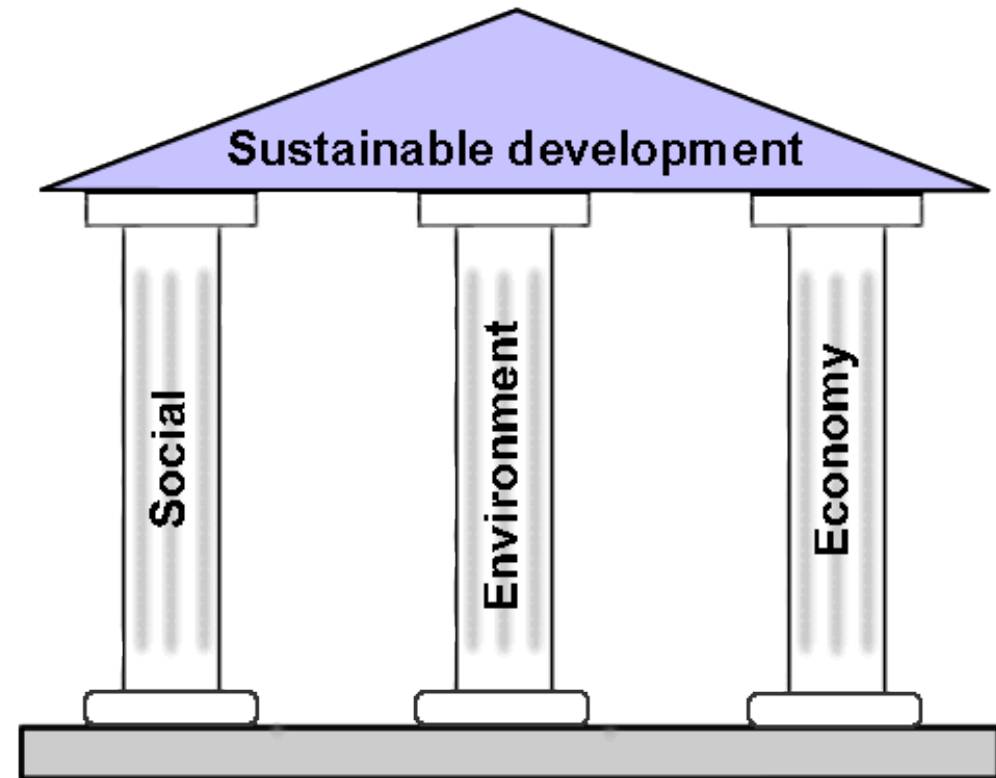
- German term „Nachhaltigkeit“
 - Originated in Forestry
 - First used by von Carlowitz (1645-1714) in his publication on forestry „Sylvicultura oeconomica“ in 1713
 - Translated into French and English in the 19th Century
 - Latin origin sustinere: uphold, bear
- Conference on the Human Environment (1972) in Stockholm
 - ‘Limits to Growth’ (Meadows et al, 1972)
 - Sustainable = state of global equilibrium
 - A set of conditions and trends in a given system that can continue indefinitely

Sustainable development - 1992

- ❑ 1992 Conference on the Environment and Development in Rio de Janeiro
- ❑ *“Our Common Future”*
- ❑ Focus on inter- and intra-generational equity & planetary limits
- ❑ *“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs”*
 - Needs - in particular essential needs of the world's poor, to which overriding priority should be given
 - Limitations - imposed by state of technology and social organization on the environment's ability to meet present and future needs.

Sustainable development - 2012

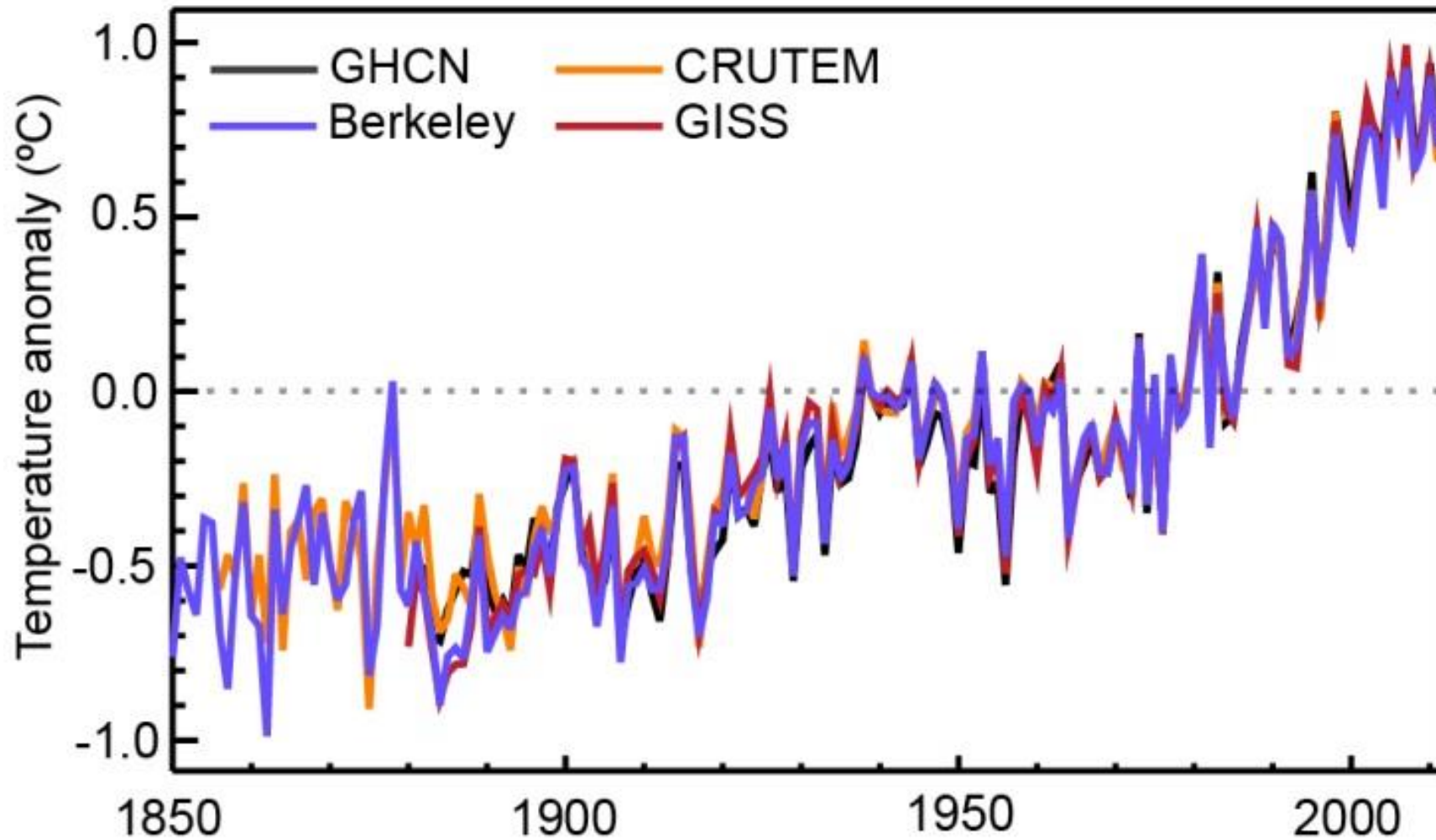
- ❑ Rio+20 conference (2012)
- ❑ *“The Future We Want”*
 - Reinforcement of sustainable development framework
 - Fight against poverty
 - Development of a green economy
- ❑ Finding a balance between “sustain” and “develop”
- ❑ Universal goals
- ❑ Three dimensions
 - Economic profitability
 - Socially just
 - Environmentally friendly



Between 1992 and 2012

- ❑ World population has grown by more than 1.5 billion people
- ❑ Global economy has grown by 75%
- ❑ Poverty, inequalities, hunger and malnutrition persists
 - 850 million hungry people
 - One-third of rural people in developing countries “extremely poor”
- ❑ Inadequate diets and unsustainable consumption patterns on the rise
 - Micronutrient malnutrition affects $\frac{1}{3}$ to $\frac{1}{2}$ of the world population
 - 1.5 billion obese people
 - 1.3 billion tonnes of food are wasted each year
- ❑ Climate change and resource degradation at the point of “no return”

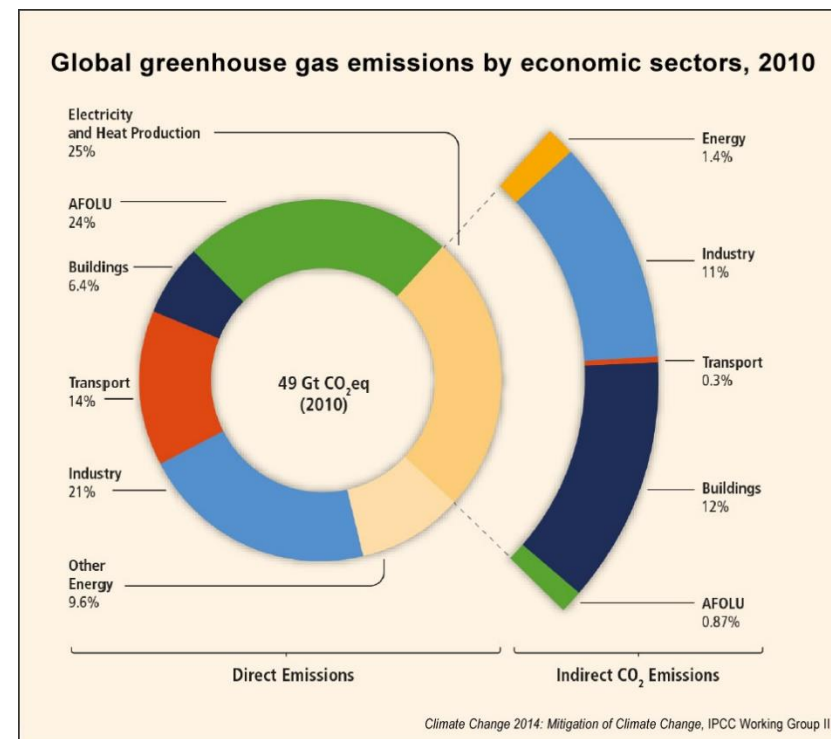
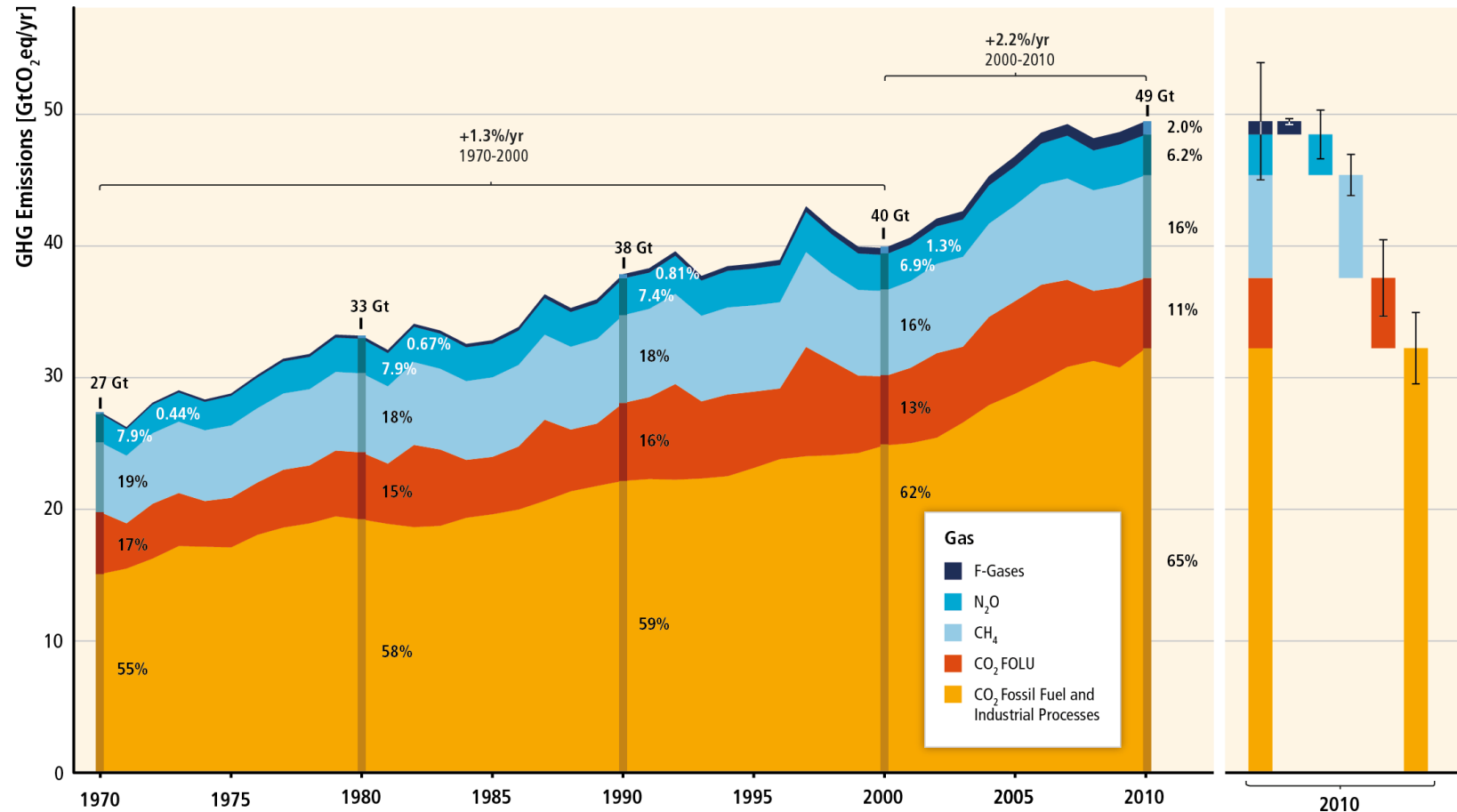
Increasing global averaged surface temperatures



IPCC WGI 5th Assessment Report (2013)

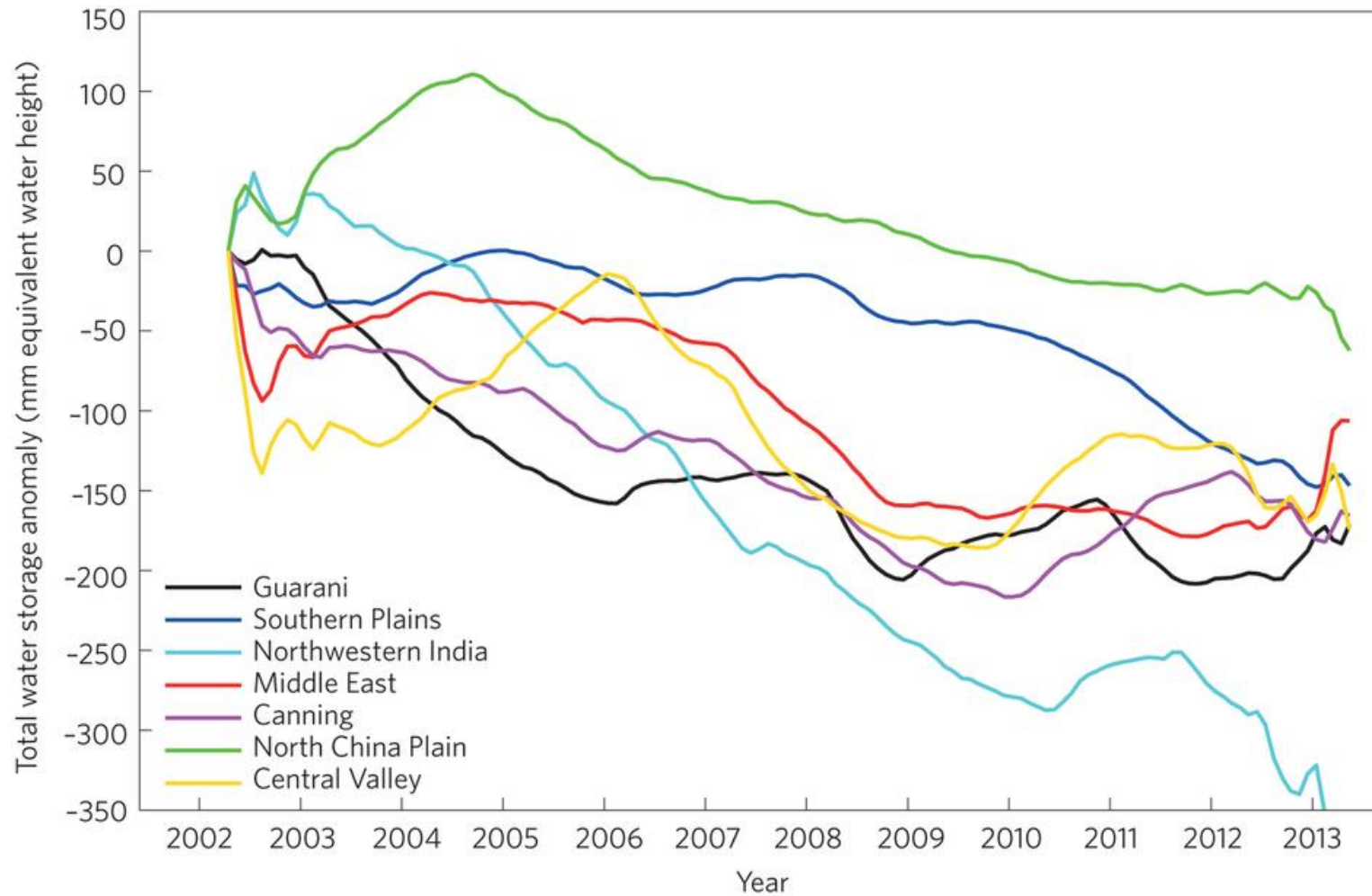
Increasing greenhouse gas emissions – 1/4 from ag & forest sector

Total Annual Anthropogenic GHG Emissions by Groups of Gases 1970-2010



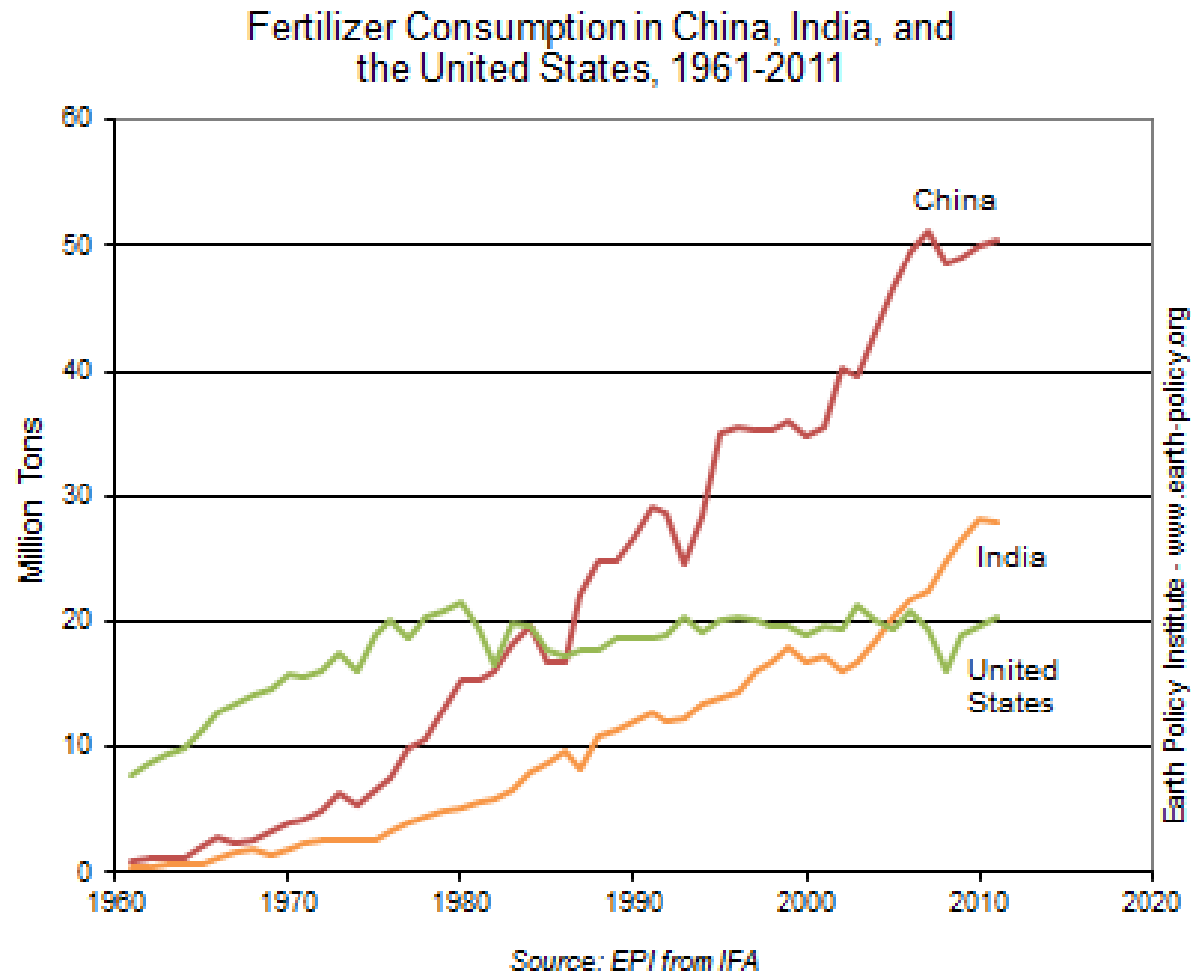
Source: IPCC5, 2014

Depletion of resources (here: groundwater extraction in India)



Source: Famiglietti, 2014

Increasing 'hunger' for energy

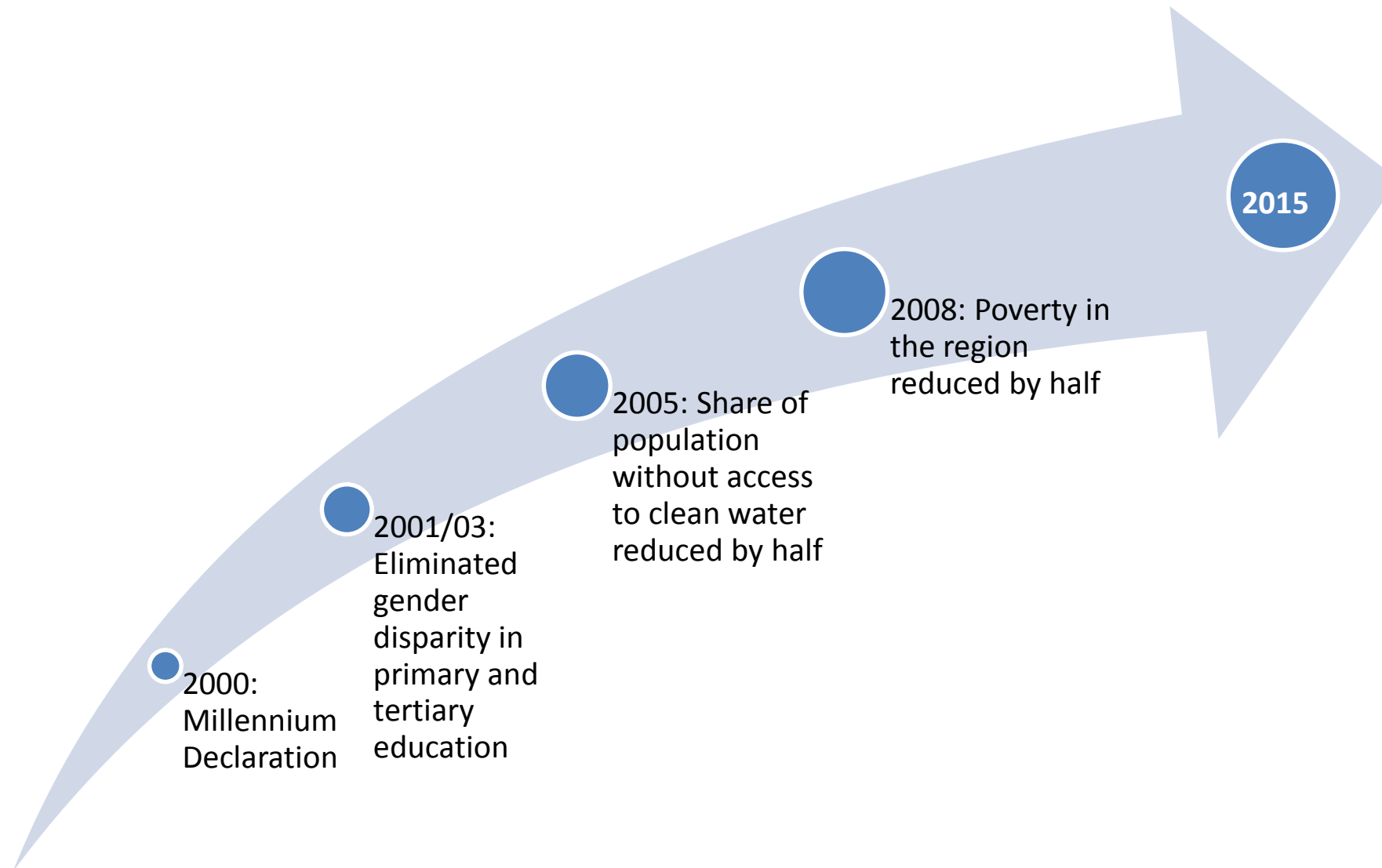


Source: Brown, 2014

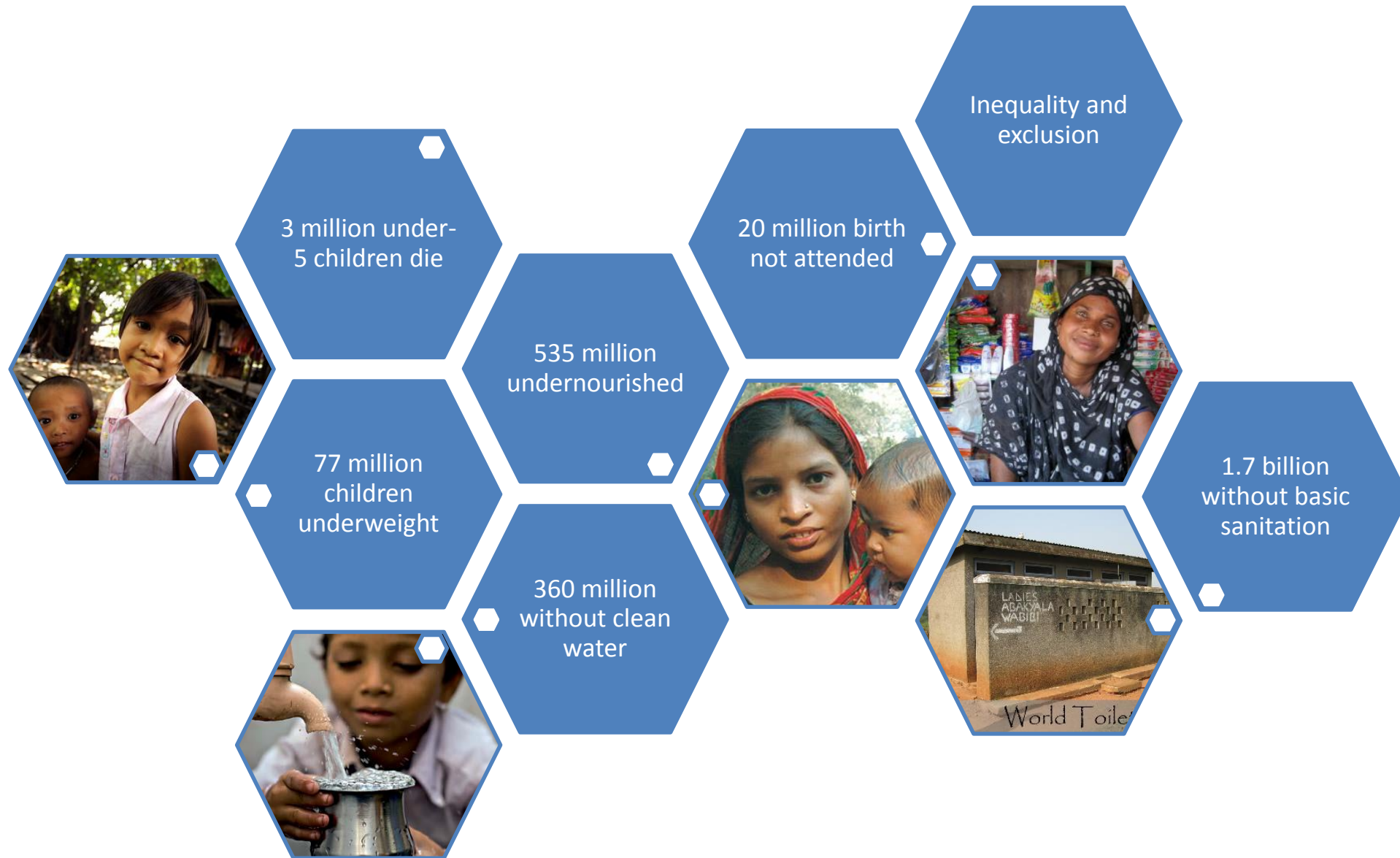
From MDGs....

- ❑ Greatest achievement of the MDGs: mobilization of broad support for a global development agenda
- ❑ MDGs drove considerable social progress from 2000-2015
 - Targets fell short of expectations
 - World pursued unsustainable consumption and production paths
 - Consequently, MDGs and sustainable development were on different “tracks”
- ❑ Three major criticisms of the MDGs
 - developed by a small group of experts
 - not member state driven
 - Some issues completely overlooked (ie food production)

MDG's in Asia-Pacific



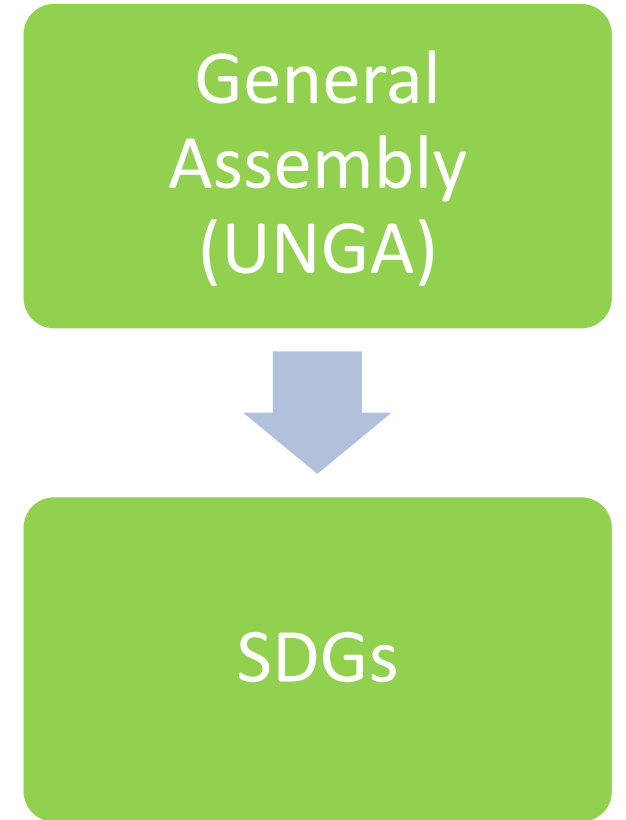
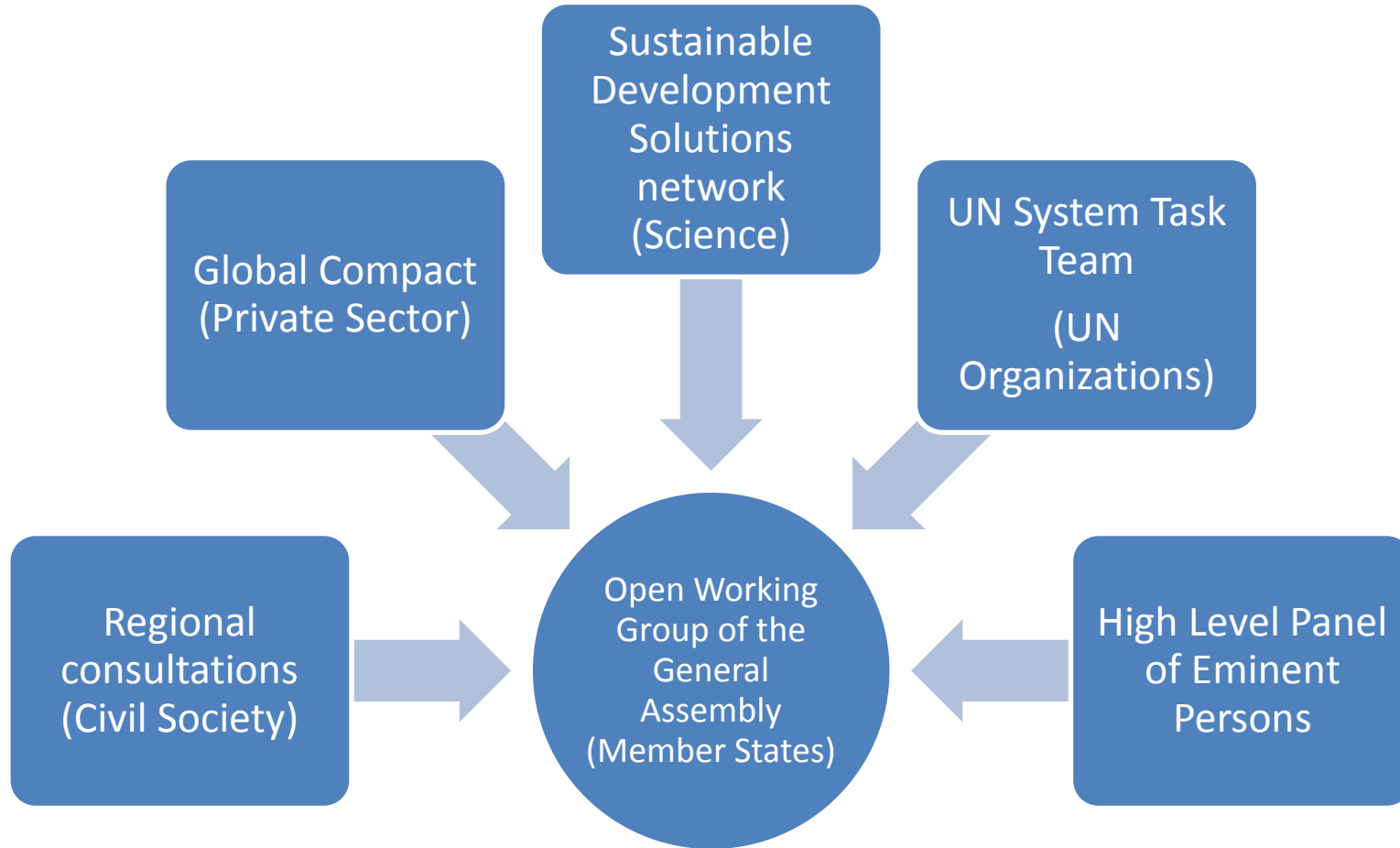
Asia-Pacific: Unfinished Agenda



...to the post-2015 sustainable development framework

- ❑ Deep transformations in the development agenda:
 - Major rethink of the framework for sustainable development and means of implementation
 - Fundamental changes to deal with root causes - not just symptoms
 - Universality of SDGs
 - Mobilizing partnership and businesses to adopt and promote sustainable development
- ❑ Convergence, reinforcement and integration of MDG and SDG tracks are key, with latter including elements of unfinished business

Proliferation of Process



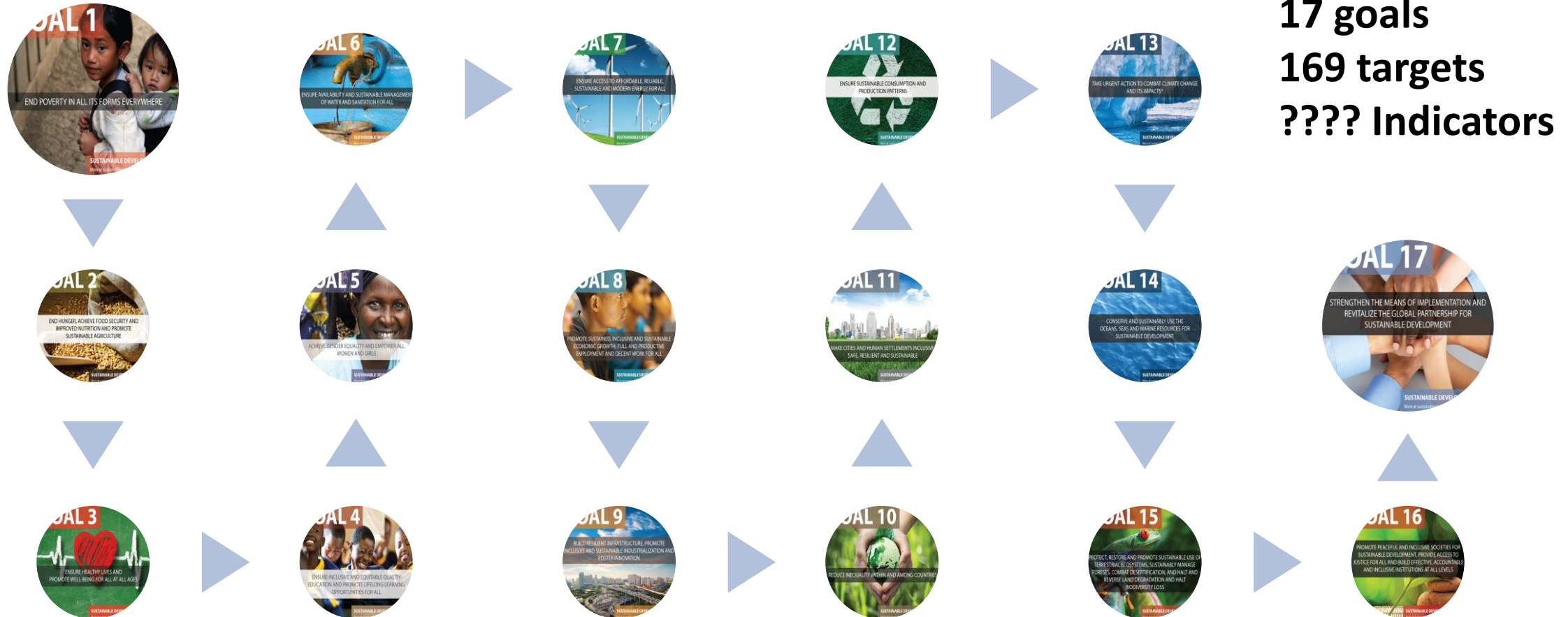
Open Working Group for Sustainable Development Goals

- ❑ Rio +20 Conference mandated follow up process to come up with SDGs to integrate into the post-2015 Framework
- ❑ OWG is officially 30 Member State Seats; but shared by up to three member states: “troikas”
- ❑ Two stage deliberations began in March of 2013 and concluded with report to UNGA in September 2014
- ❑ UN intergovernmental process began in September 2014 to agree the successor framework to the MDGs (expire in 2015)

Next steps

- ▣ All inputs from last two years have been presented to the UNGA in September 2014
- ▣ The UNGA will agree on a way of working to produce a Post 2015 Sustainable Development Framework by September 2015

17 Sustainable Development Goals



Some issues to consider

- ❑ Ownership
- ❑ Accountability
- ❑ Dimensions of sustainability
- ❑ Trade-offs
- ❑ Data & measurement

How to ensure ownership?

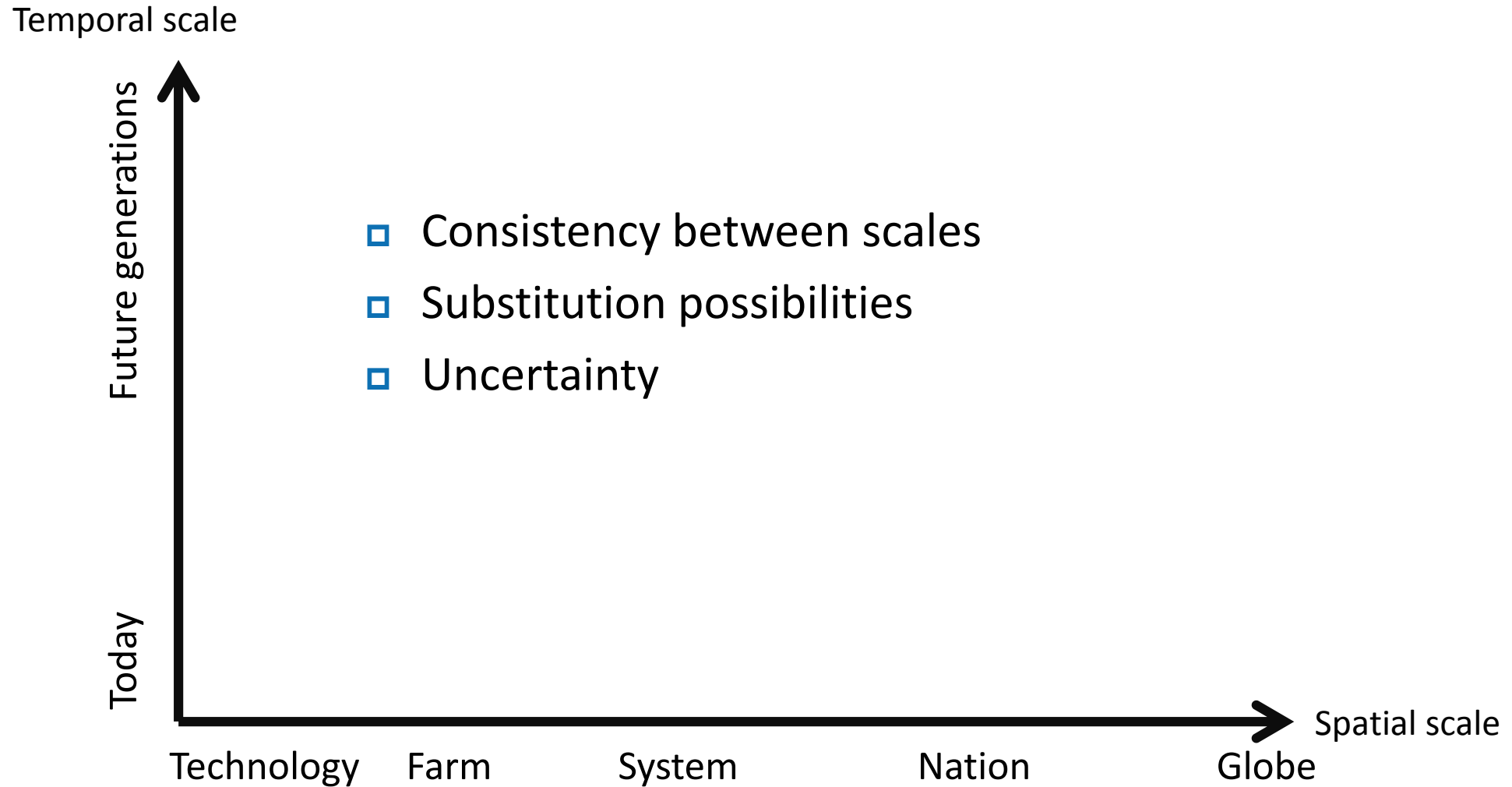
- ❑ Some of the limitations of the MDG process show:
- ❑ Mainstream SDG's in national development planning, monitoring and reporting
- ❑ Need for people's participation in review process
 - Enhance parliamentary oversight of the progress
 - Establish mechanisms for the private sector to engage
 - Civil society participation

- ❑ Dynamic relationship between rights and responsibilities of countries and people
- ❑ Different dimensions
 - Mutual accountability between developed and developing countries
 - Accountability of countries towards their people
 - Mechanisms of accountability between national and international level
- ❑ Learning from the MDG process
 - Need for people's participation in review process
 - Need for recommendations that can be monitored and followed-up

Different understandings of sustainability

- ❑ Does not have an intrinsic value
- ❑ Different assumptions about values, i.e.:
 - Relationship between economic development and human wellbeing
 - How the future should be ordered differently from today
 - Relationship between resource allocation and level of consumption
- ❑ Different views on what should be sustained
- ❑ Needs a dialogue

Dimensions of sustainability



- ❑ Sustainable development (sustainable agriculture) does not necessarily result in win/win outcomes
- ❑ Competing goals/ objectives
 - Productivity/ income, environmental sustainability, and social objectives
 - Production of food to feed a growing population vs. protection of habitat
 - Productivity needs and crop uniformity requirements versus biodiversity
 - Efficiency/equity
 - Specialization/flexibility
 - Long-term/short-term

- ❑ Need better data – “Data Revolution”
- ❑ Subnational disaggregation
- ❑ Use of “big data” – social media and other digital data
- ❑ Open data and citizens engagement

Measurement issues

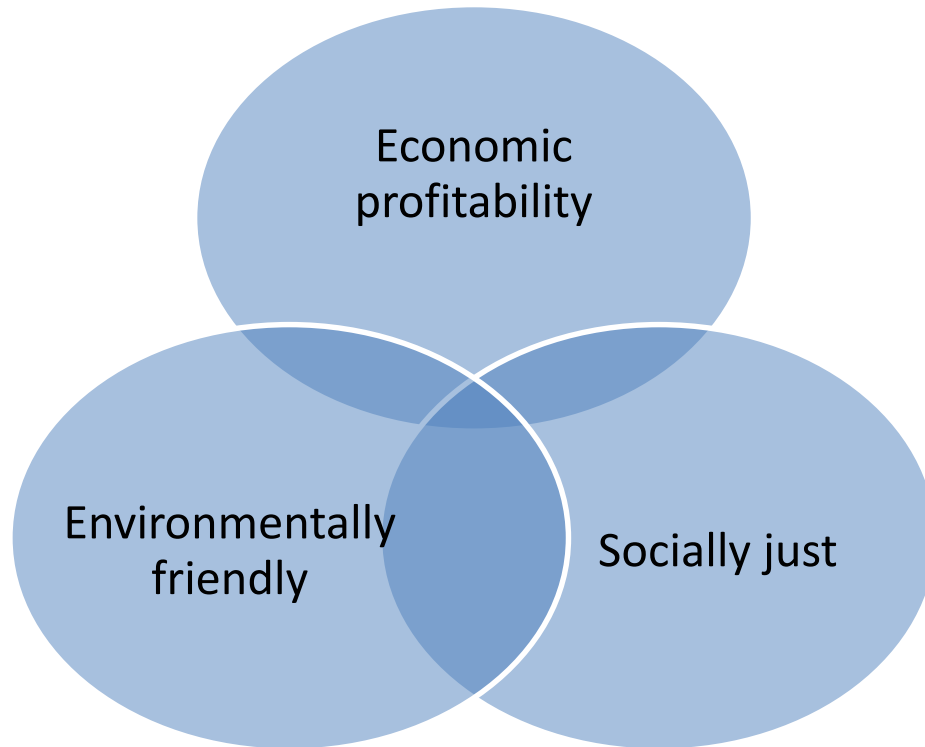
- ❑ Meaningful, sensitive to the most critical aspects of a target
- ❑ Reliable in terms of available data and measurement protocols
- ❑ Easy to understand by policy makers, investors and other stakeholders.
- ❑ Allow for disaggregation, i.e., targets to be measured in various dimensions, such as by geography, socioeconomic status, gender, age, and ethnicity
- ❑ But... “good metrics” not yet available



Why sustainable agriculture?

- ❑ More people will need more food in the future
 - Estimated 2 billion increase by 2050
 - More affluent population
- ❑ Agriculture uses resources that are becoming scarce
 - Land, soil, water, nutrients
- ❑ Farming remains key source of income
 - 75% of the world's poor in developing countries live in rural areas
 - In developing countries 29% of GDP, 65% of jobs
- ❑ Agriculture contributes to climate change – and suffers from effects of climate change

3 dimensions of sustainable agriculture



- Economic profitability
 - Ensure farm & household viability
 - Provide employment security
 - Ensure economic security of the community
- Environmentally friendly
 - Use renewable resources within regenerative capacity
 - Create substitutes for loss of non-renewable resources
 - Limit pollution to sink function of nature
 - Maintain ecosystem stability and resilience
- Socially just
 - Not compromise the ability of future generations capability to meet their needs
 - Recognize the right for development
 - Ensure equal treatment of women and men
 - Ensure decent labor conditions

Goal 2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

- by 2030 **end hunger** and ensure access by all people, in particular the poor and people in vulnerable situations including infants, to **safe, nutritious and sufficient food all year round**
- by 2030 **end all forms of malnutrition**, including achieving by 2025 the internationally agreed targets on stunting and wasting in children under five years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women, and older persons
- by 2030 **double the agricultural productivity and the incomes** of small-scale food producers, particularly women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets, and opportunities for value addition and non-farm employment
- by 2030 **ensure sustainable food production systems and implement resilient agricultural practices** that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters, and that progressively improve land and soil quality
- by 2020 **maintain genetic diversity of seeds**, cultivated plants, farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at national, regional and international levels, and ensure access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge as internationally agreed

Goal 2 – cross-cutting targets

- ❑ **increase investment**, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development, and plant and livestock gene banks to enhance agricultural productive capacity in developing countries, in particular in least developed countries
- ❑ **correct and prevent trade restrictions** and distortions in world agricultural markets including by the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round
- ❑ adopt measures to **ensure the proper functioning of food commodity markets** and their derivatives, and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility

A (small) selection of proposed indicators

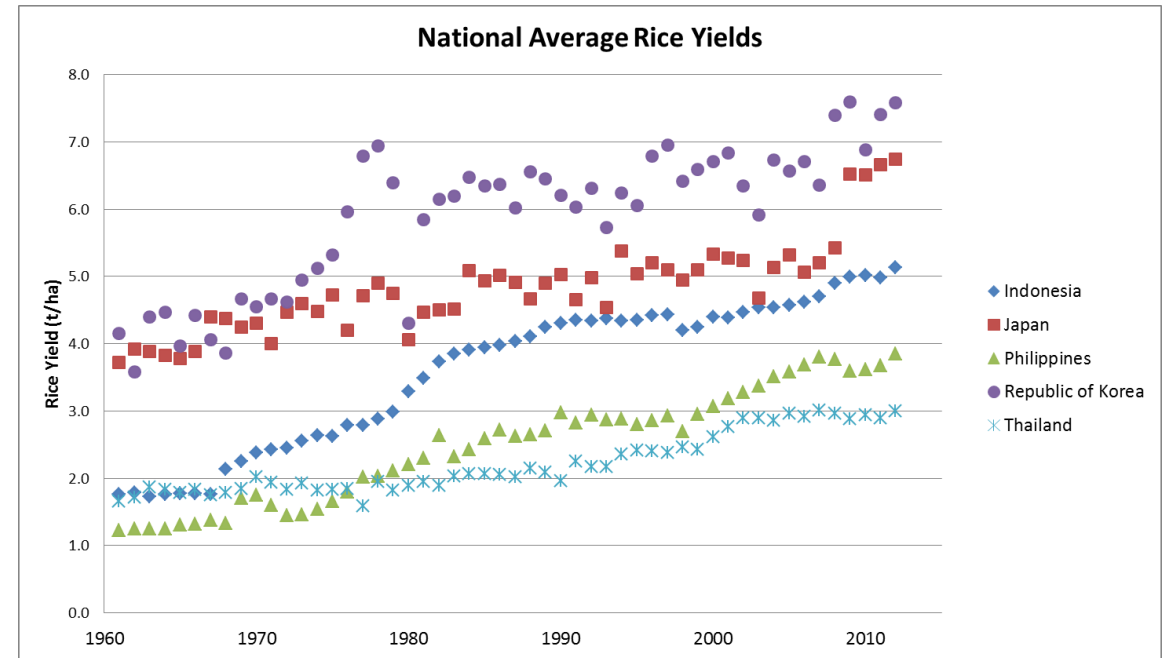
- ❑ Crop yield gaps (actual yield as % of yield potential)
- ❑ Crop nitrogen use efficiency (%)
- ❑ Share of agricultural produce loss and food waste (% of total food production)
- ❑ Proportion of farmers covered by flood, drought and heat protection systems (%)
- ❑ Greenhouse gas emissions from agriculture
- ❑ Adoption of GHG saving management practices in agriculture (% of area)
- ❑ Genetic diversity of cultivated plant species
- ❑ Share of calories from non-staple foods (%)

Some transformative changes

- ❑ Reducing the yield gap
- ❑ Increasing production limits
- ❑ Reducing waste
- ❑ Shifting to healthier diets
- ❑ Improving knowledge management

Closing the yield gap

- Difference between realized productivity and the best yield that could be achieved
 - Production-related: Seeds, water, nutrients, pest management, soils, biodiversity, knowledge
 - Market-related: transport, infrastructure, market distortions, information
- Solutions must be location-specific
- Danger of negative externalities on environment



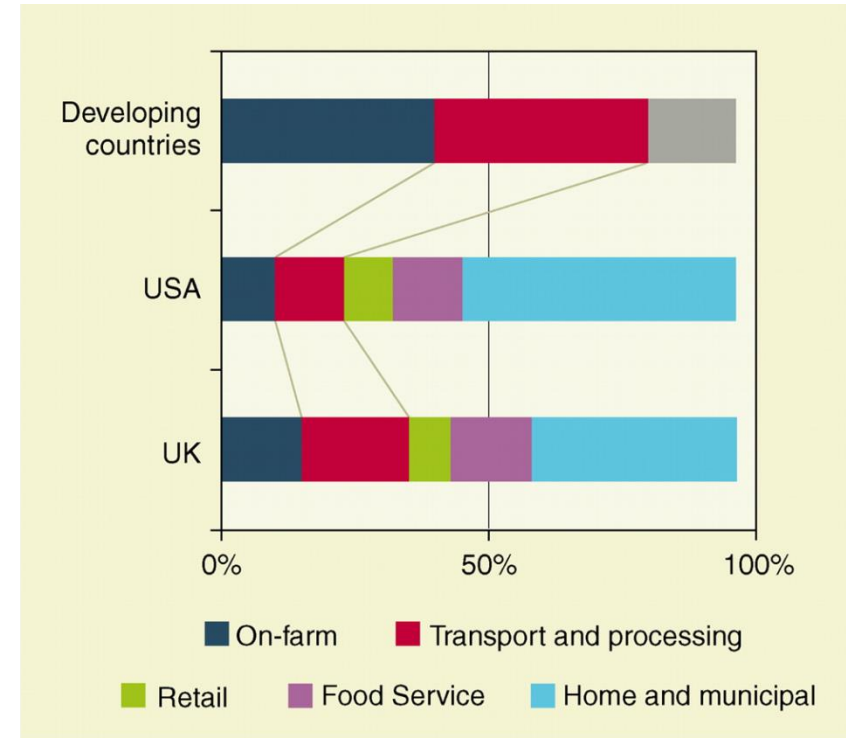
Source: FAO, 2014

Increasing production limits

- ❑ Genetic modifications are potentially valuable
 - Resistance to pests
 - Biofortification
 - Tolerance to extreme weather conditions
 - Increased photosynthetic efficiency
- ❑ Requires greater public acceptance and trust
- ❑ Rigorous assessment of environmental and food safety issues
- ❑ Governance challenge: incentivize wide access while encouraging a competitive and innovative private sector

Reducing waste

- Up to 25% of grains and 50% of horticulture produce lost from farm to fork
- Feasible to half current losses, can save use of 17% of arable land
- Requires enhanced investment
 - Markets
 - Roads
 - Cold chains
 - Storage
 - Market information



H C J Godfray et al. Science 2010;327:812-818



Changing diets

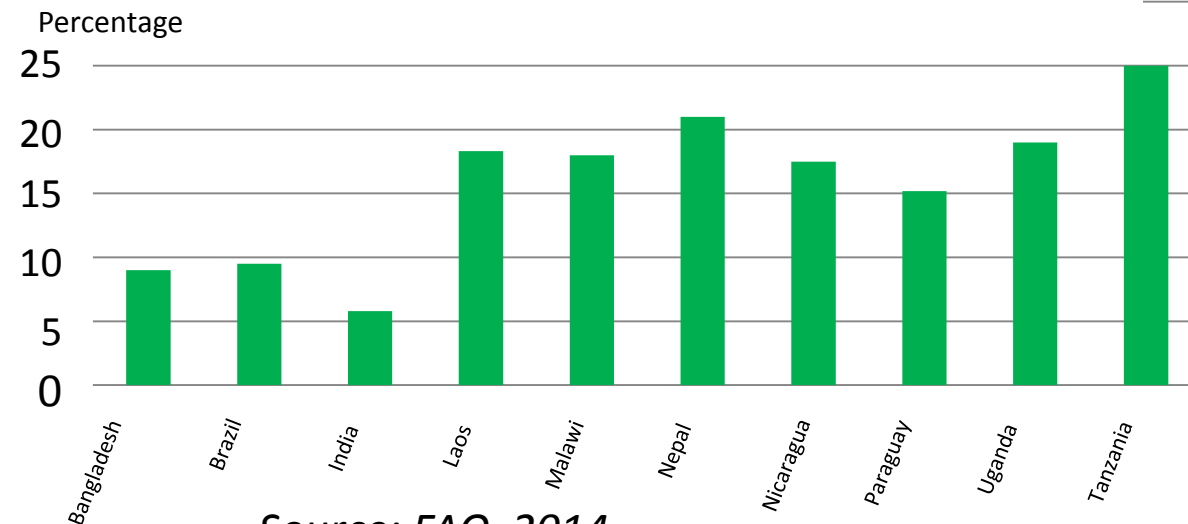
- ❑ Increasing per capita incomes, growing demand for livestock products
→ nutrition transition
- ❑ Low conversion efficiency of plant into animal matter (~10%)
- ❑ Support change towards well-balanced diets
 - Reduce consumption of meat
 - Increase proportion that is derived from more efficient sources
 - Shift towards more diverse diets
- ❑ Supportive policies and associated actions not well understood



Improving knowledge management

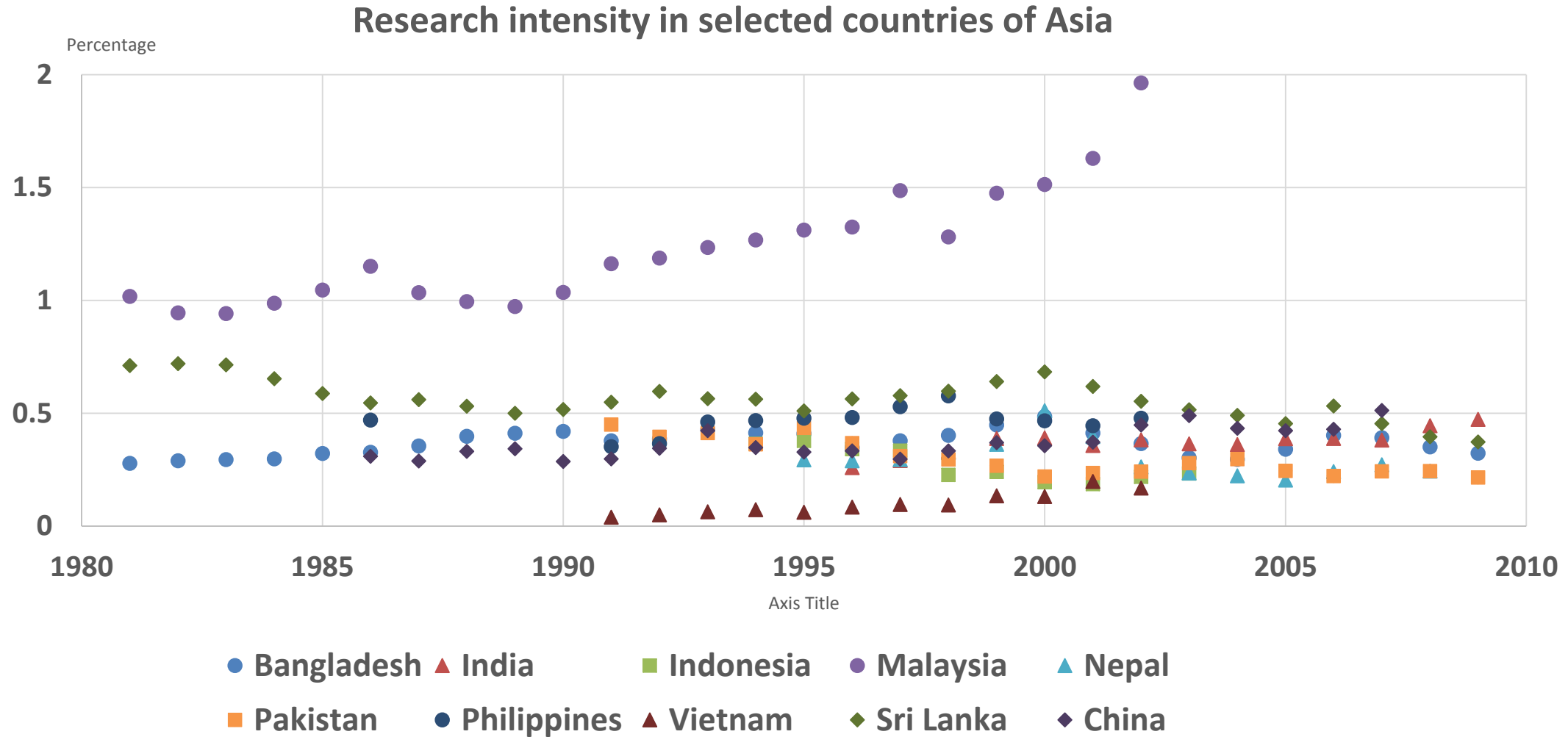
- ❑ Complex set of R&D objectives requires new approach to innovation to ‘harvest’ knowledge
- ❑ Need to address needs of small farmers through stronger focus on capacity building and exchange of knowledge
 - Improve research to extension linkages
 - Strengthen extension and advisory services
 - Invest into education and training
- ❑ Public sector plays an important role for coordination, regulation and monitoring

Shares of farms accessing information through agricultural extension, selected countries most recent years



Source: FAO, 2014

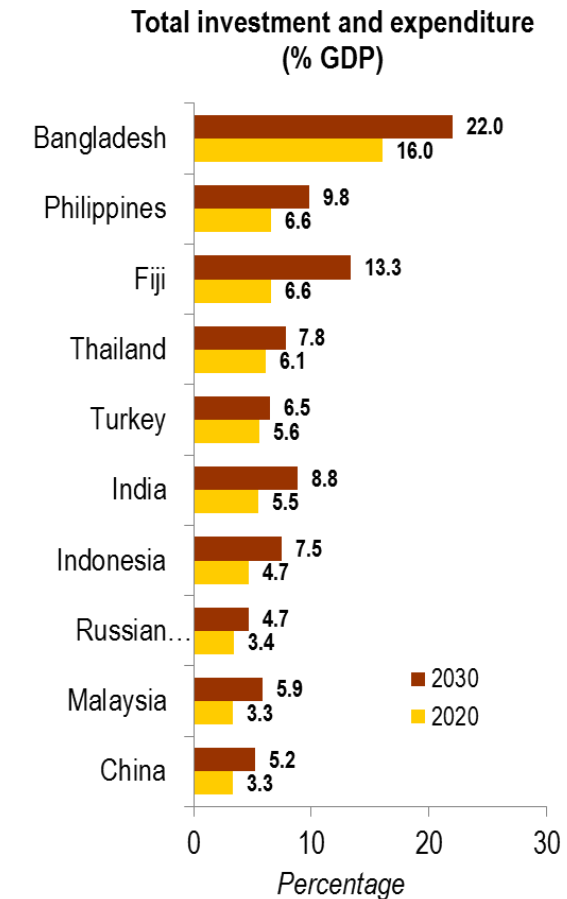
Low public research spending in Asia



Source: based on data from FAO and World Bank, 2014

Is investment into sustainable development affordable?

- Public expenditure and investment requirements to implement a policy package for sustainable development vary across countries
- Total investment needs of package of policies 5% to 8% of GDP by 2030
- Public investment needed to deliver policies to sustain growth and promote inclusive and sustainable development
- High returns to investment into agricultural research, technology transfer, farm extension, advisory services





Thank you!



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Supporting Sustainable Agriculture in Asia and the Pacific**