



THE FUTURE
IS NOW

SCIENCE FOR ACHIEVING
SUSTAINABLE DEVELOPMENT



GLOBAL SUSTAINABLE
DEVELOPMENT REPORT

2019



1. A decisive decade ahead

*Sounding the alarm bell:
The need to scale-up and
accelerate implementation*

Business-as-usual approaches

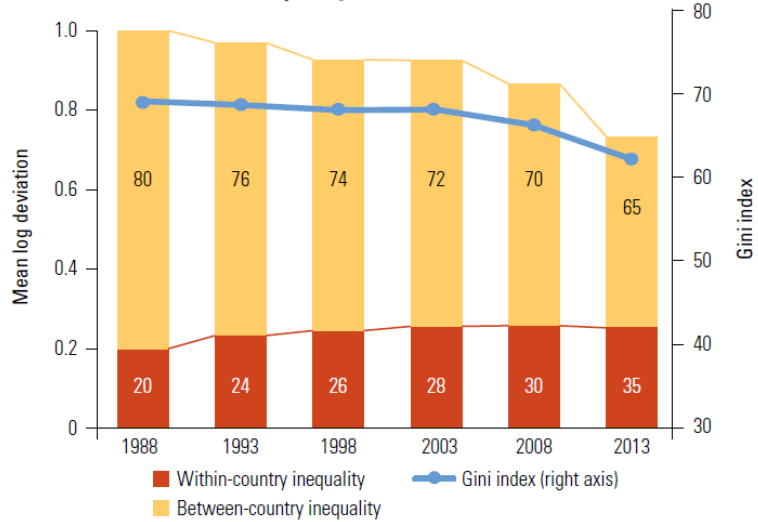
| GOAL | WITHIN 5% | 5-10% | >10% | NEGATIVE LONG-TERM TREND |
|---------|---|--|---|--|
| Goal 1 | | 1.1. Eradicating extreme poverty | 1.3. Social protection for all | |
| Goal 2 | | 2.1. Ending hunger (undernourishment) | 2.2. Ending malnutrition (stunting) 2.5. Maintaining genetic diversity 2.a. Investment in agriculture* | 2.2. Ending malnutrition (overweight) |
| Goal 3 | 3.2. Under 5 mortality 3.2. Neonatal mortality | | 3.1. Maternal mortality 3.4. Premature deaths from non-communicable diseases | |
| Goal 4 | 4.1 Enrolment in primary education | 4.6 Literacy among youth and adults | 4.2. Early childhood development 4.1 Enrolment in secondary education 4.3 Enrolment in tertiary education | |
| Goal 5 | | | 5.5. Women political participation | |
| Goal 6 | | 6.2. Access to safe sanitation (open defecation practices) | 6.1. Access to safely managed drinking water 6.2. Access to safely managed sanitation services | |
| Goal 7 | | 7.1. Access to electricity | 7.2. Share of renewable energy* 7.3. Energy intensity | |
| Goal 8 | | | 8.7. Use of child labour | |
| Goal 9 | | 9.5. Enhancing scientific research (R&D expenditure) | 9.5. Enhancing scientific research (number of researchers) | |
| Goal 10 | | | 10.c. Remittance costs | Inequality in income** |
| Goal 11 | | | 11.1. Urban population living in slums* | |
| Goal 12 | | | | 12.2. Absolute material footprint, and DMC* |
| Goal 13 | | | | Global GHG emissions relative to Paris targets** |
| Goal 14 | | | | 14.1. Continued deterioration of coastal waters* 14.4. Overfishing* |
| Goal 15 | | | | 15.5. Biodiversity loss* 15.7. Wildlife poaching and trafficking* |
| Goal 16 | | | 16.9 universal birth registration * | |

* target not specified ** based on most recently available data

Understanding the systemic challenges

Raising inequalities

FIGURE 0.10 Global Inequality, 1988–2013



World Bank, 2016

Biodiversity loss

Extinctions since 1500

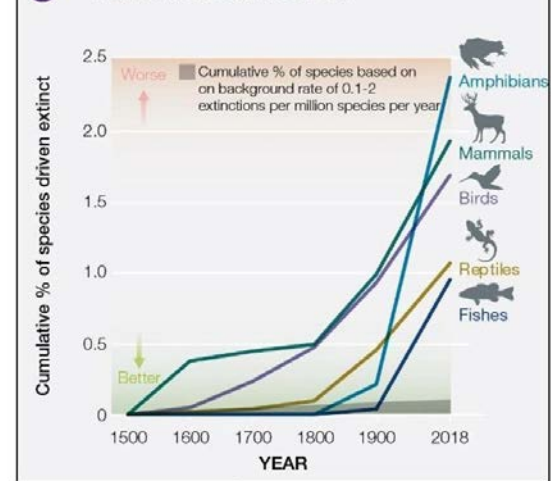
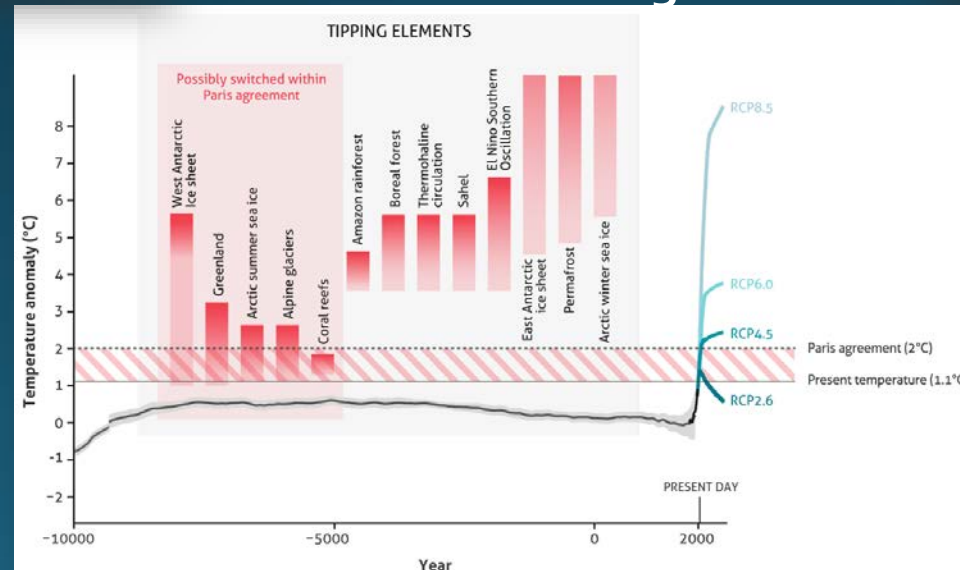


Figure 3 (B) - Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

IPBES, 2019

Climate change



Future Earth, 2017, based on Schellnhuber et al. 2016

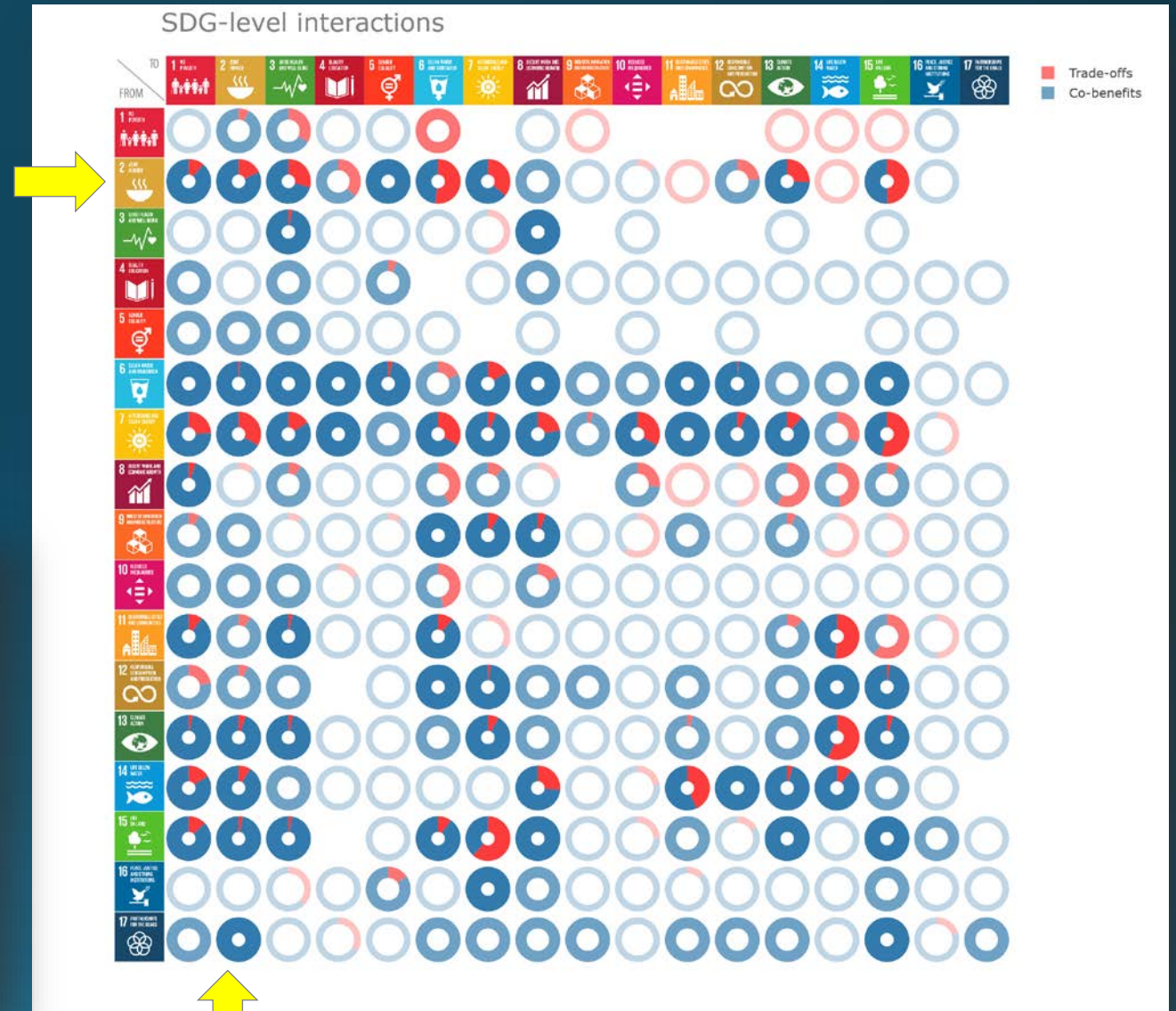


2. Knowledge-based transformations

Insight (a): From boxes to arrows – a systems perspective

Moving forward:

- *address trade-offs*
- *harness co-benefits*
- *turn vicious- into virtuous cycles*

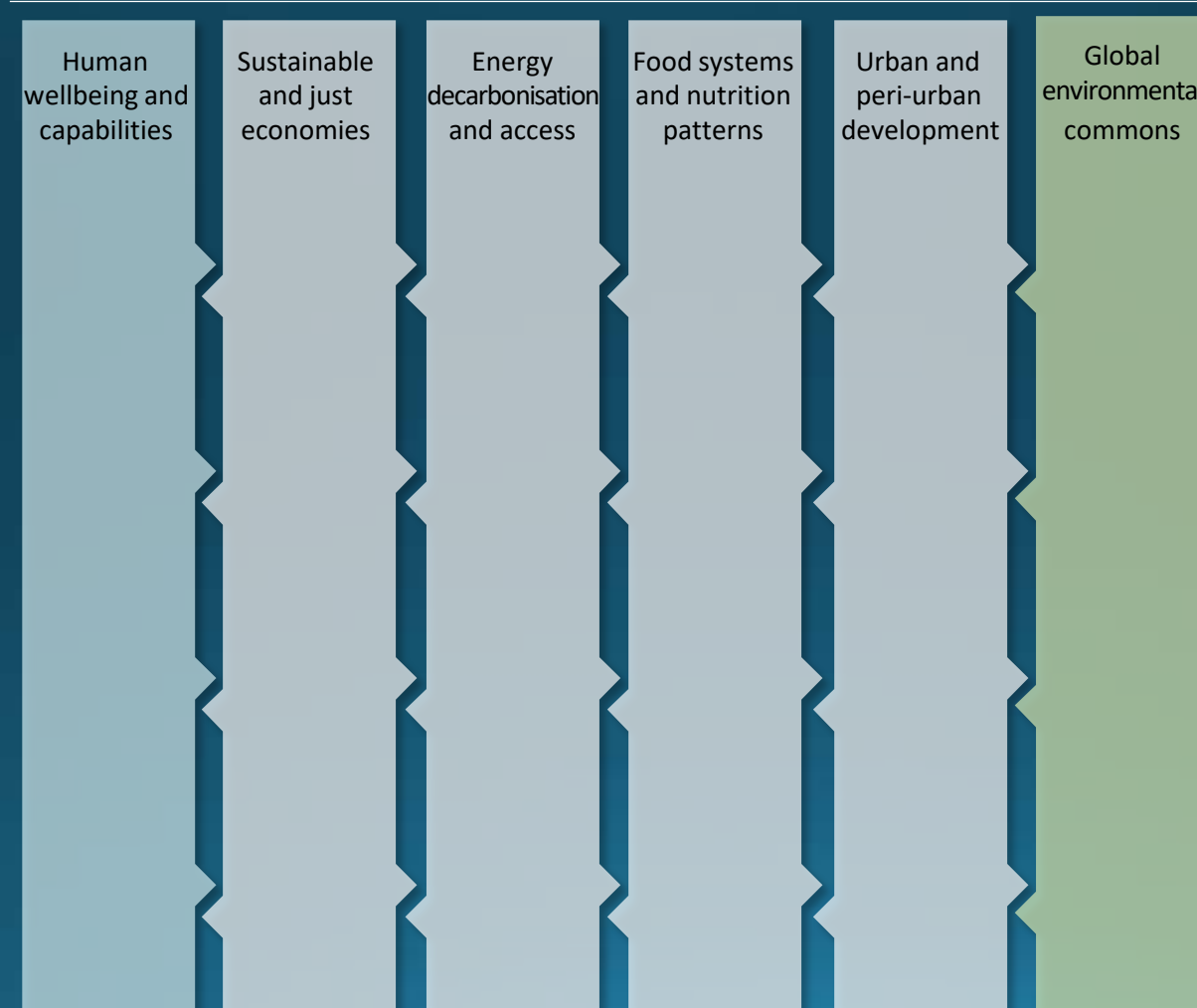




2. Knowledge-based transformations

Systemic entry points

ENTRY POINTS FOR TRANSFORMATION



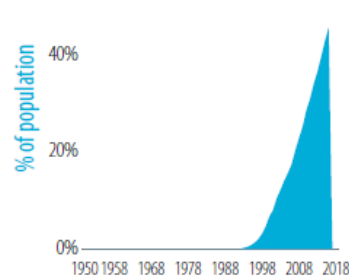


Insight (b): Levers for change in a hyper-connected world

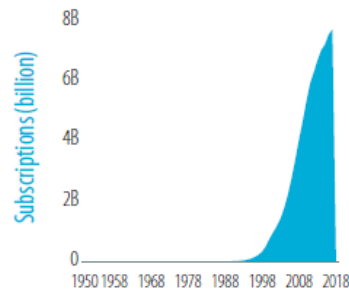


Flows of information

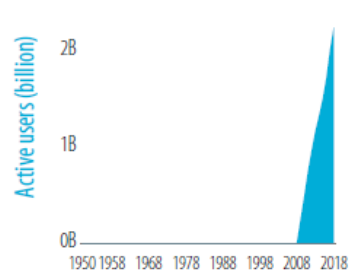
Individuals using the Internet



Mobile cellular subscriptions

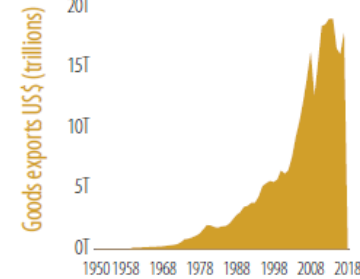


Monthly active Facebook users worldwide

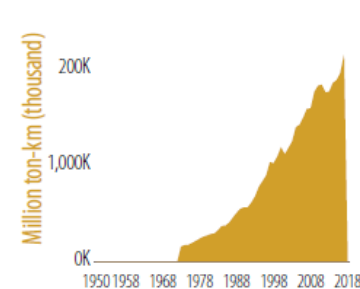


Flows of goods

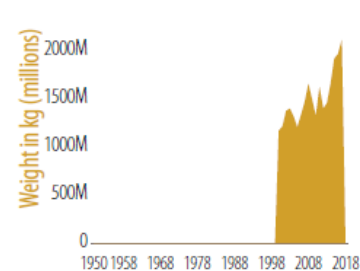
Merchandise exports



Air transport, freight

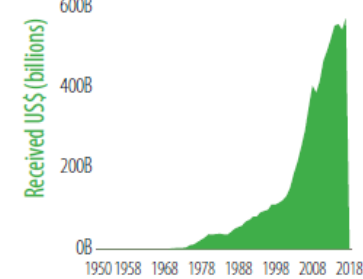


Rice imports by the EU

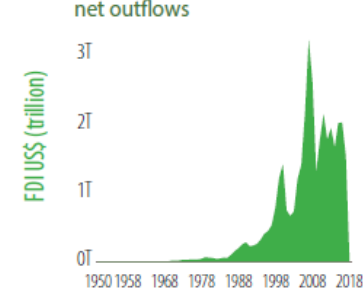


Flows of capital

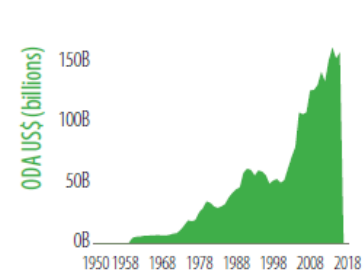
Personal remittances, received



Foreign direct investment, net outflows

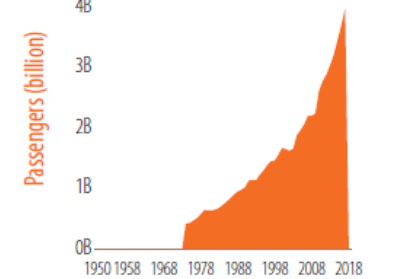


Net official development assistance received

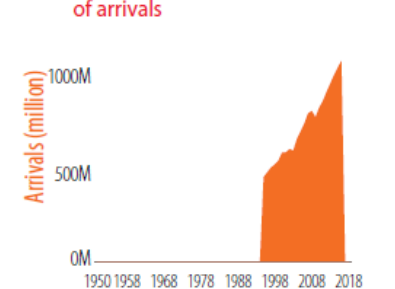


Flows of people

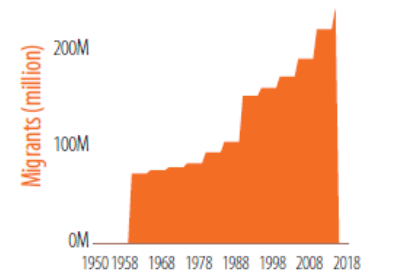
Air transport, passengers carried



International tourism, number of arrivals



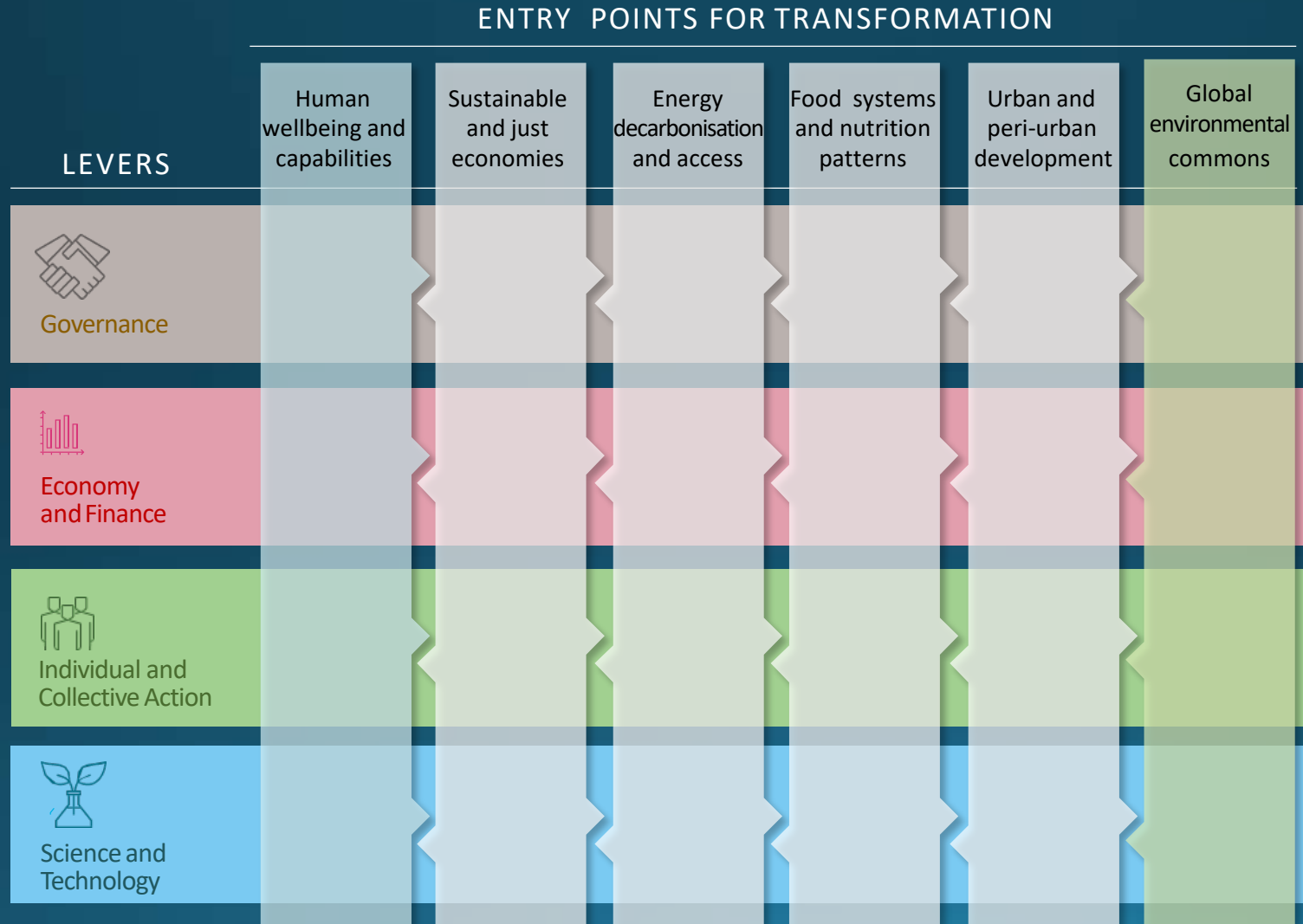
International migrant, total





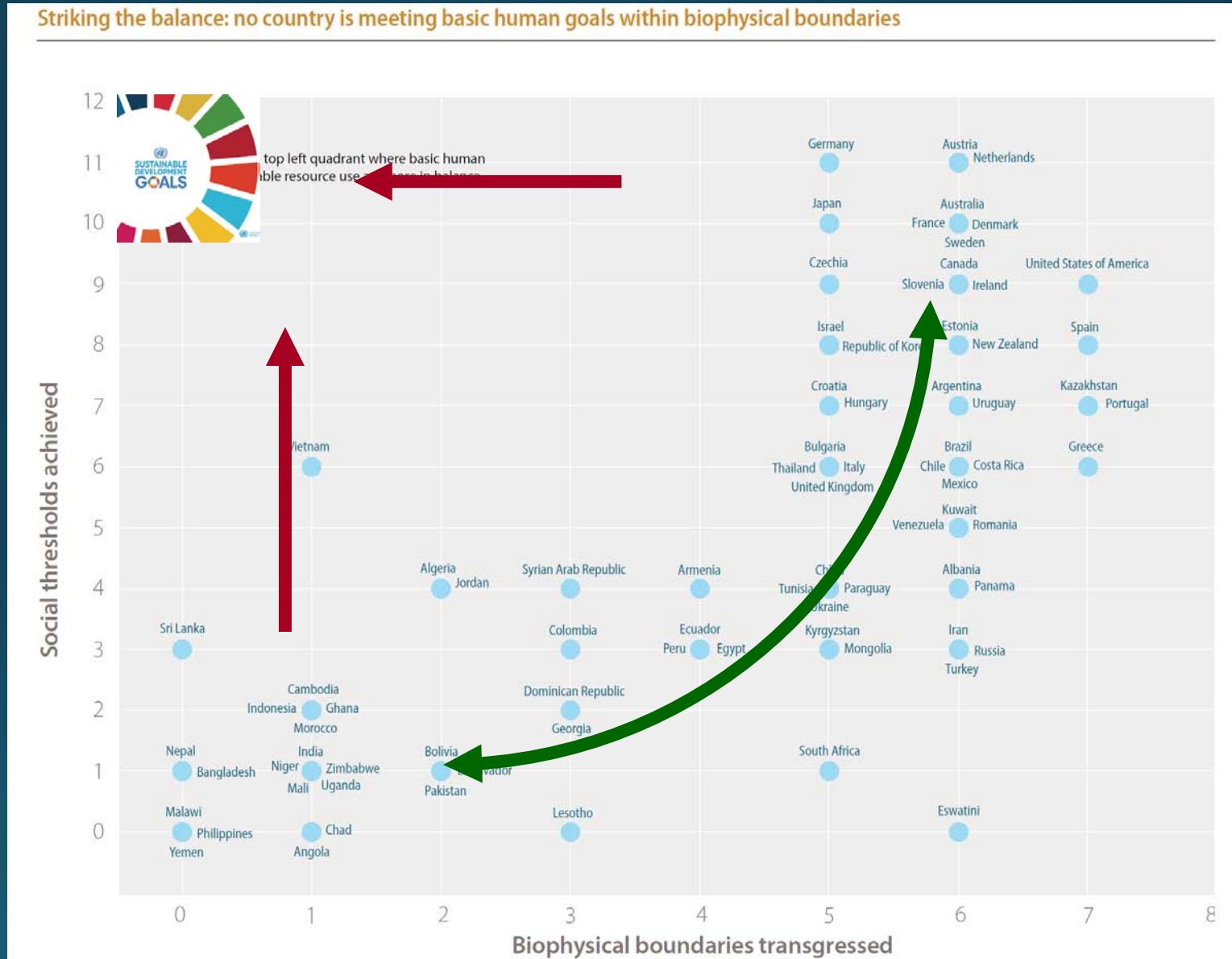
2. Knowledge-based transformations

Innovation through combined levers and new partnerships





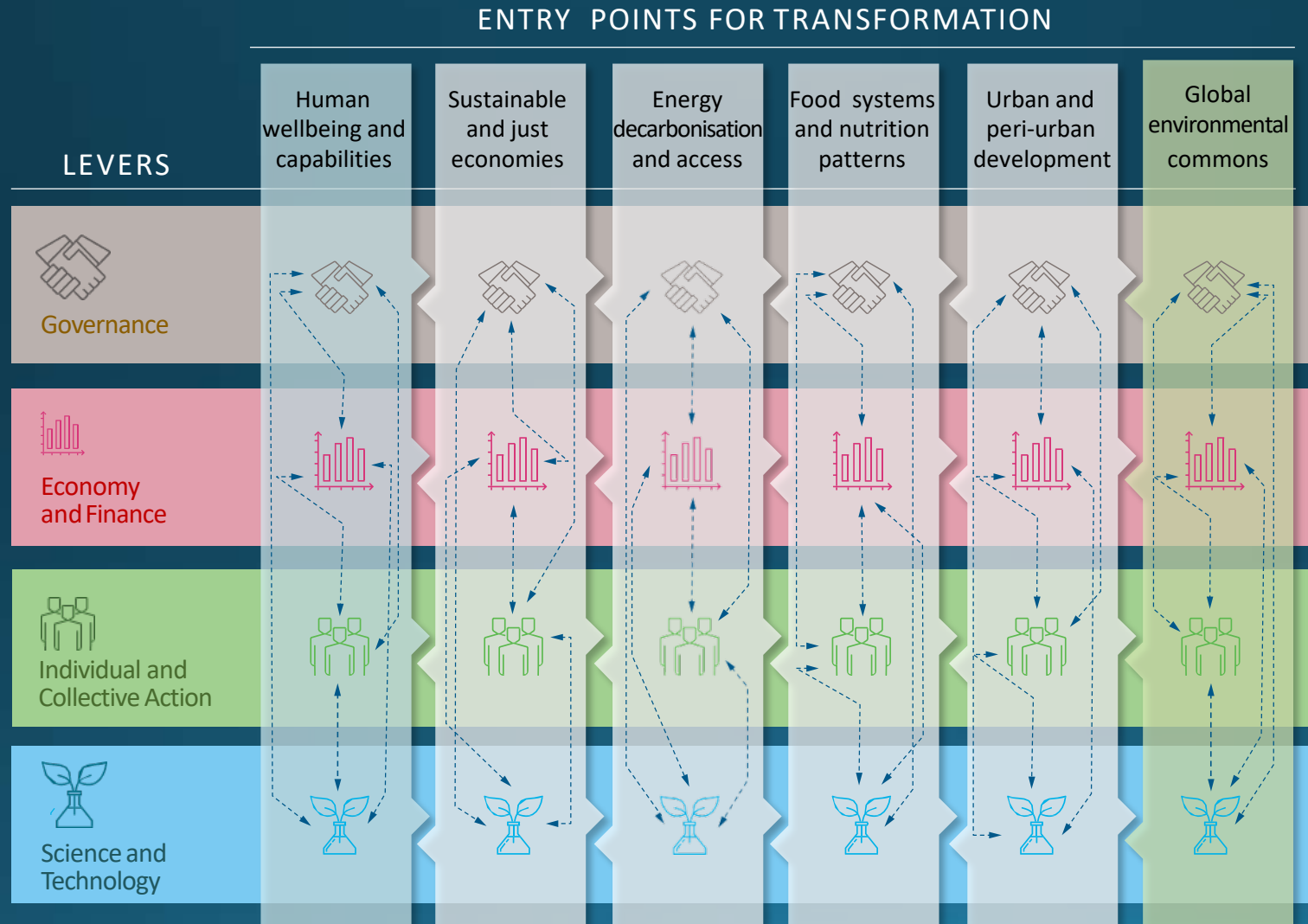
Insight (c): Context and universality matter!





2. Knowledge-based transformations

Context-specific pathways to transformation for sustainability

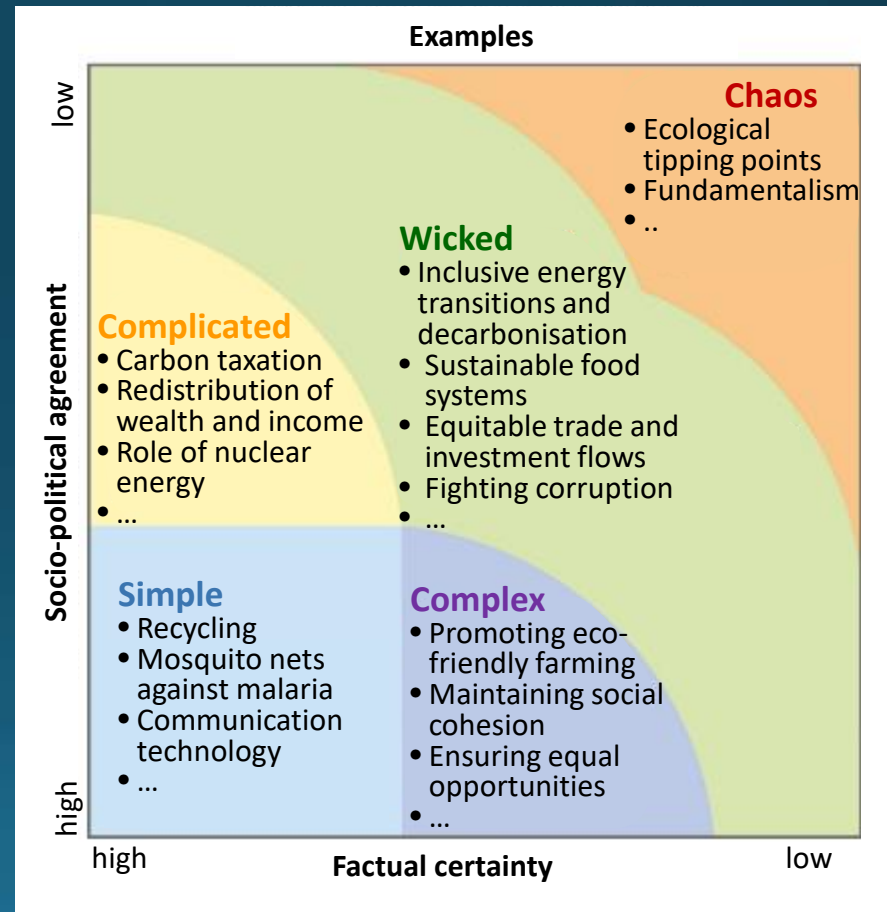
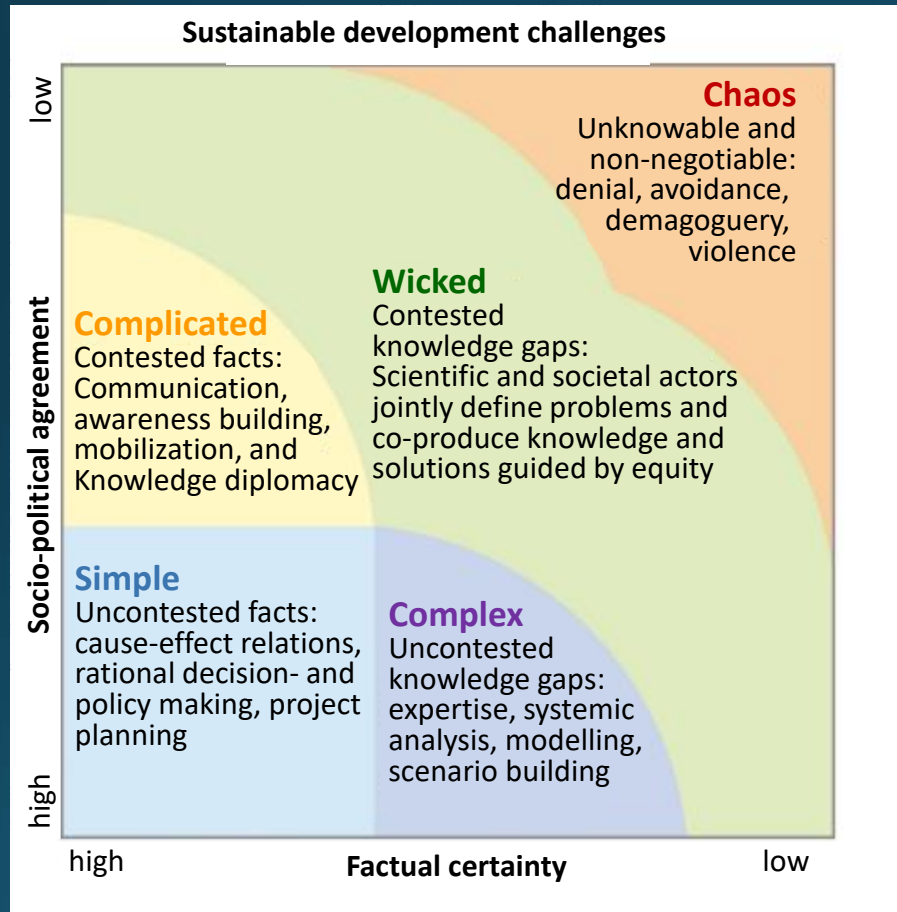


Each entry point:

- ✓ Impediments
- ✓ Levers
- ✓ Integrated and context-specific pathways
- ✓ Call to Action

Pathways to Transformation as context-specific configurations of levers to achieve transformation in each entry point

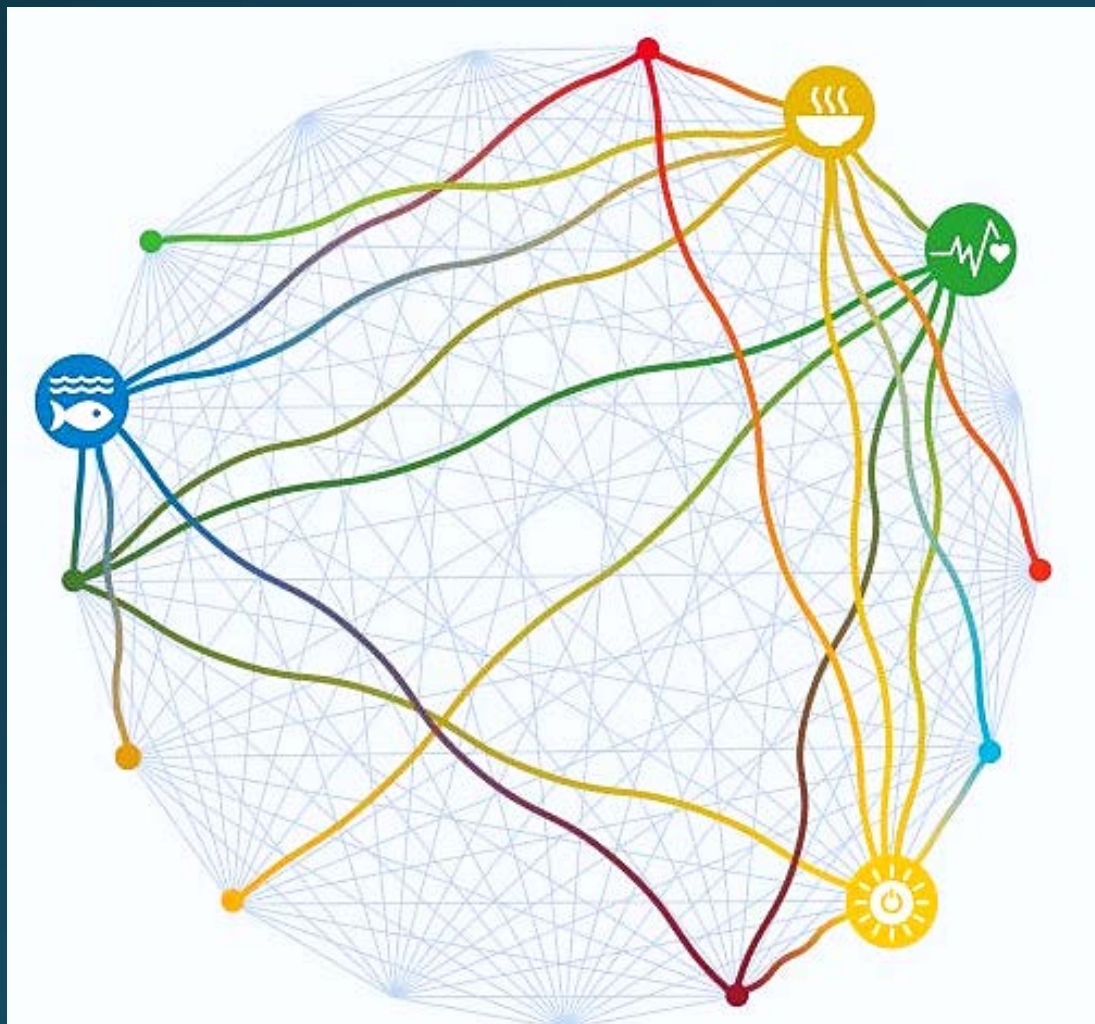
3. The role of science in knowledge-based transformations to sustainable development





Call to Action (1/3):

Harness existing knowledge for accelerated SDG implementation

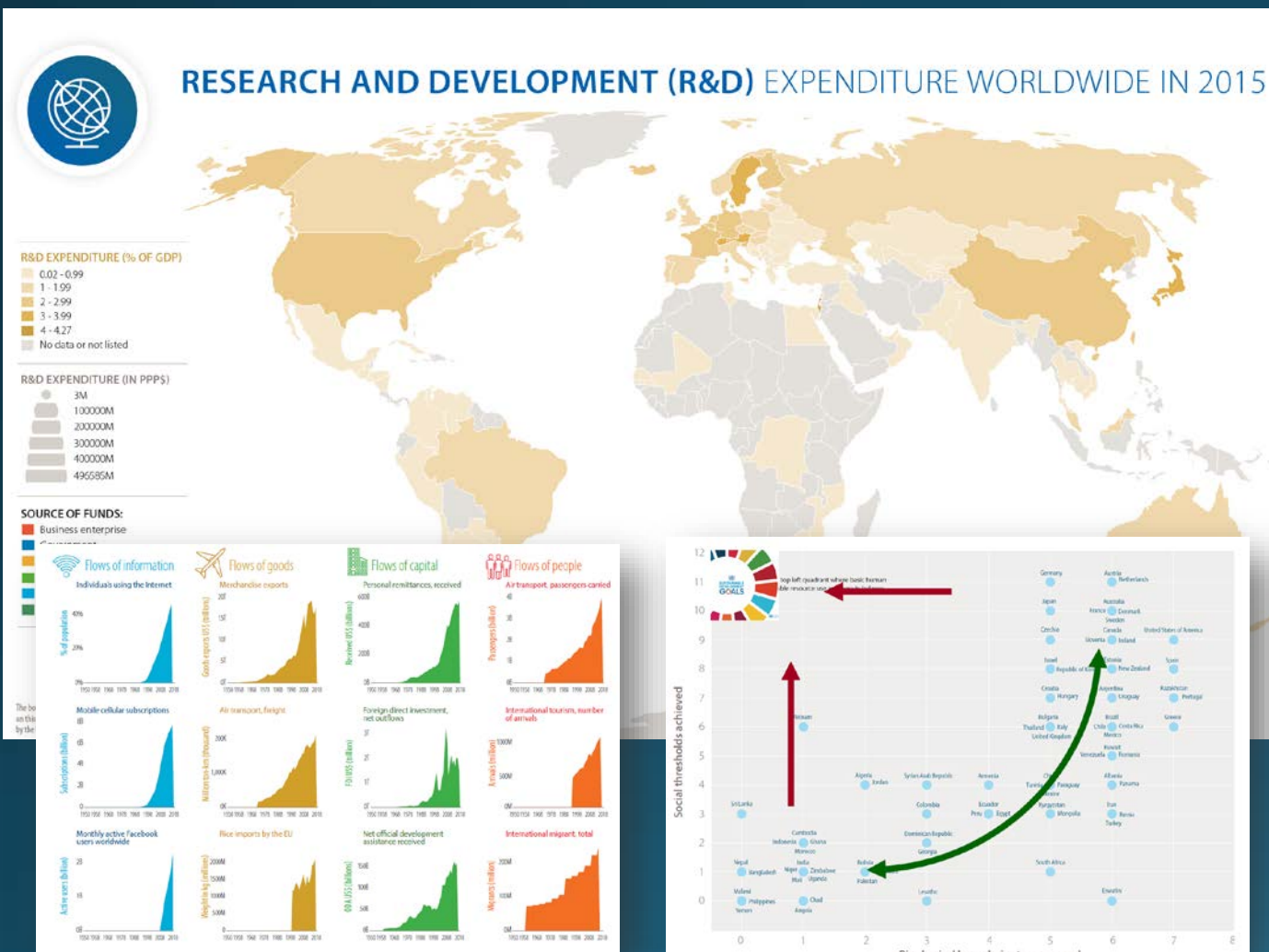


1. Continued support for international scientific assessments and synthesis and their increased coherence
2. Open access to scientific publications
3. Sustainable development councils and knowledge diplomacy
4. Support novel partnership of science (public-private-civil society) and building of competencies



5. Call to Action (2/3):

Boosting scientific knowledge in low and middle income countries

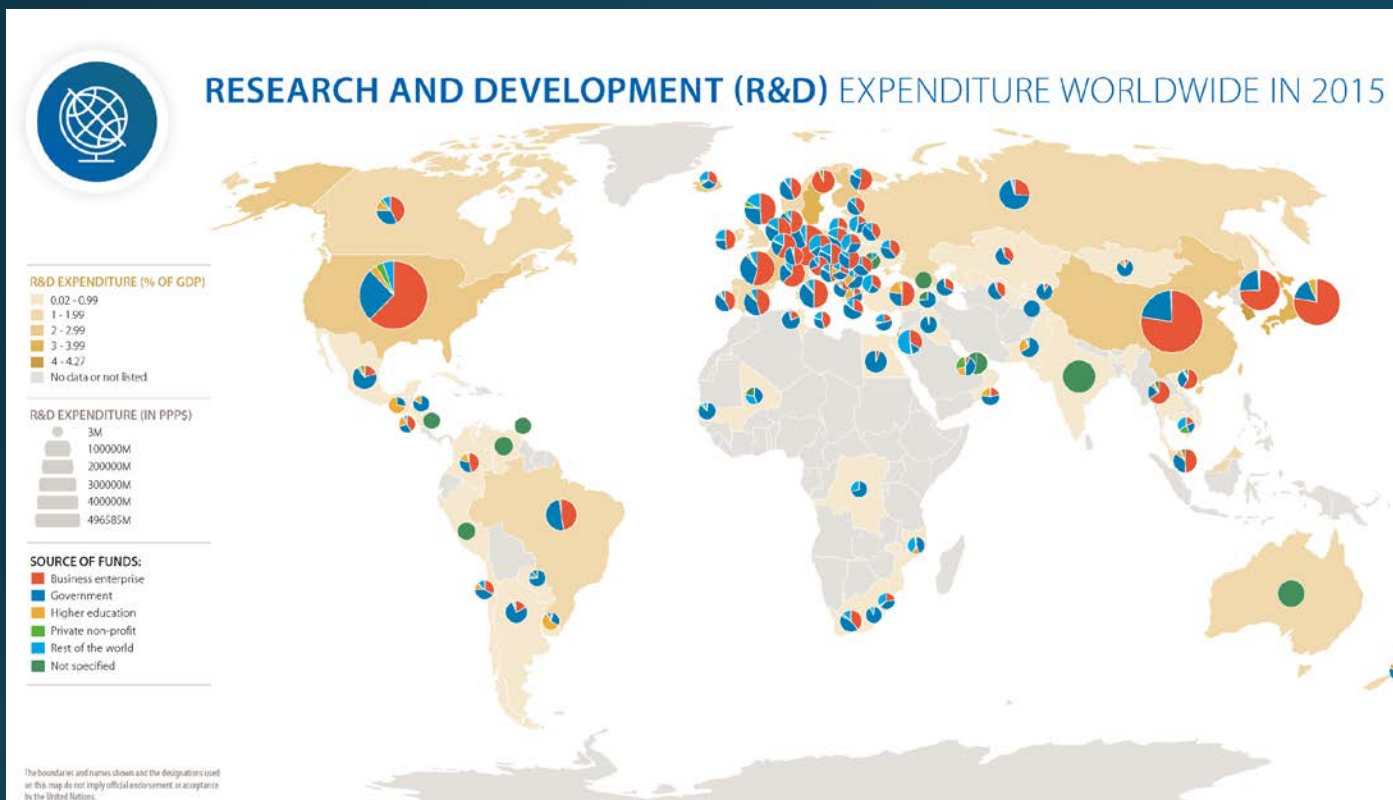


1. Build open-access SDG knowledge and technology platforms to design, monitor, and evaluate transformations to SD
2. Harnessing and boosting scientific capacities through North-South and South-South transboundary research partnerships
3. Support curricula and education in sustainable development
4. Build national and regional scientific funding institutions



Call to Action (3/3):

A 'moon-shot' mission for Sustainability Science



1. Rapid increase of mission-oriented research guided by the 2030 Agenda
2. Scientific assessment of existing transformation knowledge including non-academic sources
3. Adapt funding schemes to programme structures supporting inter- and transdisciplinary research
4. Expand incentive- and evaluation schemes
5. Create experimental spaces and transformation labs for next generation science-policy interfaces

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<https://sustainabledevelopment.un.org/globalsdreport/2019#contributions>