Science to Policy - Pathways for Accelerating Transformations

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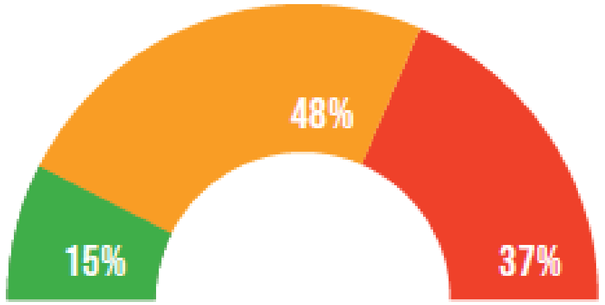
Stockholm Environment Institute
Independent Group of Scientists (2020-2023)

ESDN conference, 5 June 2024

A CONCERNING PICTURE OF SDG PROGRESS AT THE MIDPOINT:



- ON TRACK
- MODERATELY OR SEVERELY OFF TRACK
- STAGNATION OR REGRESSION

SNAPSHOT OF TRENDS IN SELECT TARGETS

GOAL	INDICATOR	DISTANCE FROM TARGET (2023)[1] (Very far from target / Far from target / Moderate distance to target / Close to target / Target met or almost met)	TREND OF SDG PROGRESS (2023)[1]	CHANGE IN TREND OF SDG PROGRESS BETWEEN 2020 AND 2023[2]
1	1.1.1 Eradicate extreme poverty		Limited or no progress	Backward
	1.3.1 Implement social protection systems		Fair progress but acceleration needed	N/A
2	2.1.2 Achieve food security		Deterioration	None
	2.2.1 End malnutrition (stunting)		Fair progress but acceleration needed	None
3	3.1.2 Increase skilled birth attendance		Fair progress but acceleration needed	Backward
	3.2.1 End preventable deaths under 5		Fair progress but acceleration needed	Backward
	3.3.3 End malaria epidemic		Limited or no progress	None
	3.b.1 Increase vaccine coverage		Deterioration	Backward
4	4.1.2 Ensure primary education completion		Limited or no progress	Backward
5	5.3.1 Eliminate child marriage		Fair progress but acceleration needed	None
	5.5.1 Increase women in political positions		Fair progress but acceleration needed	None
6	6.1.1 Universal safe drinking water		Limited or no progress	None
	6.2.1 Universal safe sanitation and hygiene		Fair progress but acceleration needed	None
7	7.1.1 Universal access to electricity		Fair progress but acceleration needed	Backward
	7.3.1 Improve energy efficiency		Fair progress but acceleration needed	None
8	8.1.1 Sustainable economic growth		Deterioration	Backward
	8.5.2 Achieve full employment		Limited or no progress	None
9	9.2.1 Sustainable and inclusive industrialization		Limited or no progress	None
	9.5.1 Increase research and development spending		Fair progress but acceleration needed	Forward
	9.c.1 Increase access to mobile networks		Substantial progress/on track	None
10	10.4.2 Reduce inequality within countries		Fair progress but acceleration needed	N/A
11	11.1.1 Ensure safe and affordable housing		Fair progress but acceleration needed	Forward
12	12.2.2 Reduce domestic material consumption		Limited or no progress	N/A
	12.c.1 Remove fossil fuel subsidies		Deterioration	Backward
13	13.2.2 Reduce global greenhouse gas emissions		Deterioration	None
14	14.4.1 Ensure sustainable fish stocks		Deterioration	N/A
	14.5.1 Conserve marine key biodiversity areas		Limited or no progress	N/A
15	15.1.2 Conserve terrestrial key biodiversity areas		Limited or no progress	None
	15.4.1 Conserve mountain key biodiversity areas		Limited or no progress	N/A
	15.5.1 Prevent extinction of species		Deterioration	None
16	16.1.1 Reduce homicide rates		Limited or no progress	Backward
	16.3.2 Reduce unsentenced detainees		Deterioration	None
	16.a.1 Increase national human rights institutions		Fair progress but acceleration needed	None
17	17.2.1 Implement all development assistance commitments		Fair progress but acceleration needed	Forward
	17.8.1 Increase internet use		Substantial progress/on track	None
	17.18.3 Enhance statistical capacity		Limited or no progress	None

Political declaration from the SDG Summit 2023

36. We commit to taking continuous, fundamental, transformative and urgent actions at all levels and by all stakeholders to overcome the crises and obstacles facing our world.

(s) We will continue to **integrate the SDGs into our national policy frameworks** and **develop national plans for transformative and accelerated action**. We will make implementing the 2030 Agenda and achieving the SDGs a central focus in national planning and oversight mechanisms. We will further localize the SDGs and advance integrated planning and implementation at the local level.

What might these national plans for transformative and accelerated action be?

- Science can and needs to support policy
  - What are the consequences of inaction and future scenarios?
  - What are potentially transformative actions?
  - How does the process of transformation unfold and how can it be actively shaped?

GLOBAL SUSTAINABLE DEVELOPMENT REPORT

The Independent Group of Scientists (2020-2023)

Mr. J. Jaime Miranda (Co-chair), Head of School at the University of Sydney's School of Public Health and Professor at the School of Medicine at Universidad Peruana Cayetano Heredia (UPCH)

Ms. Imme Scholz (Co-chair), Co-President of the Heinrich Böll Foundation

Mr. Ibrahima Hathie, Deputy Chief of Party for Feed the Future Senegal Policy Systems Services and Distinguished Fellow for the Initiative Prospective Agricole et Rurale

Ms. Shirin Malekpour, Associate Professor at Monash Sustainable Development Institute, Monash University

Ms. Nyovani Janet Madise, Director of Development Policy and Head of the Malawi office of the African Institute for Development Policy (AFIDEP)

Mr. Jiahua Pan, Member of the Chinese Academy of Social Sciences, Director of the Institute of Eco-civilization Studies and Professor, Beijing University of Technology

Ms. Kaltham Al-Ghanim , Professor of sociology at Qatar University and Director of the Social & Economic Survey Research Institute (SESRI)

Mr. John Agard, Professor of Tropical Island Ecology and Director of the University of the West Indies, St. Augustine Centre for Innovation and Entrepreneurship

Ms. Åsa Persson, Research Director and Deputy Director of the Stockholm Environment Institute, Adjunct Professor, Linkoping University

Mr. Sergey N. Bobylev, Head of Environmental Economic Division, Full Professor of Moscow State “Lomonosov” University

Ms. Opha Pauline Dube, Associate Professor in the Department of Environmental Science, University of Botswana.

Mr. Ambuj Sagar, Vipula and Mahesh Chaturvedi Professor of Policy Studies and the founding Head of the School of Public Policy at the Indian Institute of Technology Delhi

Mr. Jaime C. Montoya, Professor at the University of the Philippines College of Medicine and President of the National Academy of Science and Technology

Mr. Norichika Kanie, Professor at the Graduate School of Media and Governance, Keio University, Adjunct Professor at United Nations University Institute for the Advanced Study of Sustainability

Ms. Nancy Shackell, Senior research scientist at Bedford Institute of Oceanography in Nova Scotia, working for Fisheries and Oceans Canada (DFO)

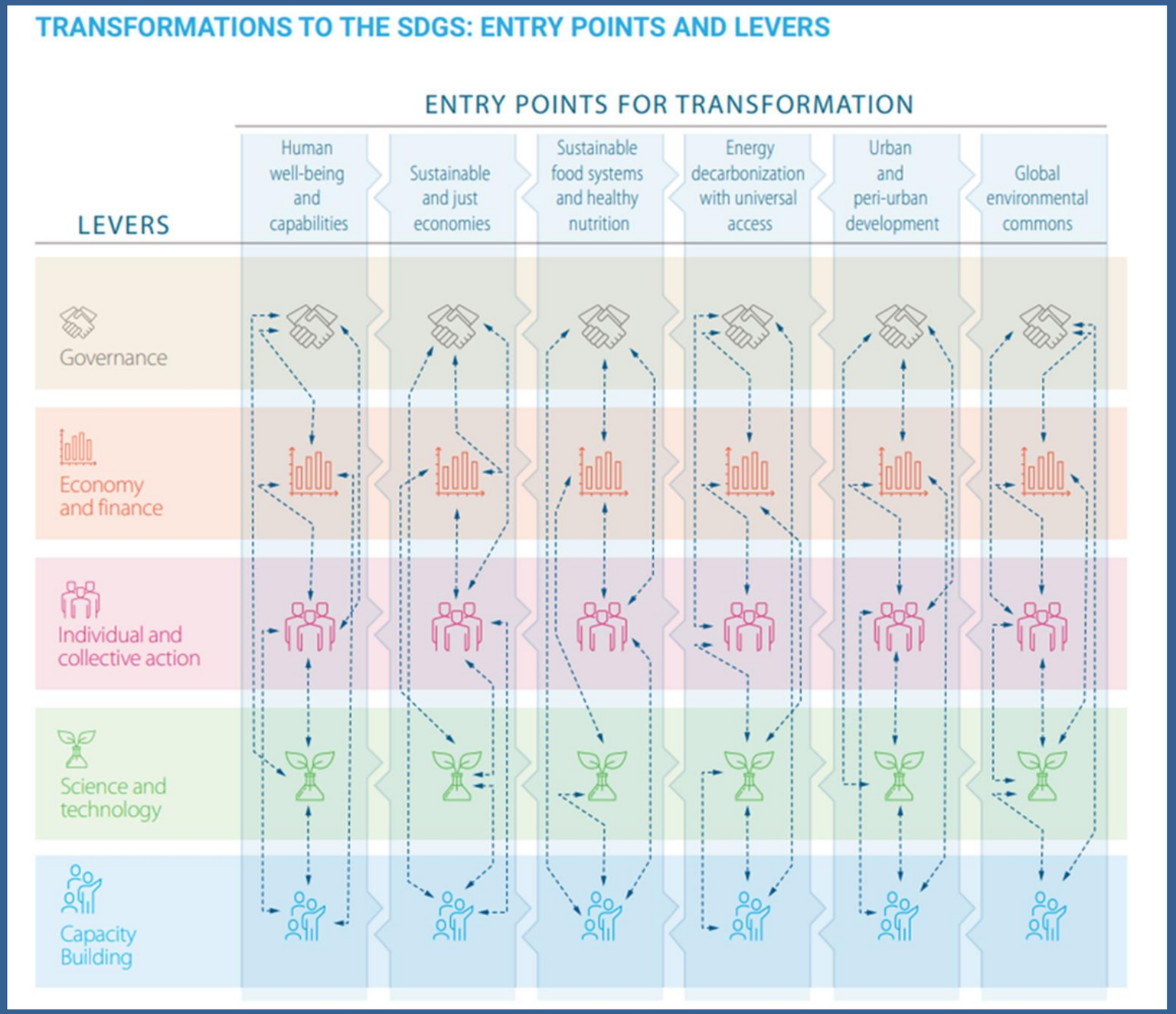
Timeline of the GSDR 2023

- A quadrennial report incorporating scientific evidence
  - Inform the HLPF and strengthen the science-policy interface
  - Provide a strong evidence-based instrument to support policy-makers
  - Builds on other assessments

- Late 2020: IGS started its work
- Inputs and consultations with stakeholders
- Scientific peer review
- Member state feedback and advance version

- September 2023 – Launch at the SDG Summit

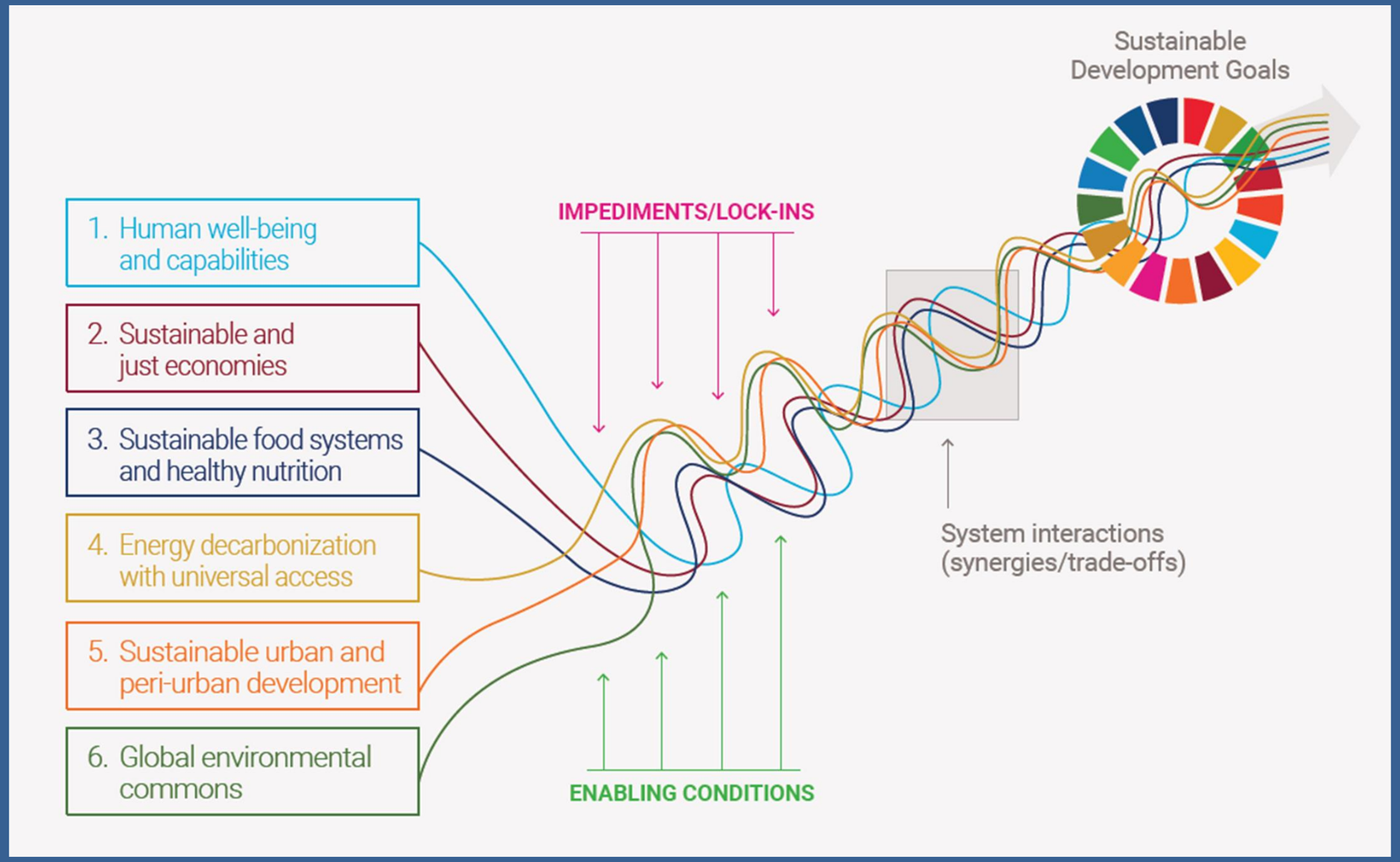
- Regional and national workshops to operationalise the GSDR



GSDR framework

Six entry points to transformation (2019 GSDR)

Five categories of levers



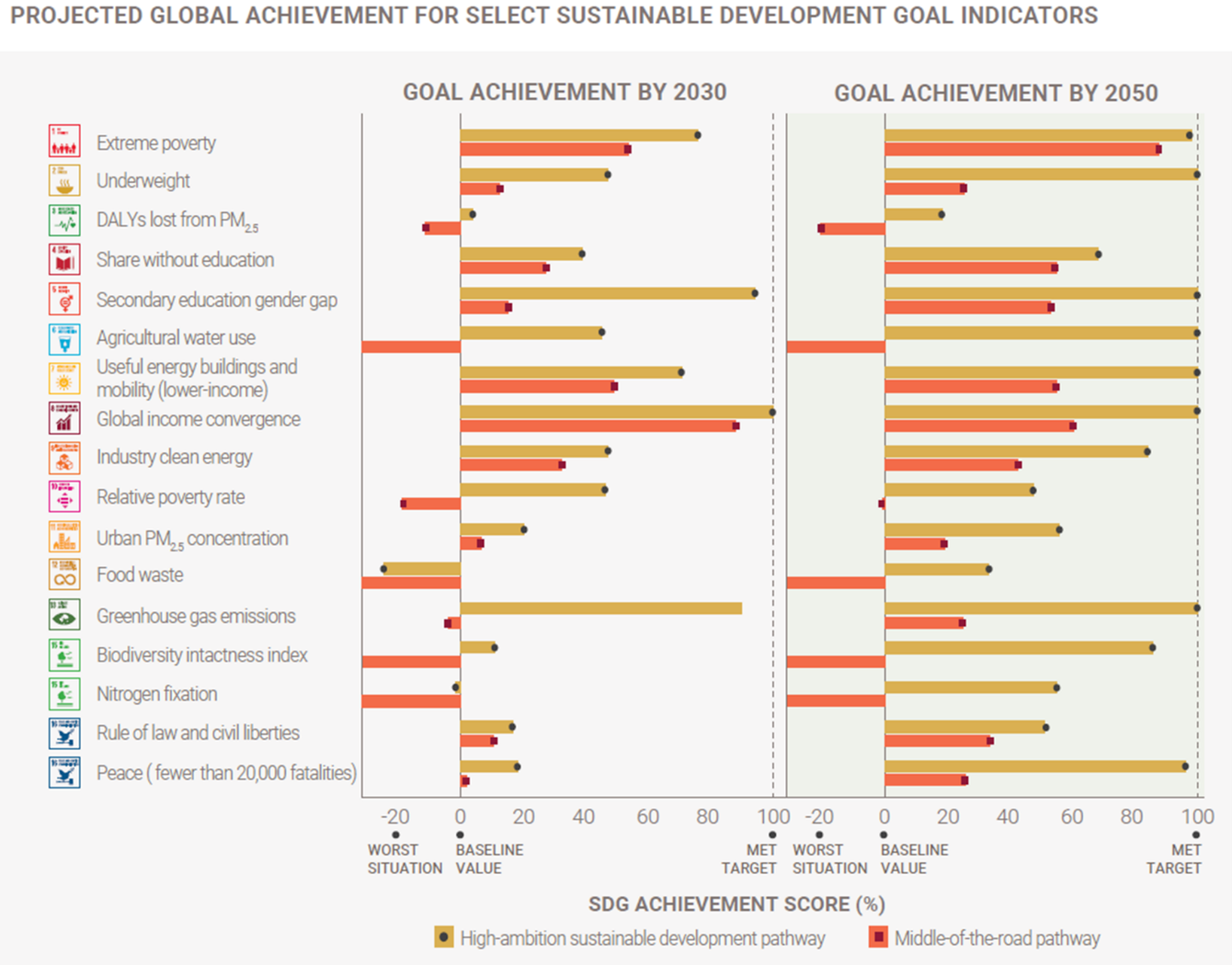
Develop pathways which…

Create enabling conditions

Anticipate and manage impediments and lock-ins

Consider and manage synergies and trade-offs

1. Consequences of inaction: Where are we heading?

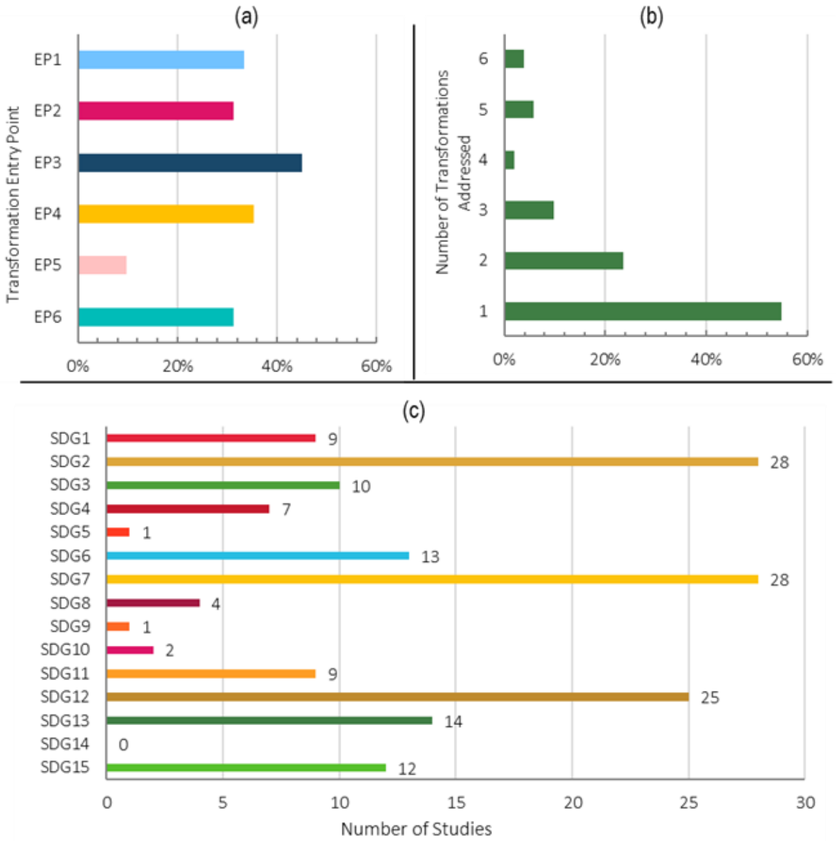


Middle of the road pathway will not take us the goals by 2030, or event 2050

Soergel et al. 2021

Synthesis: SDG scenario modelling

- Scoping review of global scenario literature (n=51), Allen et al. (forthcoming)
- Important shifts, specific interventions (policy, finance, technology, behavioral), interlinkages
- Coverage of the six ‘entry points’ and 17 SDGs
  - Most frequent – Entry point 3 on sustainable food and healthy nutrition
  - Least frequent - Entry point 5 on urban and peri-urban development
  - Limited coverage of SDGs 5, 9, 10 and 14
  - Poor inclusion of SDGs 16 and 17



Allen et al., forthcoming

Synthesis: SDG scenario modelling

- To enhance policy relevance of scenario studies:
  - Standardization and packaging of policies, aligned to policy portfolio structure of governments
  - Specify broad shifts into policy measures/interventions/mixes
  - Supplement global scenarios with regional and national modelling studies
  - Regular science-policy interaction to communicate and translate results, e.g. throug h GSDR
  - More consistent approaches to assessing interlinkages and common impediments under scenario pathways

2. What are potentially transformative actions?

GSDR reviewed scenario literature to identify key shifts and related interventions

Large potential for additional scientific synthesis to inform policy:

- Meta-evaluation and evidence synthesis (peer-reviewed literature)
- Review of good examples (grey literature)

Some reflections:

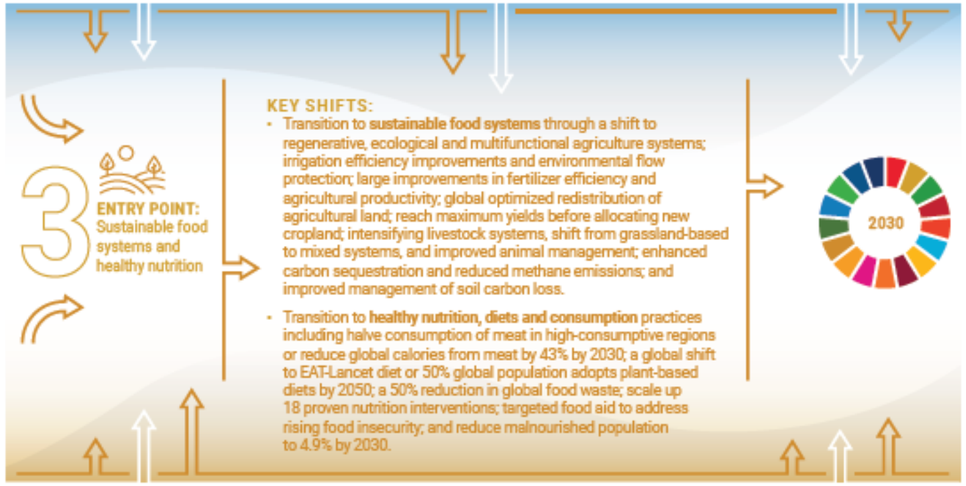
- Major political reforms have taken time – set milestones
- Effective action vs. transformative action

FIGURE 3-8

FOOD SYSTEMS AND NUTRITION PATTERNS: KEY SHIFTS, INTERVENTIONS AND IMPEDIMENTS FROM THE GLOBAL SCENARIO LITERATURE

IMPEDIMENTS

Institutional barriers, concentration of land ownership, weak governance, trade-offs between goals, behavioural and social norms around consumption and diet.



INTERVENTIONS BY LEVER

GOVERNANCE

Sustainable Food Systems: policy reform and investment in enabling conditions including improved value chains, finance, extension, gender-responsive policies and investments, social protection, water management, implementation of carbon payments and smart subsidies, and agroecological and landscape approaches. Investing in education and social security can address lock-in effects of unskilled workers in agriculture.

Healthy nutrition/diets: investment in public health information and educational materials and guided food choices through incentives or disincentives, including regulations. Proven nutrition interventions include cash transfers, various nutrition supplements for pregnant women, micronutrient supplements for children under five, treatment of severe acute malnutrition for children, lipid-based nutrition supplements for children 6–23 months at risk of food insecurity and/or poor growth, treatment of diarrhoea for children, nutrition education and interventions for reducing malaria. Agricultural subsidies to address food price increases from mitigation (~0.32% GDP globally) or direct food aid provided to those at risk of hunger (0.01% GDP).

BUSINESS AND FINANCE

Sustainable Food Systems: agricultural R&D investments of USD4 billion per year have the potential to nearly end hunger by 2030 while a further USD6.5 billion per year in technical climate-smart options can achieve GHG emissions reductions consistent with the 1.5°C pathway. Increased trade liberalisation; abolishment of import tariffs and export subsidies on agricultural products.

Healthy nutrition/diets: investments to address stunting cost USD19.75 billion between 2019 and 2030. Investments to address wasting cost USD275.97 billion between 2019 and 2030. Interventions to address anaemia cost USD16.98 billion between 2019 and 2030.

SCIENCE AND TECHNOLOGY

Sustainable Food Systems: a rapid uptake of improved technologies, especially in Africa, Asia and Latin America; investments in R&D, yield-augmenting technologies, management improvements and irrigation technologies to reduce losses in conveyance and application; adoption of new crop varieties; precision agriculture and automation, redesigning agricultural practices including intercropping and agroforestry. Mitigation options include reducing enteric fermentation (e.g. changing animal diets, increasing fodder digestibility, feed supplements), manure management (e.g. anaerobic digesters) and rice production (e.g. changes in water management regimes, soil amendments).

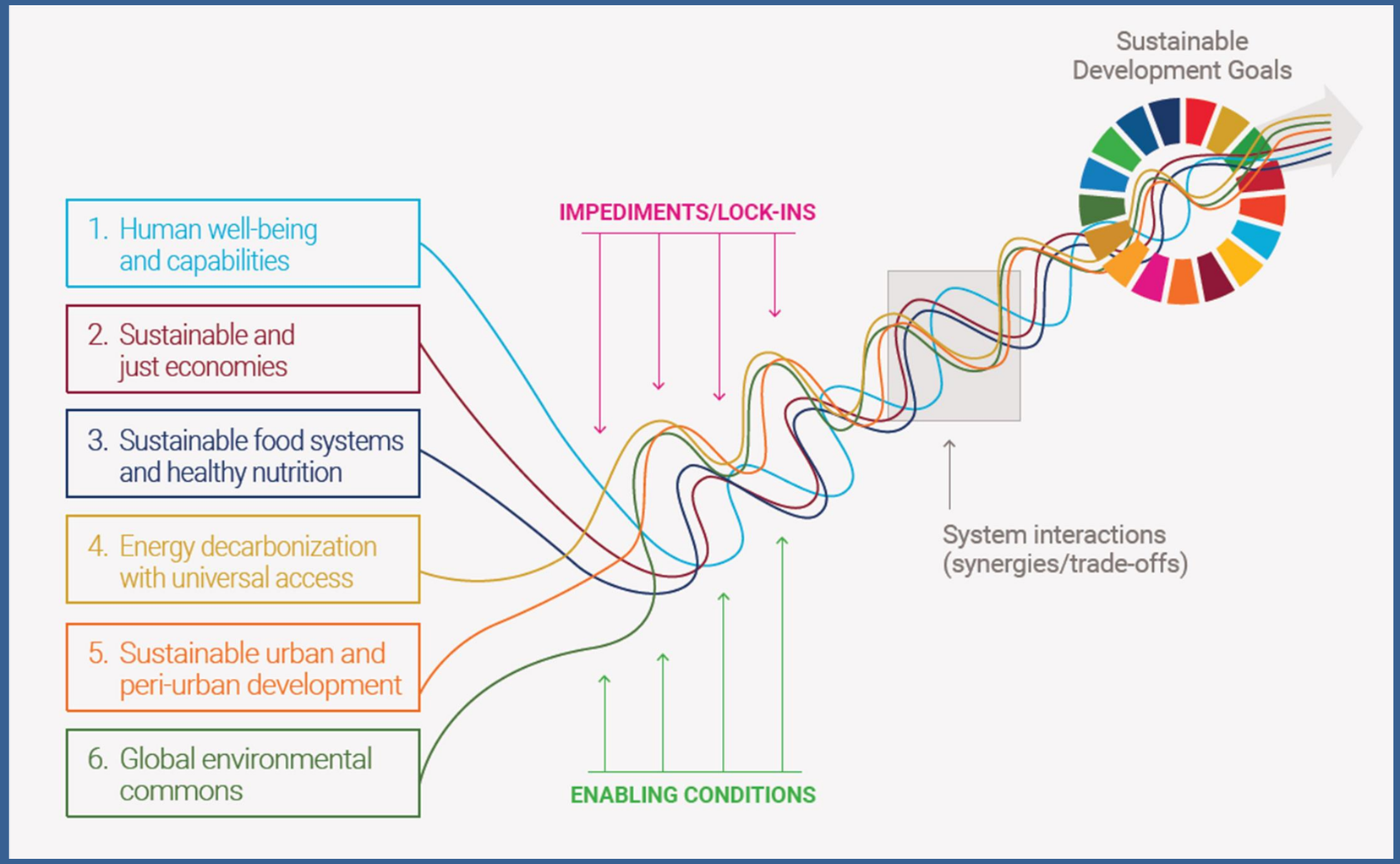
Healthy nutrition/diets: increasing R&D investments of USD4 billion per year above the baseline could reduce hunger incidence to 5% globally by 2030.

INDIVIDUAL AND COLLECTIVE ACTION

Healthy nutrition/diets: influencing social norms around diet for younger population (ages 15-44).

CAPACITY BUILDING

Build capacities to implement each lever and overcome impediments including in shifting behavioural and social norms associated with unsustainable diets and consumption practices, building governance systems for sustainable land management and food distribution and for targeting food aid to those at risk, managing trade-offs between food security and environmental goals, and supporting sustainable technology innovation and deployment.



Examples of key shifts and interventions:

Universal health coverage

Universal social insurance

Increase agricultural R&D

Carbon pricing

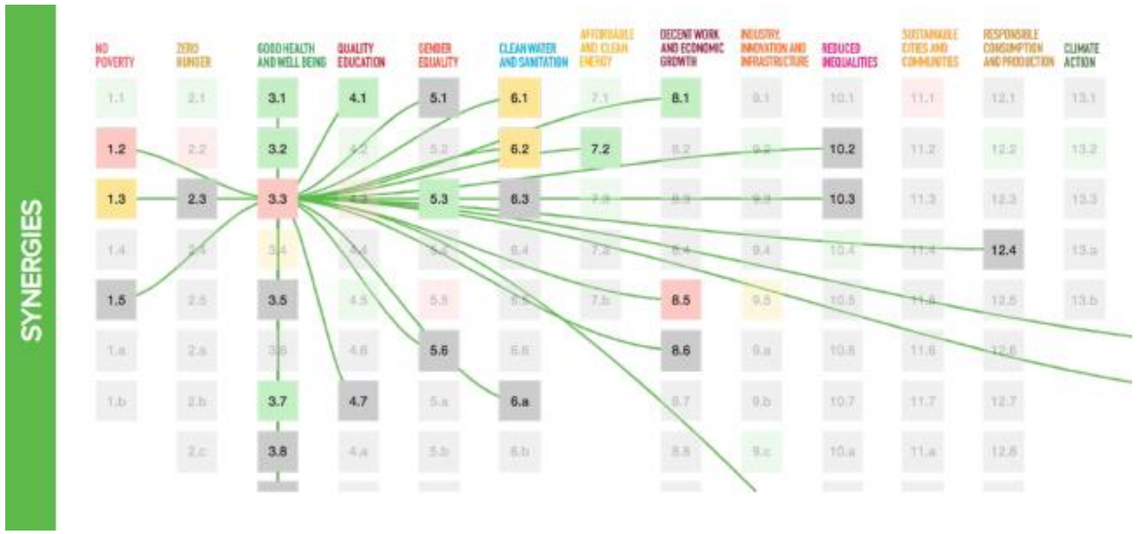
Fossil fuel subsidy reform

Electric vehicle mandates

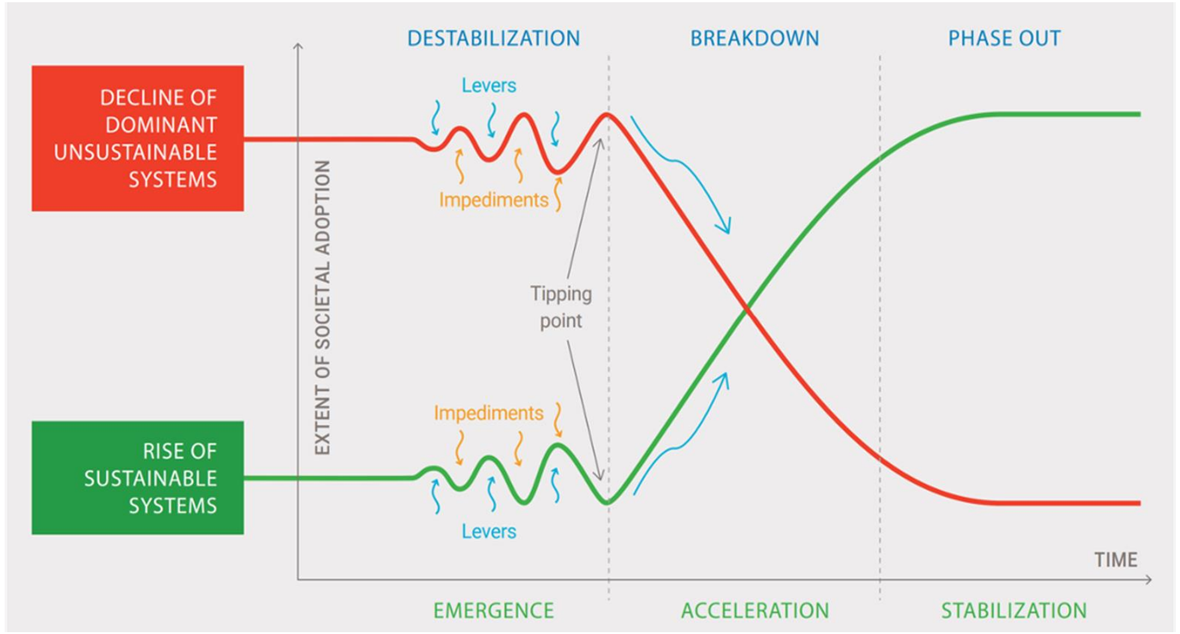
Doubling of recycling of municipal waste

Secure land tenure

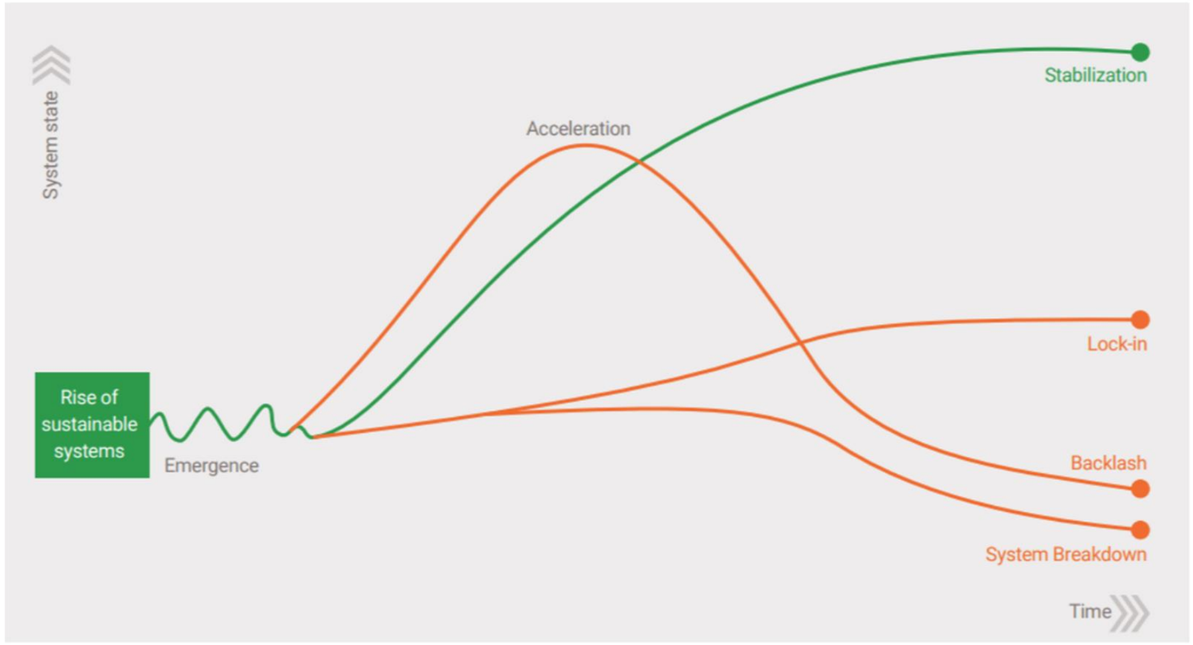
Synthesis: The SDGs are interlinked



Bennich et al. 2023. One Earth.



SUCCESSFUL AND UNSUCCESSFUL TRANSFORMATION PATHWAYS

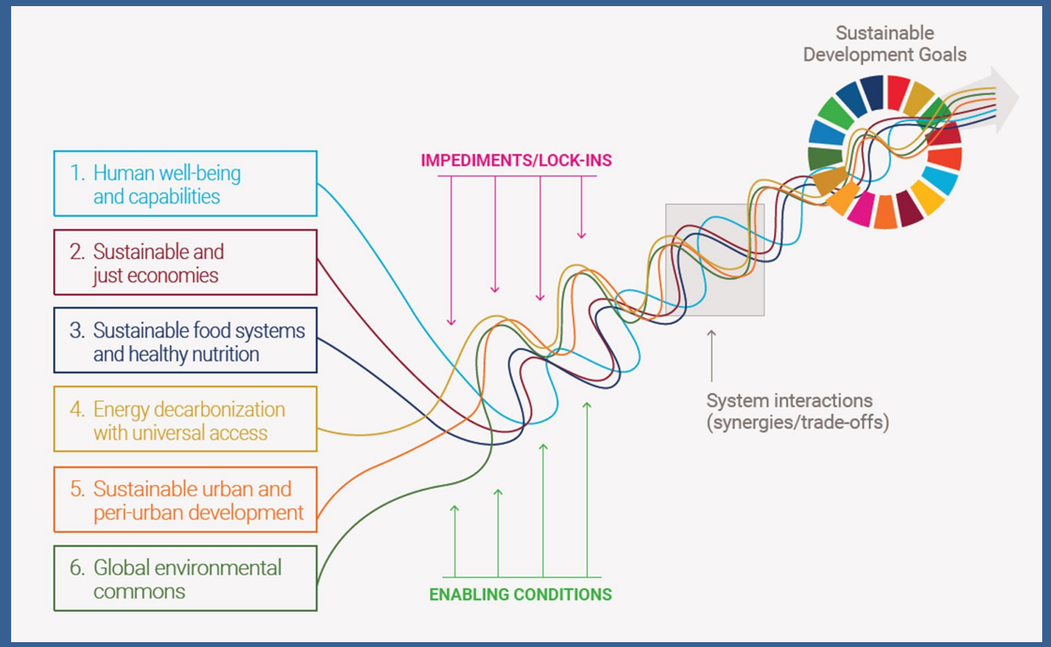


3. How does the process of transformation unfold and how can it be actively shaped?

Build capacity for transformations

- Foresight and long-term planning
- Nurture innovation and de-risk investment
- Strategic direction of multiple actors
- Comprehensive and sequenced policy mixes
- Negotiation and conflict resolution
- Public engagement

Call to action



- **Establish an SDG Transformation framework**
  - National plans, with global commitments and non-state actor partnerships
  - Commit domestic and ODA finance and integrate in budgeting
  - Use science-based tools
- **Build capacities for transformation**: training, foresight, public engagement, negotiation skills
- **Drive transformation through its phases and manage interlinkages**: key solutions for six entry points, sequence interventions, assess interlinkages and spill-overs
- **Improve critical, underlying conditions for SDG implementation**: prevent conflict, ensure fiscal space, focus on marginalized groups
- **Work with science**: invest in evaluation research, global South R&D, knowledge sharing

Setting the agenda in research

Comment

JOSE LUIS GONZALEZ/REUTERS

The Sustainable Development Goals aim to end poverty, improve health and education, and ensure sustainable modes of living.

What scientists need to do to accelerate progress on the SDGs

Shirin Malekpour, Cameron Allen, Ambuj Sagar, Imme Scholz, Åsa Persson, J. Jaime Miranda, Therese Bennich, Opha Pauline Dube, Norichika Kanie, Nyovani Madise, Nancy Shackell, Jaime C. Montoya, Jiahua Pan, Ibrahima Hathie, Sergey N. Bobylev, John Agard & Kaltham Al-Ghanim

Drilling down into why the UN Sustainable Development Goals are so hard to achieve, and showing policymakers pathways to follow, will help the planet and save lives.

This year marks the halfway point of the United Nations Sustainable Development Goals (SDGs), which were agreed in 2015, to be reached by 2030. As an independent group of scientists appointed by the UN to assess progress and recommend how to move forwards, we have a stark message: the world is not on track to achieve any of the 17 SDGs and cannot rely on change to happen organically.

At the current rate of progress, the world will not eradicate poverty, end hunger or provide quality education for all by 2030 – to name just some, central, aspirations of the SDGs. Instead, by the end of this decade, our world will have 575 million people living in extreme poverty, 600 million people facing hunger, and 84 million children and young people out of school[1]. Humanity will overshoot the Paris climate agreement's 1.5 °C 'safe' guardrail on average global temperature rise. And, at the current rate, it will take 300 years to attain gender equality[2].

Global leaders must act now to remove roadblocks and accelerate progress. This is the focus of our *Global Sustainable Development*

Identify tailored approaches to remove key roadblocks

Find cost-effective and feasible pathways

Strengthen governance and accountability

A reality check for sustainability.

Thank you!

RESOURCES

Journal article - Recurring patterns of SDG interlinkages and how they can advance the 2030 Agenda: https://www.sei.org/publications/recurring-patterns-of-sdg-interlinkages/

Perspective - Maximizing progress on the 2030 Agenda: building on SDG interlinkages: https://www.sei.org/perspectives/maximizing-progress-on-the-2030-agenda-building-on-sdg-interlinkages/

Perspective - Six ways to tap potential of integrative policy and planning post-SDG Summit: https://www.sei.org/perspectives/six-ways-post-sdg-summit/

Journal article - Returning to core principles to advance the 2030 Agenda: https://www.sei.org/publications/returning-to-core-principles-to-advance-the-2030-agenda/

Tool - SDG Synergies: https://www.sdgsynergies.org