

SCIENCE FOR ACCELERATING
TRANSFORMATIONS
TO SUSTAINABLE
DEVELOPMENT



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GLOBAL SUSTAINABLE
DEVELOPMENT REPORT 2023

The Global Sustainable Development Report

Mandated in 2016 to provide follow-up and review of the 2030 Agenda for Sustainable Development

- Informs the SDG Summit and strengthens the science-policy interface
- Written by an independent group of 15 scientists appointed by the United Nations Secretary-General
- An ‘assessment of assessments’ to provide a strong evidence-based instrument to support policy-makers
- GSDR 2023 launched on 12 September 2023 in advance of the UN SDG Summit



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, Linköping 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)



The GSDR Process

- Written every 4 years by an independent group of scientists appointed by the Secretary-General with support from UN System.

Previous report launched in 2019

- **Global Inputs:**

Online call for inputs: 175+ submissions from 40+ countries

Regional Consultations in Australia, China, Japan, Malawi, Peru, Philippines, Qatar, and Senegal

- **Peer Review** conducted by the International Science Council (ISC) in partnership with major scientific networks.

104 reviewers from across the globe to ensure balanced views and reflection of global scientific consensus.



Regional Consultations

To inform the GSDR as an assessment of assessments, the IGS conducted a series of regional consultations with policy makers, experts, and practitioners in different geographic regions to gather insights from a diverse range of local perspectives and experiences.

- [Latin America and the Caribbean](#), 7-9 November 2022, **Peru**
- [Africa](#) (in French), 14-16 November 2022, **Senegal**
- [Asia and the Pacific](#), 28-30 November 2022, **Philippines**
- [Africa](#) (in English), 30 November - 2 December 2022, **Malawi**
- [Western Asia](#), 24-25 January 2023, **Qatar**
- Virtual consultations took place in **Australia, China and Japan**

GSDR Contents

- Half-way to 2030 – Progress towards the SDGs
- Framing the future
- Pathways to achieve the SDGs
- Accelerating transformations to the SDGs
- Transformations through science – and in science
- Calls to action for transformations

TIMES OF CRISIS, TIMES OF CHANGE

SCIENCE FOR ACCELERATING
TRANSFORMATIONS
TO SUSTAINABLE
DEVELOPMENT





Report Findings

*Transformation is possible,
and inevitable*



Progress toward the SDGs: *Where are we now?*

Stagnation in the face of multiple crises – COVID-19, War, Climate Crisis

- Slowing down, or reversal of progress since 2019 in key areas like poverty, hunger, gender equality
- Long-term negative trends in crucial areas like climate action, biodiversity loss, inequality
- Future crises and SDG setbacks to be expected if action not taken

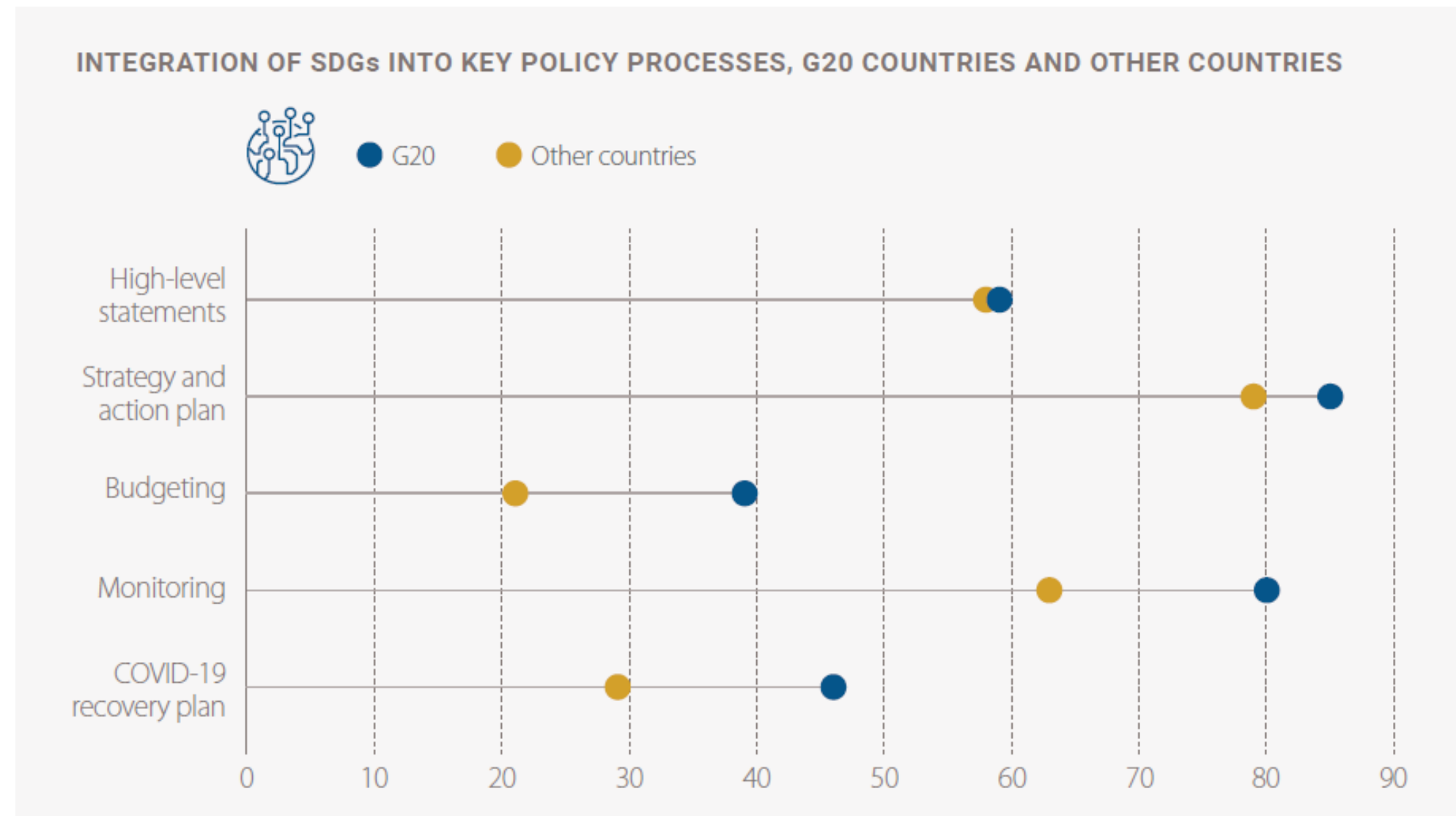
Some positive trends – SDG awareness, institutions, goal setting, promising examples

CURRENT STATE OF PROGRESS TOWARDS THE SUSTAINABLE DEVELOPMENT GOALS BASED ON SELECT TARGETS



Framing the future: *Where are we heading?*

- **SDG awareness on the rise:** SDG awareness, commitments, partnerships and institutional mechanisms are increasing, but without visible impact on performance
- **Weak links:**
 - Financing – The SDG financing gap in developing countries increased by at least 56 per cent in 2020.
 - Declining International cooperation – Global solidarity is instrumental to human security.
 - Accountability – Inclusive and trusted institutions and decision-making processes are needed.

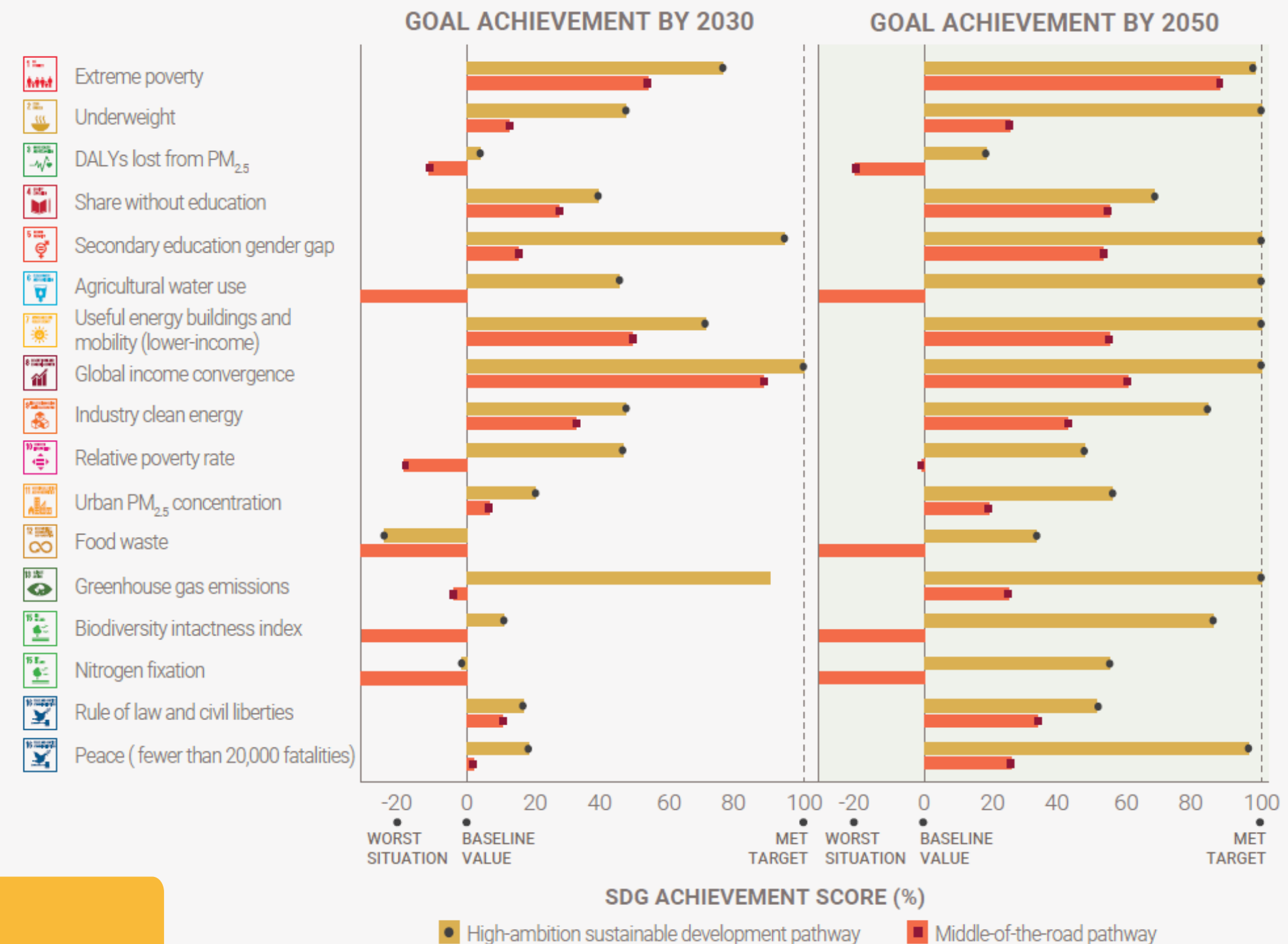


Sachs, Jeffrey D. and others, 2022.

What scenarios tell us

- Under a **high-ambition scenario**, most of the Goals will have made progress by 2030.
- By 2050 most Goals would be achieved or nearing the target levels, but such issues as air pollution and management of food waste would still be lagging behind.
- High-ambition scenario measures include: Price on carbon, Phasing out coal and biomass, Mandating electric vehicles, Adjusting energy subsidies, More determined shift towards sustainable consumption and diets.

PROJECTED GLOBAL ACHIEVEMENT FOR SELECT SUSTAINABLE DEVELOPMENT GOAL INDICATORS



Soergel et al., 2021

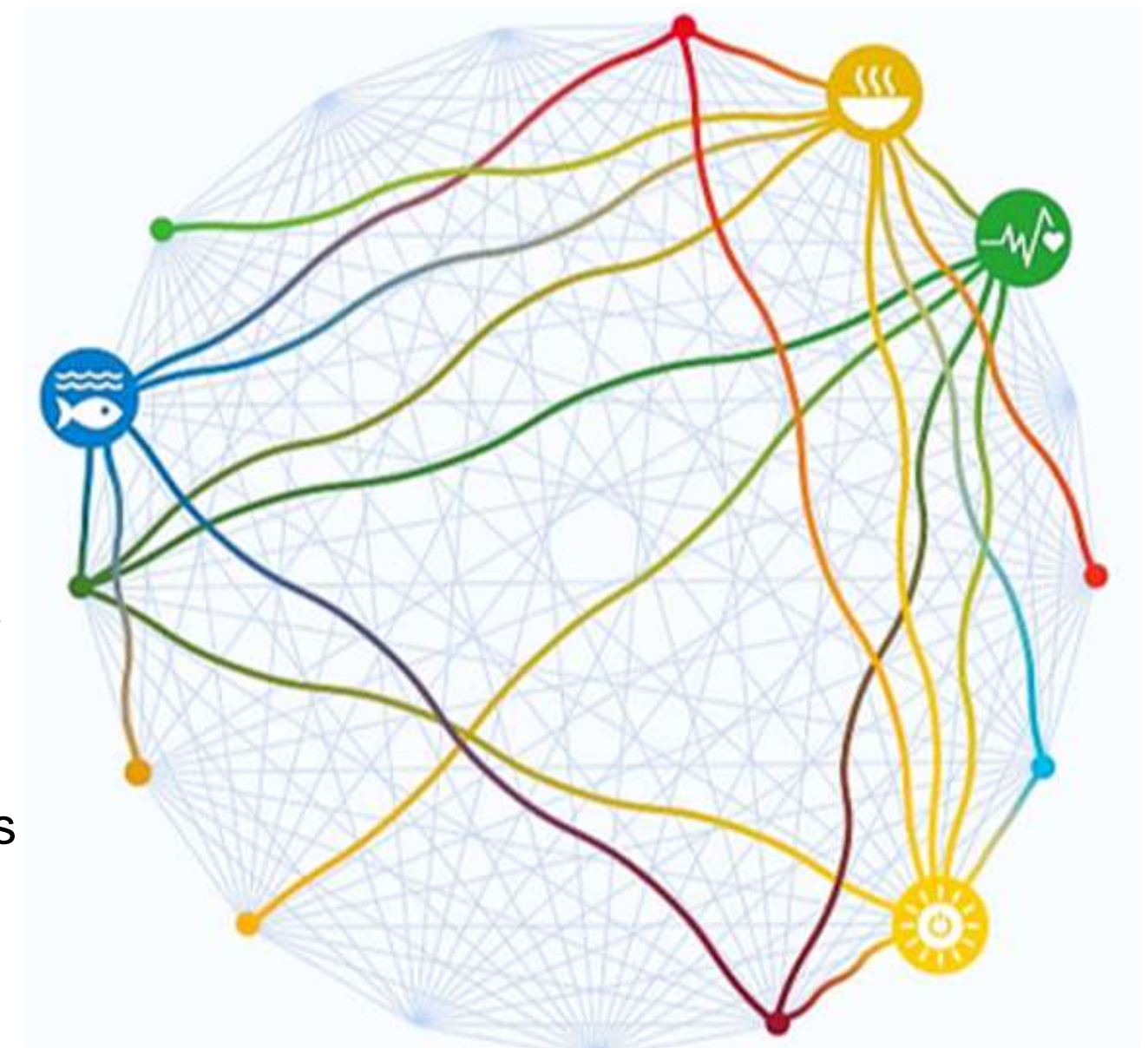
- The SDGs won't be achieved by 2030 with 'Business-as-usual' pathways or incremental changes, or even by 2050
- **Transformations & game-changing interventions are needed**



Frameworks for shaping the future

Accelerating progress: Using SDG interlinkages

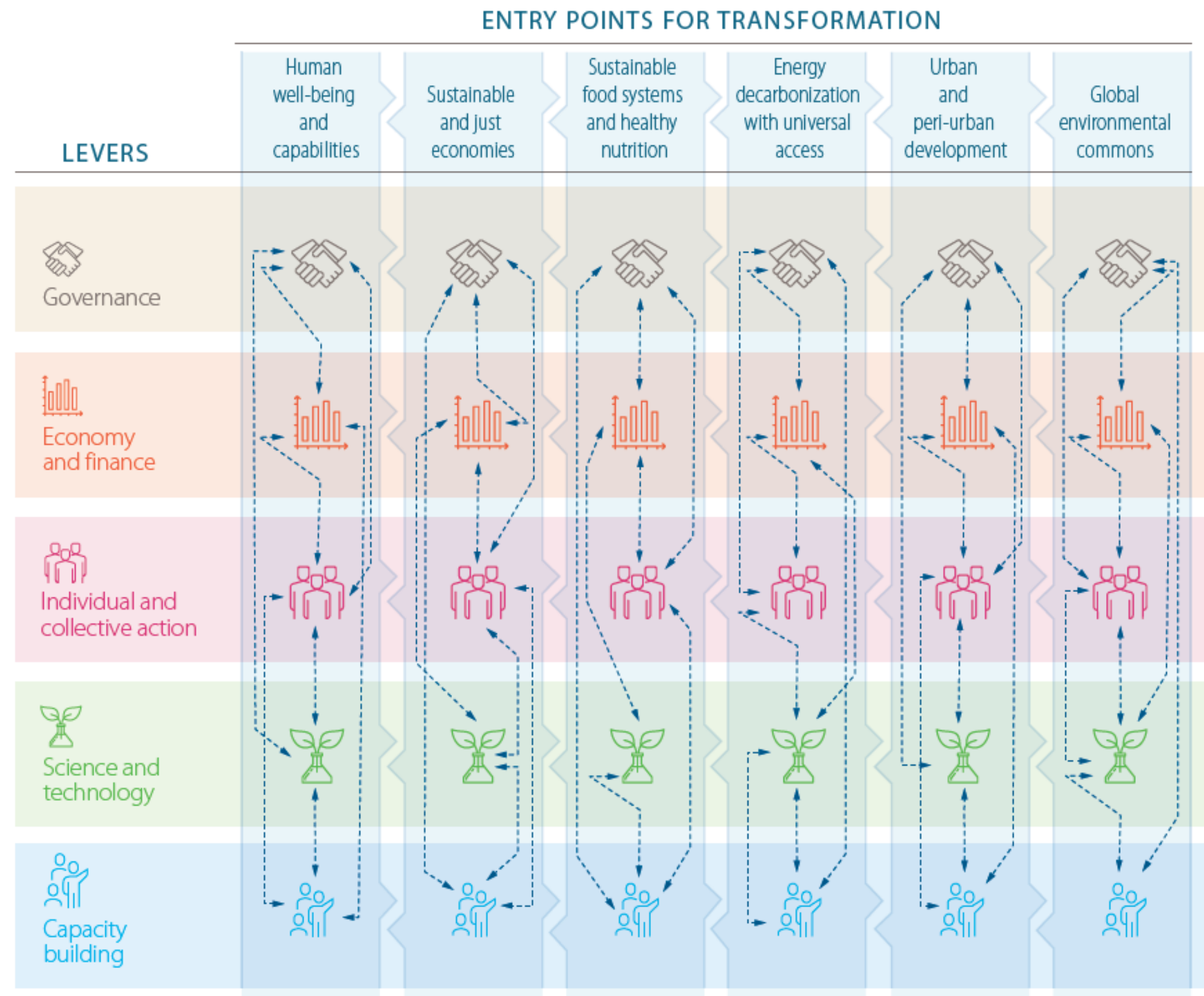
- Policymakers stand to benefit by leveraging synergies and managing tradeoffs between SDGs, including accounting for spillovers across national borders.
- The latest science finds that SDG interlinkages are context and group specific:
 - High-income countries face more trade-offs than low- and middle-income countries where actions have a relatively high share of synergies.
 - Synergies are higher for female, younger, and rural populations for whom trade-offs are more negligible - *i.e., progress on a given SDG indicator for these groups will generally foster progress for the group on other SDG indicators.*



Working through entry points for transformation

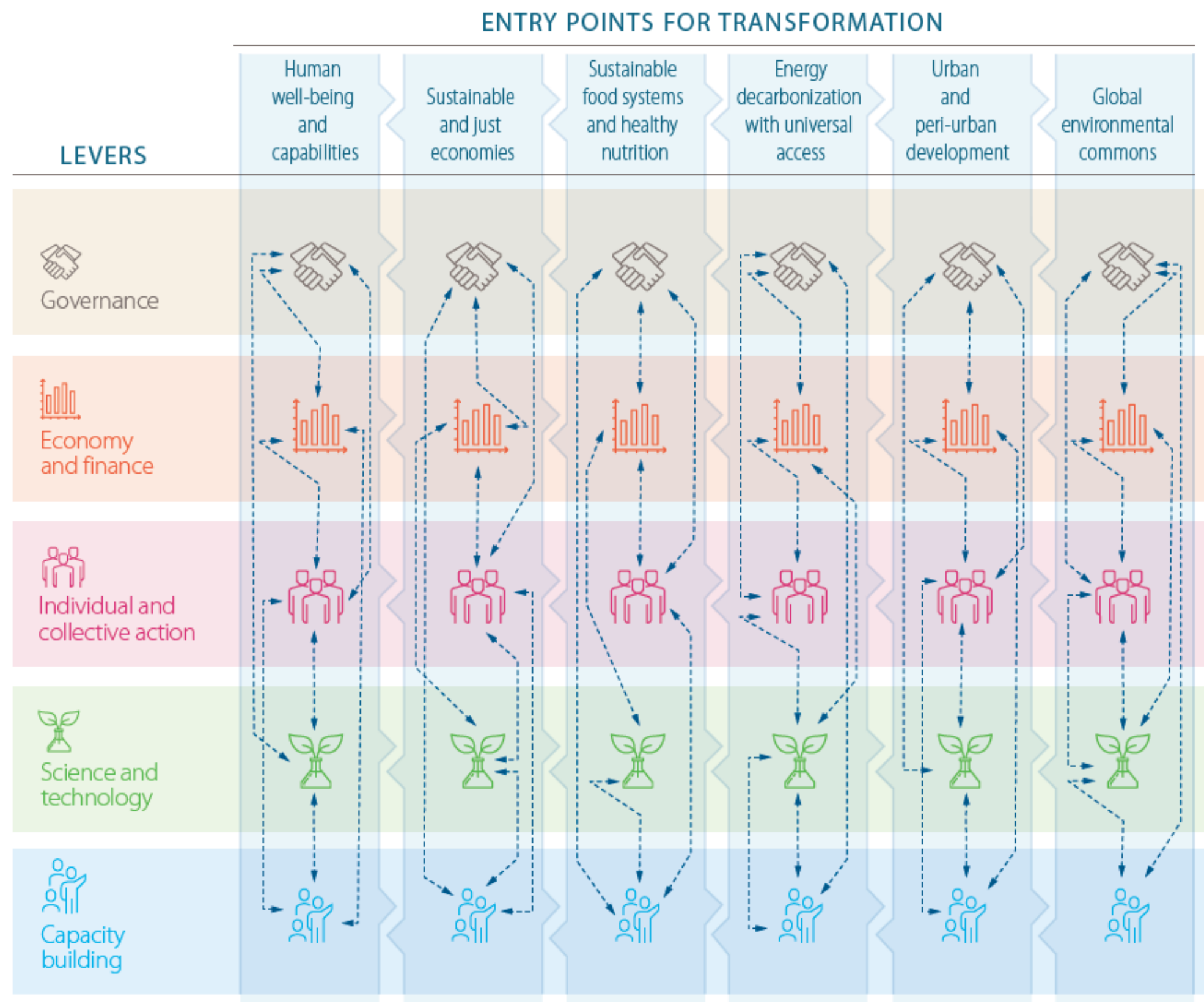
- Business-as-usual strategies will not deliver the SDGs by 2030 or even 2050 but working through **six key entry points to leverage interlinkages** could unleash rapid progress.
- Locally relevant, synergistic and integrated implementation processes will be needed that break down the silos of public service and policymaking.
- Levers need to work together in a cohesive manner to overcome impediments
- Capacity building is a lever added in the 2023 GSDR and crucial for enabling transformation

TRANSFORMATIONS TO THE SDGS: ENTRY POINTS AND LEVERS



- Capacity building is a lever added in the 2023 GSDR and crucial for enabling transformation:
- Capacity building.....“not the ability to implement someone else’s agenda but the ability to set and pursue your own agenda.” Youba Sokona[former vice chair of the Intergovernmental Panel on Climate Change (IPCC)]
- Build capacities for transformation : Training, foresight, public engagement, negotiation skills

TRANSFORMATIONS TO THE SDGS: ENTRY POINTS AND LEVERS





Transformative Shifts in
Entry Points





1

ENTRY POINT: **Human Well-being & Capabilities**

- Scale up investment in primary **health** care and ensuring access to life-saving interventions
- Accelerate secondary **education** enrolment and completion and ensuring all girls are enrolled
- Increase investment in **water and sanitation** infrastructure to deliver universal piped water access and halving of untreated wastewater.



2

ENTRY POINT: **Sustainable and Just Economies**

- Accelerate a just economy with **inclusive, pro-poor growth** including redistribution measures, doubling welfare transfers in low-income countries
- Rollout **good practice** climate policies and global carbon pricing
- Encourage **lifestyles** that promote ‘sufficiency’ levels
- Invest in **green innovation**, and **circular and sharing economy models**.

3

ENTRY POINT: **Food Systems & Nutrition Patterns**

- Shift to regenerative ecological and multifunctional agricultural systems.
- Improve irrigation and fertilizer efficiency.
- Reduce food waste by 50 per cent and scale up proven nutrition interventions.
- Halve consumption of meat in high-consumption regions and adapt plant-based diets.



4

ENTRY POINT:

Energy Decarbonization & Universal Access

- Large-scale deployment of **renewables** with access to technologies and equipment
- Rapidly scale up energy **infrastructure** investment, especially in Africa, and support universal electricity **access** and clean cooking alternatives
- Transition to energy consumption and demand reduction including by improving energy efficiency.



5

ENTRY POINT: **Urban & Peri-urban Development**

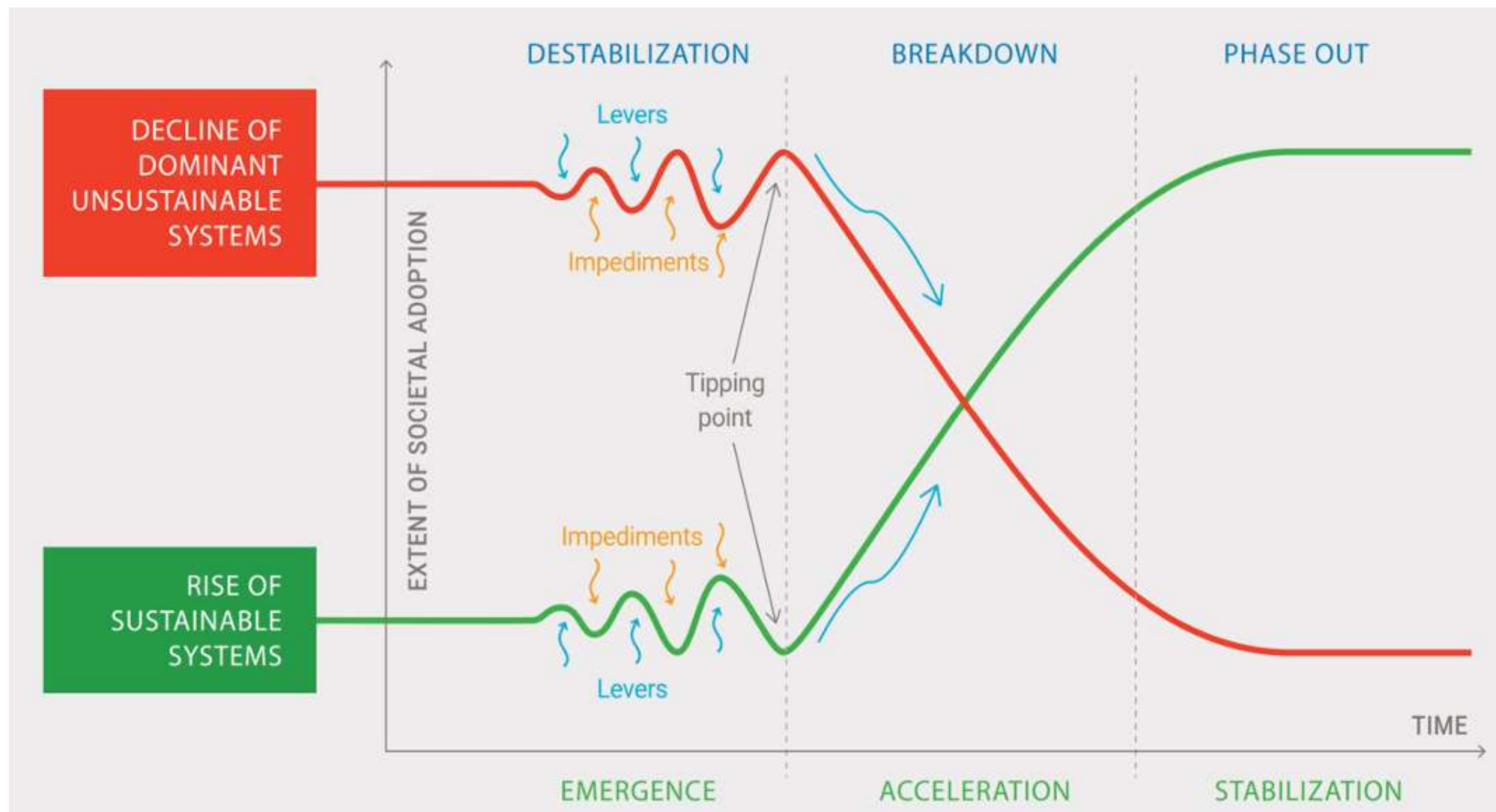
- Double the recycled and composted share of municipal waste by 2030 and increase circularity of waste cycle
- Greater use of electrical vehicles
- Better public transport with cities' and infrastructure oriented to people and pedestrians
- Good-practice policies for transport, buildings and waste

6

ENTRY POINT: **Global Environmental Commons**

- Expand **protected** areas, abandon intensive agricultural practices in protected areas, reforestation of all degraded forest areas, shift societal preferences towards conservation land use
- Reduce **water** consumption and ensure environmental flow requirements
- Adopt a **1.5°C land-sector road map** that combines ambitious protection, conservation, restoration and lifestyle changes

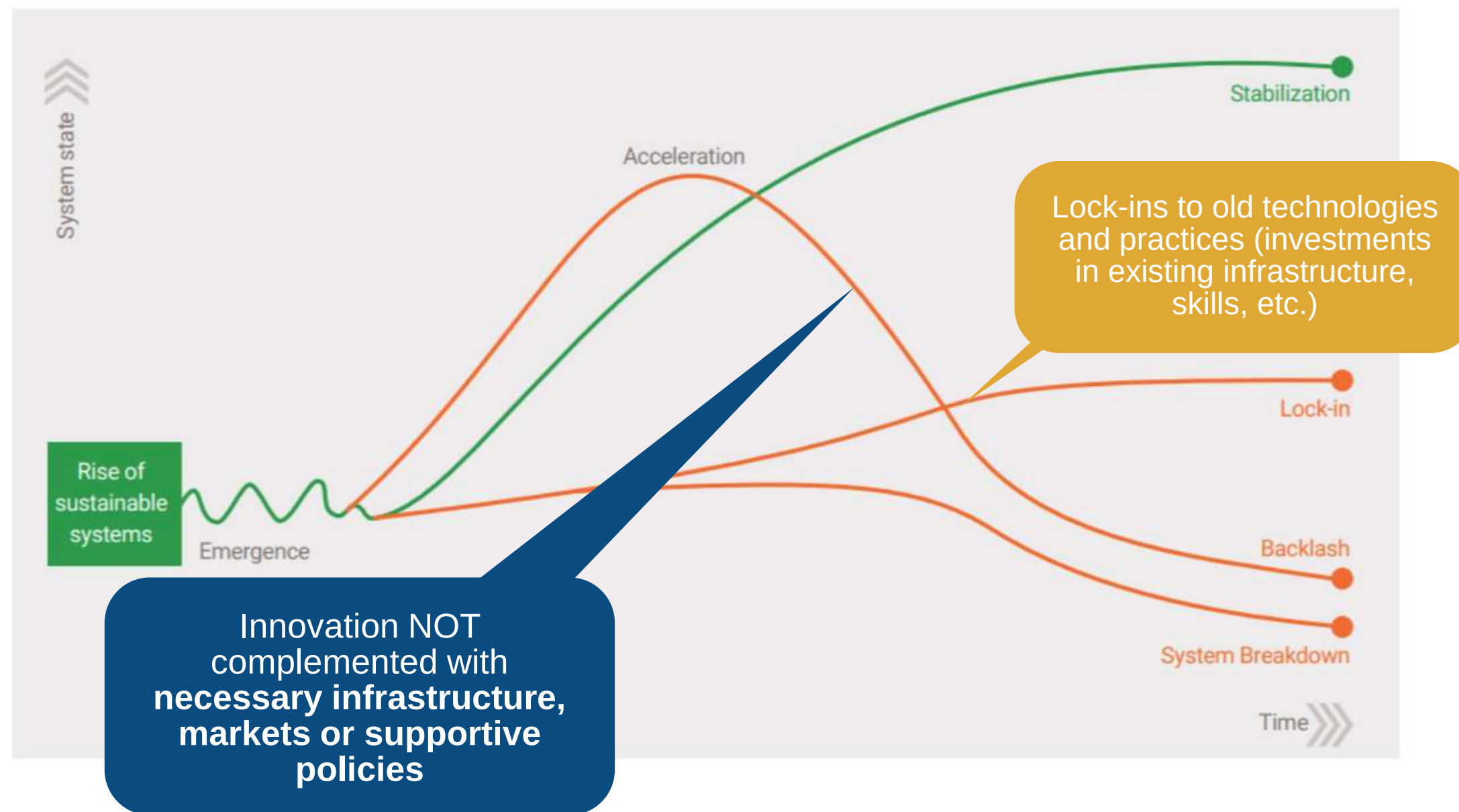
Driving Transformation through its phases on an S-curve



- Strategies for the SDGs must minimize impediments and support promising solutions specific to different phases of transformation:
 - **Emergence**
 - **Acceleration**
 - **Stabilization**
- Tipping points examples:
 - Major societal shifts in perspectives (single-use plastics)
 - Innovations suddenly become easier to use or more socially desirable (smart phone)
- **Strategic combinations of levers enable SDG solutions to move from emergence, to acceleration, to stabilization**

Overcoming impediments for dynamic transformations

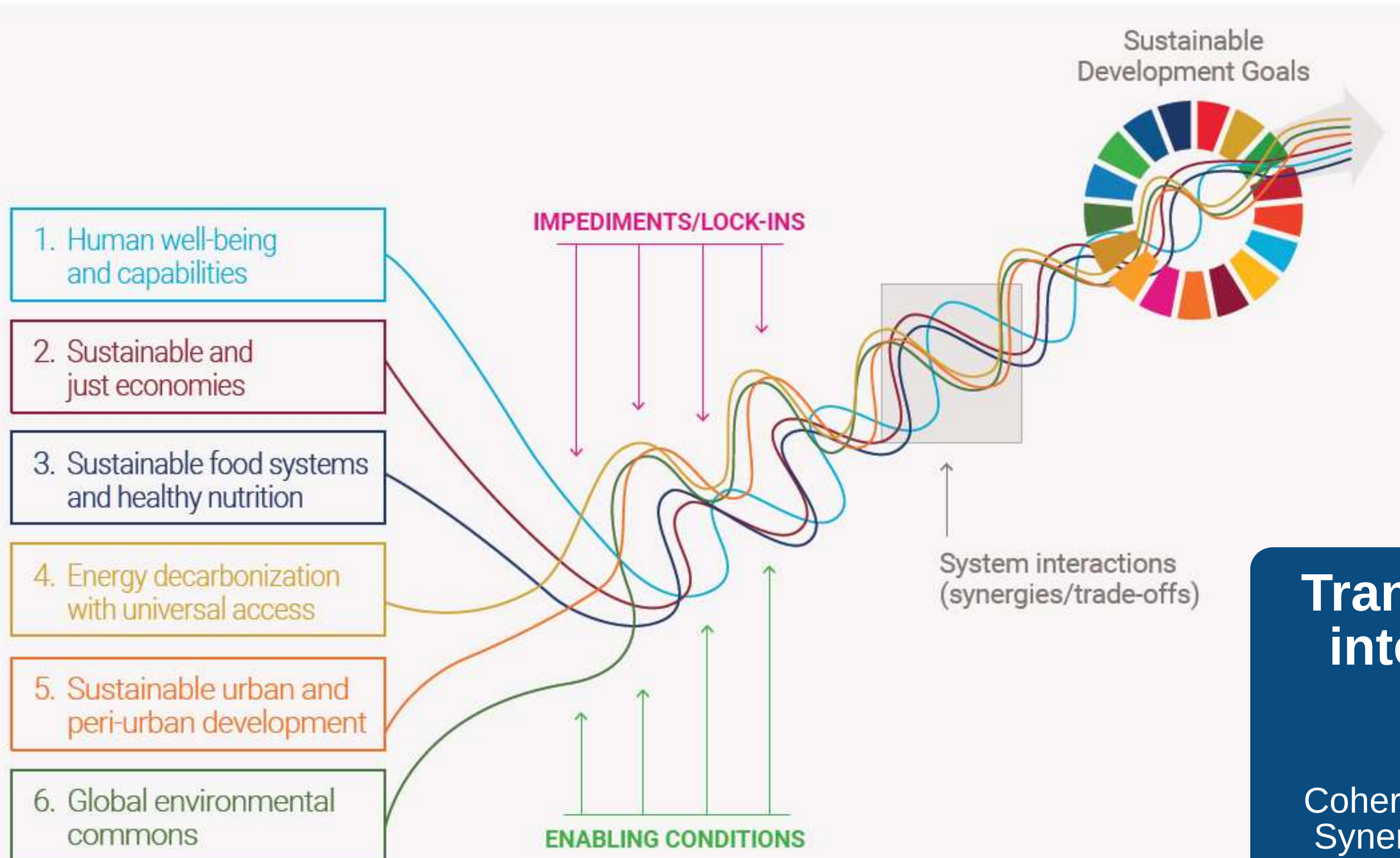
SUCCESSFUL AND UNSUCCESSFUL TRANSFORMATION PATHWAYS



- **Acceleration** is Key
- Nurture **innovation**
- Give **strategic direction**
- Goals Matter
- **Foresight** capacity
 - Use scenarios and models
- Standardization and quality assurance
- Innovation (COVID-19 and virtual meetings)
- Powerful actors support new ways of thinking, doing and acting (electric car)



TRANSFORMATIONS ARE INTERLINKED ACROSS SYSTEMS – COHERENT ACTIONS CAN GENERATE SYNERGIES/MANAGE TRADE-OFFS



**Transformations are
interlinked across
systems**

Coherent Actions can Generate
Synergies/ Manage Trade-offs

Translating rising awareness and commitments to the SDGs into action

- The crises that have wiped out years of SDG progress are interrelated, fuelling intensities, but connections could be turned into **opportunities**.
- The SDGs have taken root across sectors and levels of government improving prospects for achievement, but **aspirations and commitments have not yet translated into action and implementation at a scale visible in SDG progress** often due to lack of financial resources.

Goal attainment will depend on all actors integrating the SDGs into core decision-making processes, financing mechanisms prioritizing SDG attainment, and strong mechanisms for accountability.





Calls to Action

- **Establish an SDG Transformation Framework for Accelerated Action**
 - Member states should set national plans prioritizing key SDGs and addressing bottlenecks
 - Business and local government roadmaps
 - Provide finance and integrate SDGs in budgeting
- **Build capacities for transformation**
 - Training, foresight, public engagement, negotiation skills
- **Drive transformation through its phases and manage interlinkages**
 - Identify interventions for six entry points, use science to assess interlinkages and international 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, mechanisms for knowledge sharing



In closing...

- Transformations are possible, and inevitable
- A better future does not rest on one source of security, but on **all necessary securities**, including geopolitical, energy, climate, water, food and social security
- Working as a **human collective**, time and resources must be used as judiciously and effectively as possible
- Against the backdrop of shocks and crises, the **2030 Agenda** for Sustainable Development remains a strong and valid agenda for a desirable future



Q&A



Thank you!

Find the GSDR 2023 and latest news here:



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<https://sdgs.un.org/gsdrgsd2023>



[@SustDev](https://twitter.com/SustDev)



Division for Sustainable Development Goals

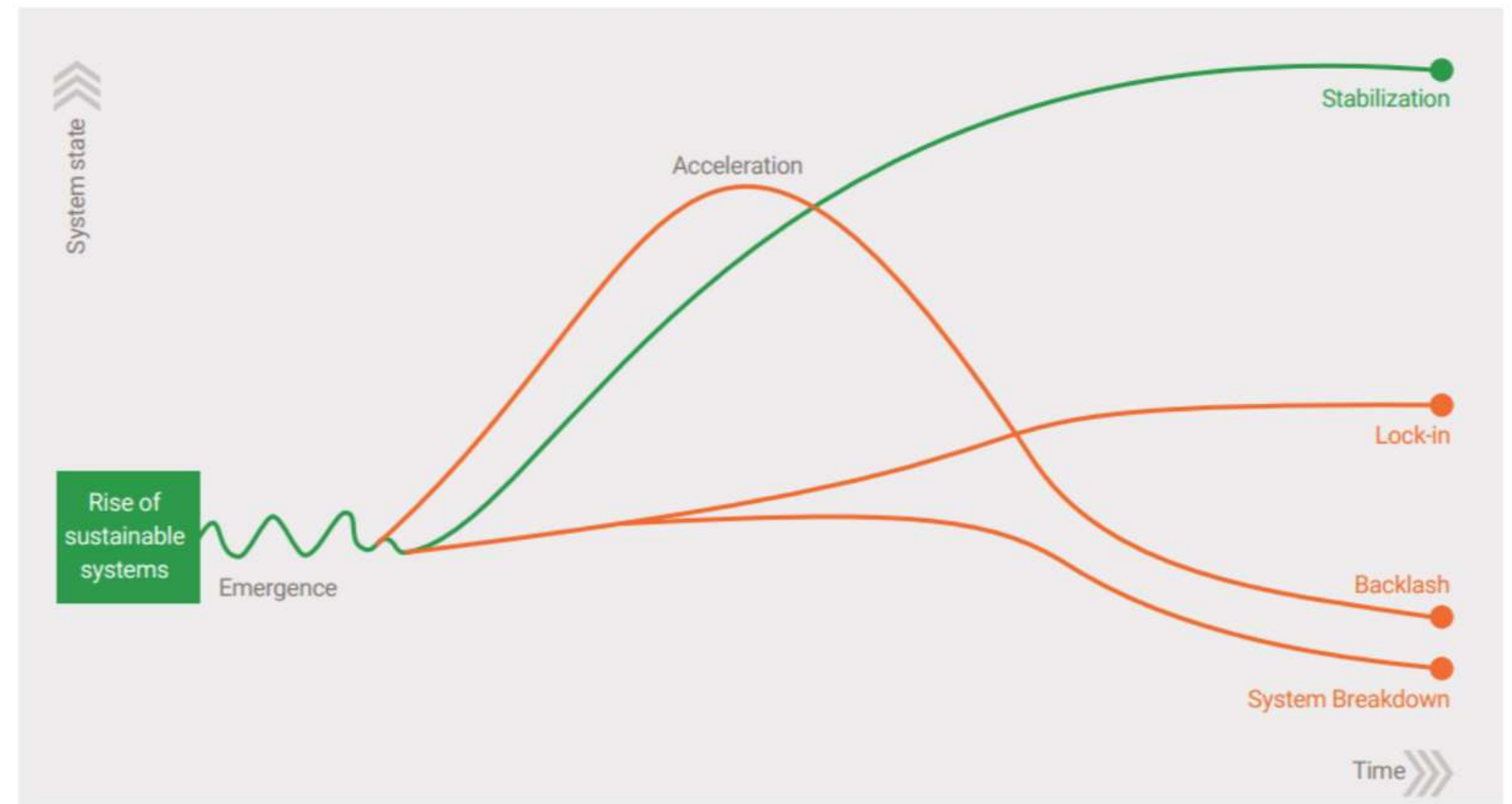
Department of Economic and Social Affairs
United Nations Secretariat Building
405 East 42nd Street
New York, NY 10017, USA

ADDITIONAL SLIDES

Common Impediments to Transformation

- Deficits in governance, institutional capacities, financing and infrastructure
- High upfront capital costs, immaturity of technologies and markets, gaps in financing and large sunk investments
- Political feasibility can be undermined by influential actors and vested interests and concerns about potential trade-offs for jobs and livelihoods
- Engrained practices and behaviours can be very difficult to change.

SUCCESSFUL AND UNSUCCESSFUL TRANSFORMATION PATHWAYS



Key Shifts

ENTRY POINT: Human wellbeing and capabilities

- Scale-up investment in core primary **health** care interventions, ensure that every pregnant woman and neonate has access to lifesaving interventions, optimize existing health systems and expand community-based health initiatives.
- Accelerate secondary **education** enrolment and completion rates, ensure all girls are enrolled in secondary education by 2030, expand tertiary education and education on sustainability issues.
- Increased investment in **water and sanitation** infrastructure, particularly; transition to universal piped water access and halve untreated wastewater that by 2030 (and halve again by 2050).

Interventions by lever

GOVERNANCE

Health: policy and population-wide interventions (e.g. regulatory interventions, taxes, restrictions and bans); periodic outreach and schedulable services (e.g. vaccines, family planning, nutrition, supplements); first-level and above clinical services (e.g. disease treatment, counselling, mammography, asthma, pulmona). Optimising health systems to address staff shortages, retrain workers, reinforce infrastructure and supplies, strengthen networks and expand services

Education: eliminating school fees, improving local access to schools, increasing the number of years of compulsory schooling, and providing food, stipends, and other resources for children at school

BUSINESS &FINANCE

Health: additional USD200 billion per year from 2020 to 2030 for core PHC in LMICs

Water & Sanitation (W&S): reallocate financing away from conventional freshwater supply systems combined with massive ramp-up in investment in efficiency and clean supply projects. Incremental investment in piped water access and water treatment reaches USD260 billion per year by 2030.

SCIENCE &TECHNOLOGY

W&S: rapid expansion of desalination and wastewater recycling in water stressed regions

INDIVIDUAL& COLLECTIVE ACTION

W&S: additional 10% end-use efficiency improvement beyond baseline due to behaviour change

CAPACITY BUILDING

Build capacities to implement each lever and to overcome impediments including building an adequate workforce that is well-resourced, available where needed, and with accessible infrastructure and functioning equipment, addressing financing gaps for investment in health, education and water and sanitation, strengthening governance and institutions, and resolving conflicts.



ENTRY POINT: Sustainable and just economies

Key Shifts

- Encouraging inclusive, pro-poor growth including progressive redistribution measures, doubling welfare transfers in low-income countries
- Rollout of good practice **climate policies** and **global carbon pricing**
- Encouraging **lifestyles** that promote sufficiency levels
- Investment in **green innovation**, and **circular and sharing economy models**.

Interventions by lever

GOVERNANCE

- **Just Economy:** policies for redistribution, income transfers, and redirecting public investments to focus on productive capacity and raising the incomes of the poor, including universal cash transfers, universal insurance coverage, or instituting a basic income. Social transfer schemes can include equal per capita payments or progressive redistribution inversely proportional to income.
- **Sustainable Economy:** good practice climate policies including economy-wide measures such as differentiated carbon pricing through taxes or cap- and-trade. Environmental policies and taxation to accelerate behaviour change, for example when applied to transport or energy. Governments can also create markets for new innovations through regulations, tax exemptions, deployment subsidies and labelling.

BUSINESS & FINANCE

- **Just Economy:** recycling revenue raised from carbon taxes in all countries to households to alleviate poverty, with shortfalls in LICS to be met by a portion of revenues raised in HICS and committed to a global fund. Greater concessional finance and debt relief for developing countries to ensure scope for social spending.
- **Sustainable Economy:** global carbon tax revenue potential of USD436-1360 billion by 2030 under different mitigation pathways. Rollout of good practice climate policies would cost 0.02% in annual GDP growth to 2050.

SCIENCE & TECHNOLOGY

- **Sustainable Economy:** industry technology measures include carbon capture and storage (HICS 1.5% of total CO₂ emissions by 2030), improving final energy efficiency (HICS 11% and LMICS 6% by 2030); and reducing N₂O emissions. Support from state investment banks, public-private financing facilities, and government science funding mechanisms for green innovations. Divestment in current business-as-usual practices and technologies and increasing investment in R&D.

CAPACITY BUILDING

- Build capacities to implement each lever and overcome impediments including building institutional capacities for navigating revenue collection and redistribution, overcoming political resistance, managing environmental and economic trade-offs, designing and delivering carbon taxes to address financing gaps, developing markets for sustainable innovations, and shifting ingrained unsustainable behaviors and attitudes.

ENTRY POINT: Food systems and nutrition patterns

Key Shifts

- Shift to **regenerative ecological** and **multifunctional agricultural** systems.
- Improve **irrigation and fertilizer efficiency**.
- **Reduce food waste** by 50 per cent and **scale up proven nutrition interventions**.
- **Halve consumption of meat** in high-consumption regions and adapt **plant-based diets**.

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.

BUSINESS & 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 & TECHNOLOGY

- **Sustainable Food Systems:** a rapid uptake of improved technologies, especially in Africa, Asia and Latin America; investments in R&D, yieldaugmenting 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.
- **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 & 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 building institutional capacities for navigating revenue collection and redistribution, overcoming political resistance, managing environmental and economic trade-offs, designing and delivering carbon taxes to address financing gaps, developing markets for sustainable innovations, and shifting ingrained unsustainable behaviors and attitudes.

Key Shifts

ENTRY POINT: Energy Decarbonisation & Universal Access

- Large-scale deployment of **renewables** and best available technologies, appliances and equipment
- Rapidly scaling up **infrastructure** investment and support for universal electricity access and clean cooking alternatives
- Phasing down of **fossil fuels** by 2030 in a domestically and globally just manner
- Major changes in global **consumer behaviour** to reduce energy consumption and end-use electrification.

Interventions by lever

GOVERNANCE

- **Access:** subsidies to stimulate the adoption of cleaner cooking fuels/technologies or regulations to near-complete phase out biomass cookstoves by 2030.
- **Decarbonisation:** carbon pricing of emissions and subsidies for renewables. Energy system policies for faster phase out of coal and near-complete phase out of traditional biomass by 2040, restrictions on nuclear capacity additions and bioenergy potential, and faster phase out of fossil energy subsidies by 2030. Mandatory targets to increase share of renewables in electricity generation and ban new installations of coal power plants by 2025 (HICS) or 2030 (LMICs).
- **Demand:** introduction of a progressive carbon tax affecting energy demand, regulations to improve energy efficiency, incentives to improve dwelling energy performance and change behaviour to reduce energy consumption; designing and enforcing national standards and labelling for household appliances and efficient equipment; subsidies, appliance rebates and access to credit for lower income households to benefit from modern energy technologies.

BUSINESS & FINANCE

- **Access:** increase public and private investment in electricity infrastructure in Africa from 1% to 3% GDP per annum to 2030.
- **Decarbonisation:** divestment from fossil fuel activities reaching more than 170 Billion USD per year by 2030 and used to partially fund USD910 billion per year on efficiency and low-carbon resources. Recycling of carbon revenues whereby developed countries devote part of their revenues to an international fund that supports clean energy and R&D in developing countries (USD50 billion per annum).

SCIENCE & TECHNOLOGY

- **Decarbonisation:** public and private investment in innovation in renewable energy technologies; spatially optimised bioenergy with carbon capture/storage.
- **Demand:** promote digital technologies for energy use, transmission and monitoring and innovation in high quality housing with highly efficient facilities for cooking, storing food and washing, low-energy lighting.

INDIVIDUAL & COLLECTIVE ACTION

- **Demand:** incentivize behaviour change to reduce energy consumption.

CAPACITY BUILDING

- Build capacities to implement each lever and overcome impediments including for designing and implementing market conditions, incentives and regulatory settings for investment in sustainable energy infrastructure and improving revenue collection, navigating political resistance from sunk investments in capital stocks, managing trade-offs and competition between socioeconomic and environmental goals, building coalitions and public support in favour of decarbonisation, and shifting towards sustainable consumption behaviours.



ENTRY POINT:
**Sustainable urban
and peri-urban
development**

Key Shifts

- Shift towards **sustainable urban development** by doubling of the recycled and composted share of municipal waste by 2030 and increased circularity in the waste cycle; implementing mandates for electric vehicle market penetration; increasing demand and provision of public transport; rollout of good practice climate policies for transport, buildings and waste; investing in innovation to reduce plastic and solid waste; transition to smart cities using modern digital technologies. water access and halve untreated wastewater that by 2030 (and halve again by 2050).

Interventions by lever

GOVERNANCE

Expanding municipal waste collection systems, incentives and educational initiatives for composting and recycling;³² investment in public transport networks, multi-modal transport and incentives or mandates for electric vehicle uptake (e.g. 50% new sales by 2030), regulations or standards to improve fuel efficiency of passenger cars and aviation,^{7,12,16} building standards to improve final energy intensity of new residential and commercial buildings and no new installations of boiler capacity;¹² retrofitting of existing building stock to improve energy efficiency (6-11% by 2030);¹² reducing waste emissions by 28-55% by 2030.

SCIENCE & TECHNOLOGY

Investing in innovation to reduce plastic and solid waste¹⁴ and modern digital technologies to transition to smart cities.

INDIVIDUAL & COLLECTIVE ACTION

Incentives and educational initiatives for behaviour change around composting and recycling and public transport.



Key Shifts

ENTRY POINT: Global Environmental Commons

- Protect and restore life on land by expanding protected areas to all priority conservation areas and biodiversity hotspots reaching 40-50% of terrestrial areas by 2050; preserving 85% of tropical/ boreal forest and 50% of temperate forest on each continent; abandoning agricultural land in protected areas or areas with >5% threatened species; ambitious reforestation of all degraded forest areas; and implementing a 1.5°C land-sector roadmap for 2050 combining avoided deforestation and land conversion, restoring forests and wetlands, improving forest management, lifestyle changes (diets, waste) and reduced reliance on BECCS. Protect other global environmental commons including ensuring environmental flow requirements; greater conservation of water by households, farms and industry, and improved air quality control.

Interventions by lever

GOVERNANCE

- Conservation policies, establishment of protected areas, land use regulation and law enforcement, integrated land use planning, sustainable forest management (optimising rotation and stocks, low-impact logging, certification, fire management), improved land tenure, sustainable commodity production, improved supply chain transparency, procurement policies, commodity certification, cleaner cookstoves, investments in ecosystem restoration and nature-based solutions, integration of agroforestry into agricultural and grazing lands, limit water extraction to local environmental flow requirements in low, intermediate and high flow periods.

BUSINESS & FINANCE

- Payment for Ecosystem Services schemes, including Reducing Emissions from Deforestation and Forest Degradation (REDD+).

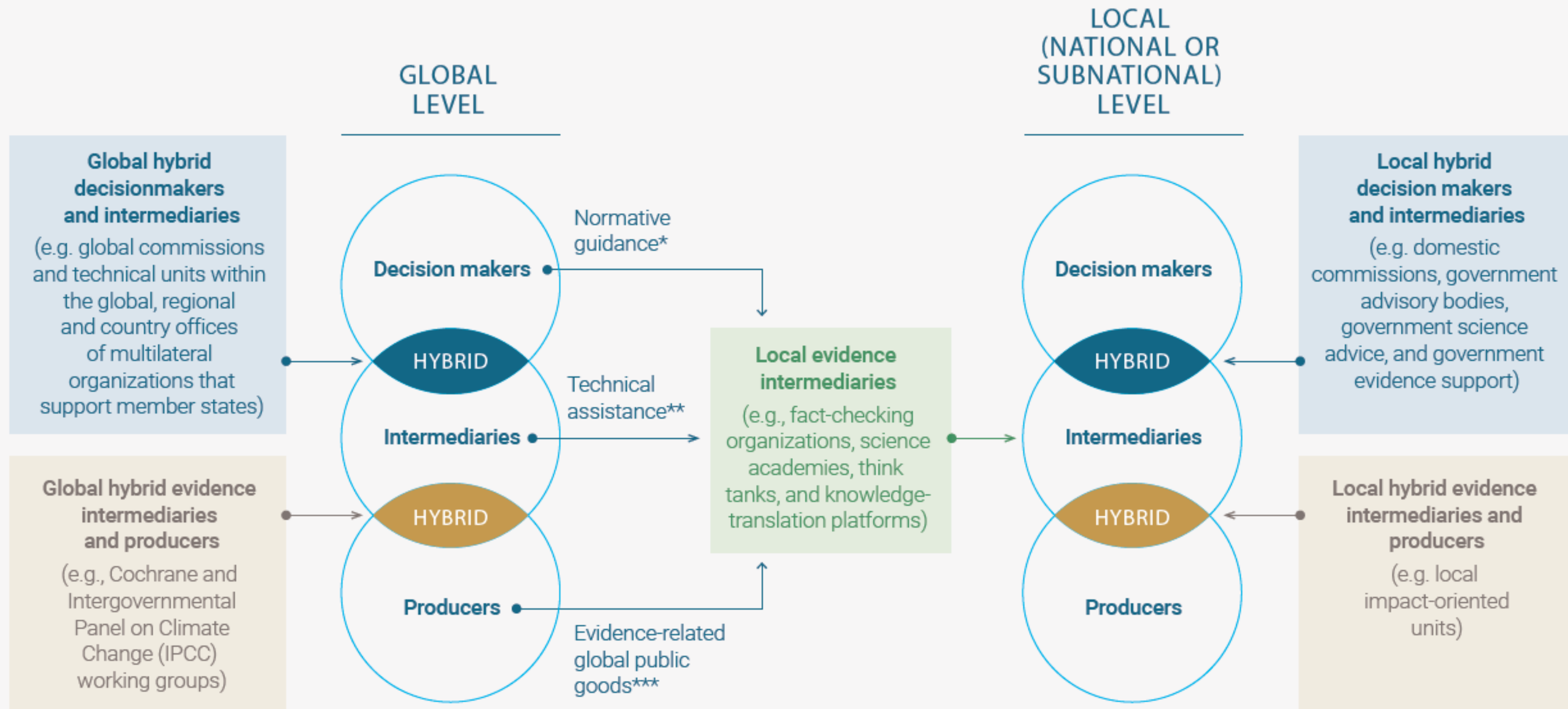
INDIVIDUAL & COLLECTIVE ACTION

- Shift societal preferences from production to conservation land use and enable lifestyle changes around diets and waste.

CAPACITY- BUILDING

- Build capacities to implement each lever and overcome impediments including for managing trade-offs between food production and biodiversity protection, designing and implementing effective financial conservation schemes, establishing sustainable land management regulations, institutions and governance systems.

DYNAMICS OF SCIENCE PRODUCTION AND POLICY DECISION-MAKING

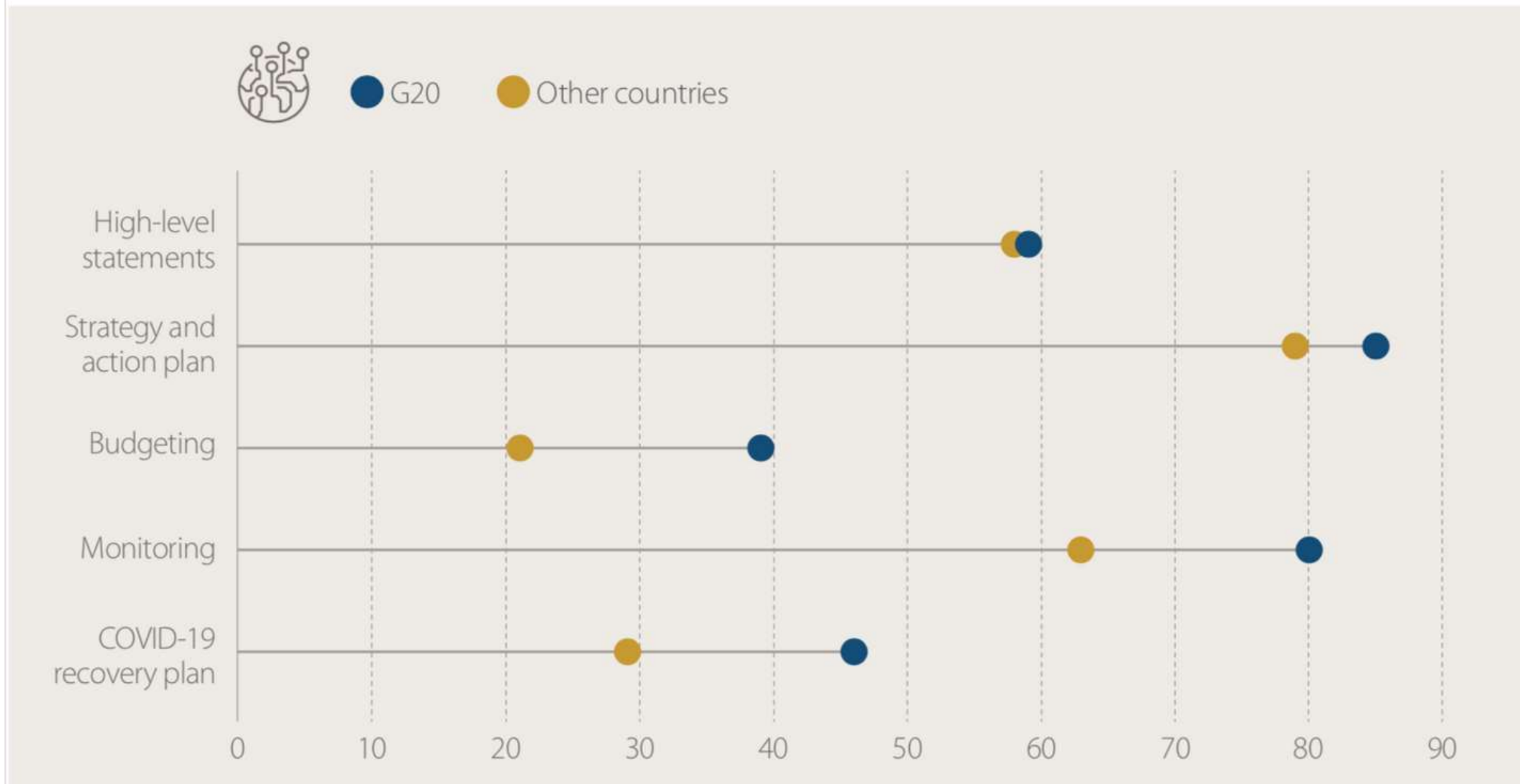


* e.g. General Assembly resolutions and United Nations agency guidelines

** e.g. capacity to respond to questions with best evidence

*** e.g. Cochrane evidence syntheses and Intergovernmental Panel on Climate Change modeling

INTEGRATION OF SDGs INTO KEY POLICY PROCESSES, G20 COUNTRIES AND OTHER COUNTRIES

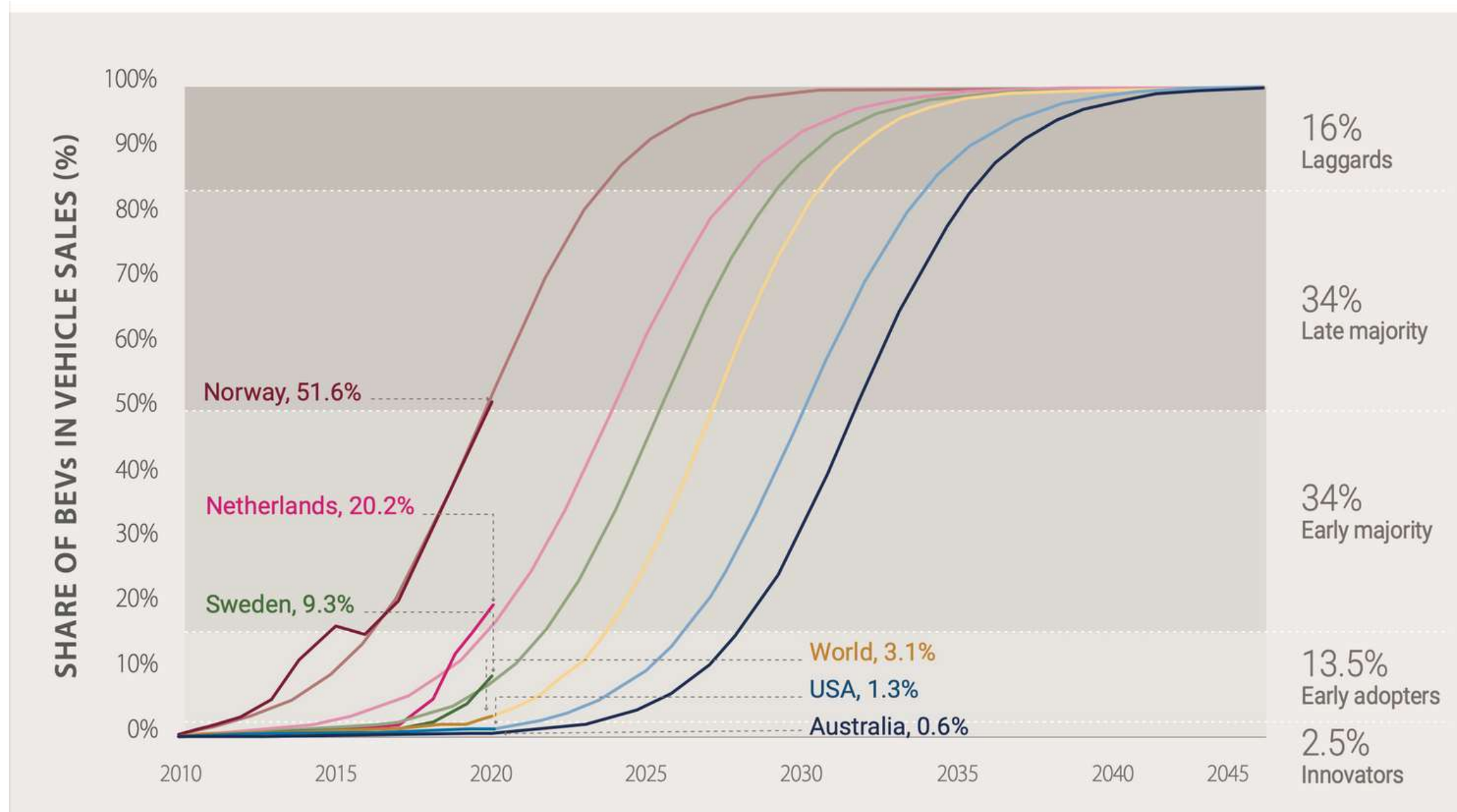


Source: Sachs et al. (2022a) Sustainable Development Report 2022: From Crisis to Sustainable Development

Aspirations, Commitments, and Partnerships

- A recent survey of 60 countries showed that by 2021, **75% of governments had developed SDG strategies and action plans.**
- **G20 countries** on average have been **less ambitious** than other countries despite representing the majority of the world's population and income.

The S-Curve in Practice: Electric Vehicles



- Several countries advanced rapidly along the S-curve. Key factors for potential adopters are the upfront **costs** and **availability** of an adequate charging network. **Governmental policy and tax incentives** also helps acceleration.
- However, this transition can also cause **damage** and **trade-offs**, and **spillovers** must be accounted for and managed.



Corporations & Foundations for the SDGs

- Amidst an overall declining trust in institutions, **people are looking to the private sector to fill that gap** – holding CEOs and businesses to a new standard of leadership.
 - *According to one survey, business has emerged as the most trusted institution (61%), followed by NGOs (59%) and governments (52%).*
- **Increasing stakeholder support** for sustainability, investors are engaging in conversations about long-term growth and **ESG**-integrated investment decisions.
- **Corporate foundations** may actively contribute to the achievement of the SDGs by acting as **broker organizations in cross-sector collaborations for the SDGs.**

Scenario Frameworks for Global Change

SSP1 - Sustainability

The world shifts gradually, but pervasively, towards a more sustainable path, emphasizing more inclusive development that respects perceived environmental boundaries. Management of the global commons slowly improves, educational and health investments accelerate a demographic transition, and a shift from economic growth towards a broader emphasis on human well-being. Driven by an increasing commitment to the SDGs, inequality is reduced both across and within countries. Consumption is oriented towards low material growth and lower intensity use of resources and energy.

SSP2 – Middle-of-the-road

A business-as-usual scenario. The world follows a path in which social, economic and technological trends do not shift markedly from historical patterns.

SSP3 - Regional rivalry

A resurgent nationalism, concerns about competitiveness and security, and regional conflicts push countries to increasingly focus on domestic or, at most, regional issues.

SSP4 - Inequality

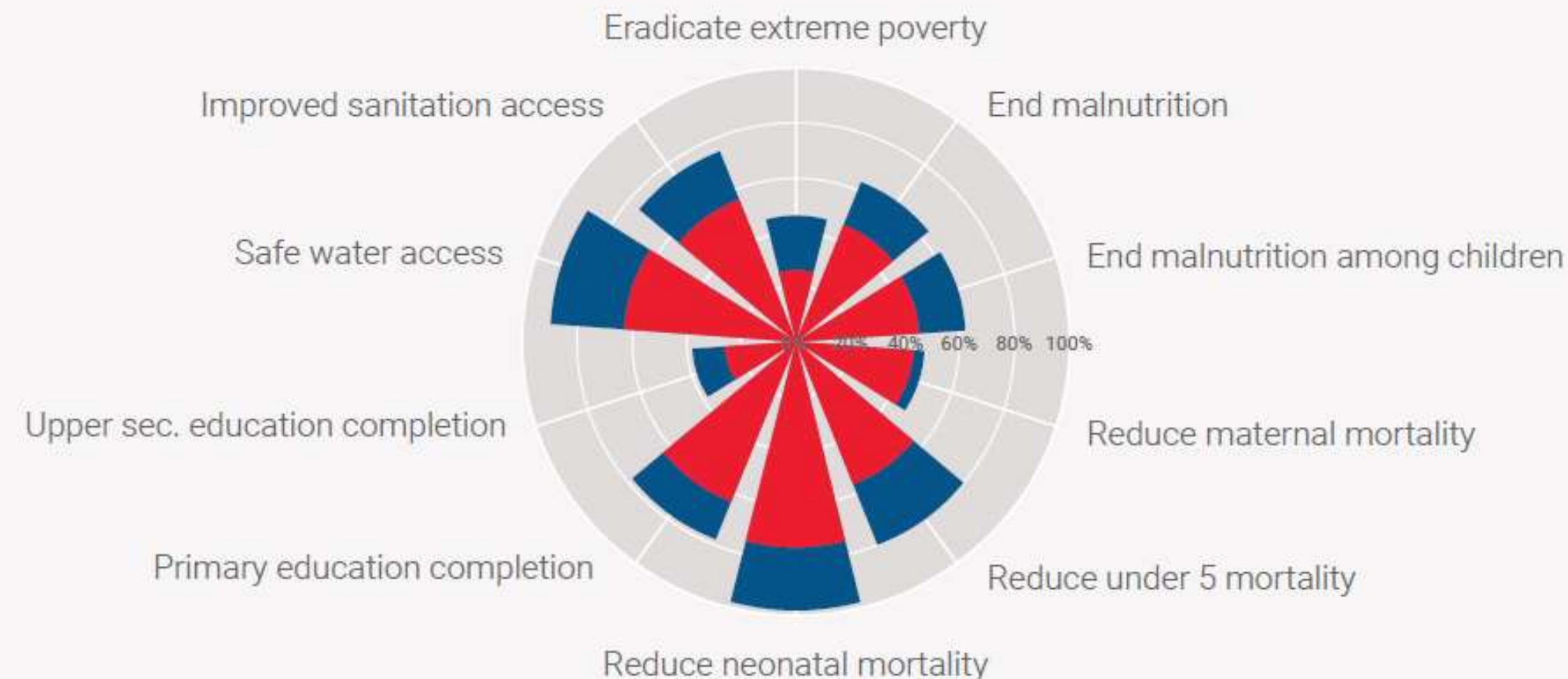
Highly unequal investments in human capital, combined with increasing disparities in economic opportunity and political power, lead to increasing inequalities and stratification both across and within countries.

SSP5 - Fossil-fuelled development

This world places increasing faith in competitive markets, innovation and participatory societies to produce rapid technological progress and development of human capital as the path to sustainable development.

PROGRESS TOWARD SDG TARGETS BY 2030 ASSUMING A GLOBAL “SDG PUSH” COMPARED WITH A HIGH-DAMAGE COVID-19 SCENARIO

SCENARIO: ■ High-Damage COVID-19 ■ SDG Push



Note: This chart shows the global population's percentage progress toward the target value between 2015 and 2030 (the portion closed of the gap-to-target that existed in 2015). It compares and outcome with heavy COVID-19 damage (red), and one with a global push (turquoise).

Source: Hughes et al., 2021

Global SDG Push

- The message from these global scenario projections is clear: **Business-as-usual actions will deliver limited gains on the SDGs.** However, with increased ambition, transformative policies can accelerate progress.
- An **integrated** and **coherent** approach to implementation must be taken to ensure that interventions target priority entry points for systems change and that trade-offs are managed, and synergies are harnessed.