

Residual Accounts and linkages to SDGs

Ministry of Statistics and Programme Implementation

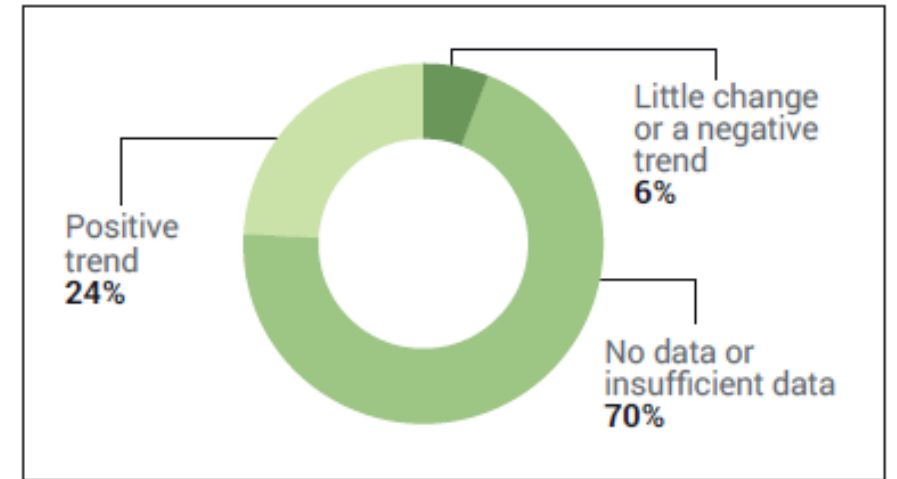
3 July 2023



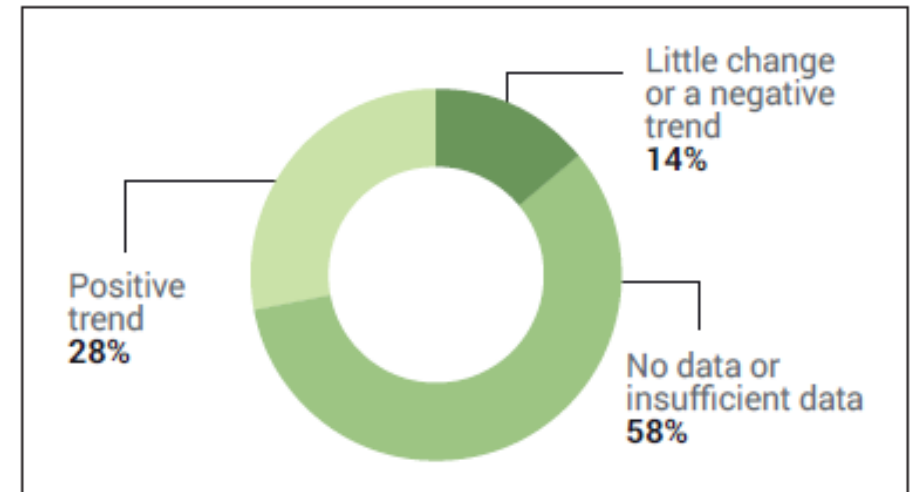
Measuring progress – Environment and the SDGs

- 231 unique indicators of the SDG framework can be put into buckets relating to:
 - “Drivers of change”, “State of the environment” , “State of society”
- Of 92 SDG indicators most relevant to the environmental dimension of the SDGs in 2021
 - Globally 42% had sufficient data to assess progress made in achieving the SDG targets.
 - Percentage of indicators showing a positive trend toward meeting the relevant SDG declined
- SDGs interlinked, therefore important to draw interlinkages between data and reporting on indicators.

Central and Southern Asia



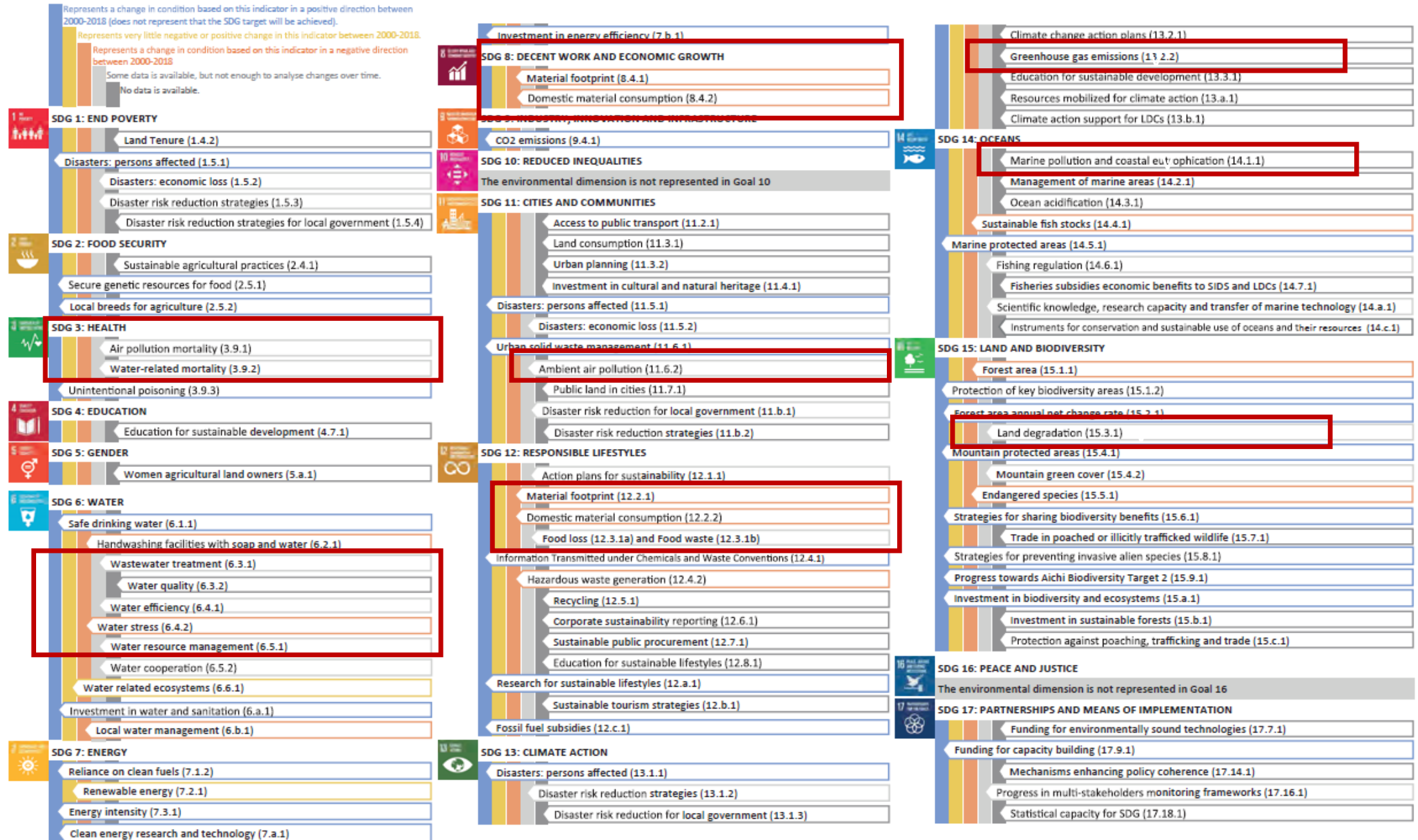
Global



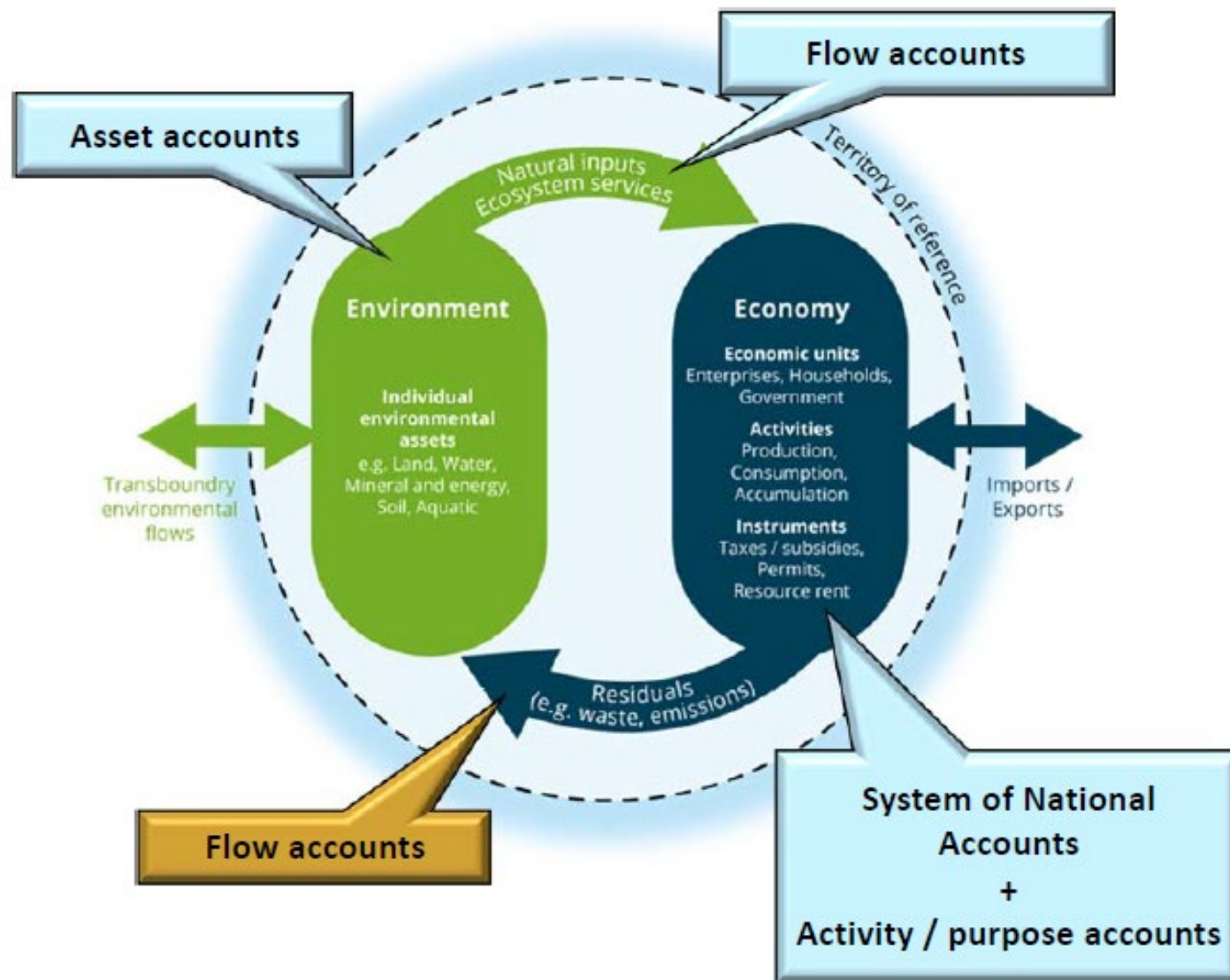
Measuring progress –Waste and the SDGs

- Seven specific indicators under SDGs which relate to issues of effective management of various wastes streams including
 - 11.6.1: Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal solid waste generated by cities.
 - 12.3.1 (b): Food Waste Index
 - 12.4.1: Number of parties to international multilateral environmental agreements on hazardous waste, and other chemicals that meet their commitments and obligations in transmitting information as required by each relevant agreement
 - 12.4.2 (a): Hazardous waste generated per capita
 - 12.4.2 (b): Proportion of hazardous waste treated
 - 12.5.1: National recycling rate
 - 14.1.1(b): Floating plastic debris density
- In addition, indicators on mortality caused by air, water and soil pollution (indicators 3.9.1, 3.9.2 and 3.9.3)
- There are also indirect linkages between chemicals and many other SDG targets related to ecosystem health and sustainable consumption and production.

Global Scorecard on the Environmental Dimensions of SDGs (red boxes strongly related to residual accounts)



Environment and income/wealth accounts



Natural Inputs

Natural inputs are all physical inputs that are moved from their location in the environment as a part of economic production processes or are directly used in production (e.g. flows of minerals, timber, fish, water).

Product Flow

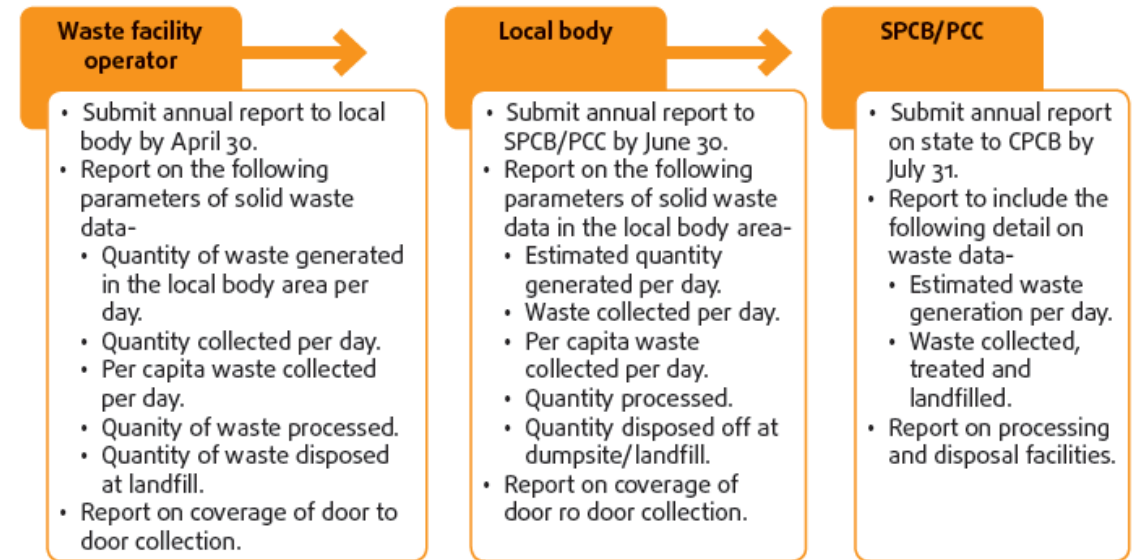
Products are goods and services that result from a production process in the economy, including additions to the stock of fixed assets.

Residuals

Residuals are flows of solid, liquid and gaseous materials and energy that are discarded, discharged or emitted by establishments and households through processes of production, consumption or accumulation (e.g. solid waste, air emissions, return flows of water).

India

- Extensive legislative framework for management of waste, as well as major Missions
- Part to five Multilateral Environmental Agreements related to waste and chemicals:
 - Basel Convention on the control of transboundary movements of hazardous wastes and their disposal
 - Stockholm Convention on persistent organic pollutants
 - Minamata Convention on mercury
 - Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade
 - Vienna Convention for the protection of the ozone layer, and its Montreal Protocol on substances that deplete the ozone layer
 - Also, party to Strategic Approach to International Chemicals Management (SAICM), a policy framework to promote chemical safety around the world



Example: Data collection and reporting on municipal solid waste in India as per the Solid Waste Management Rules

Assessment of data-related challenges

- Challenges in data generation, collection, and reporting
- Need for an integrated system for coordinated and harmonized collection, validation and reporting of waste management data across government agencies
- Consistent approaches for data collection/reporting for global targets such as SDGs
- Enhancing national data collection, management and analysis capacity
 - Harmonized protocols
 - Understanding the state of the environment
 - Interactions among SDGs
- Strengthening the role and ownership of National Statistical Offices and Ministries of Environment in terms of collecting and processing environmental data
- Establishing a practice by non-environmental government agencies, particularly the Ministries of Finance of factoring environmental indicators and integrated analyses into decision making
- UNEP Assessment 2020 for India

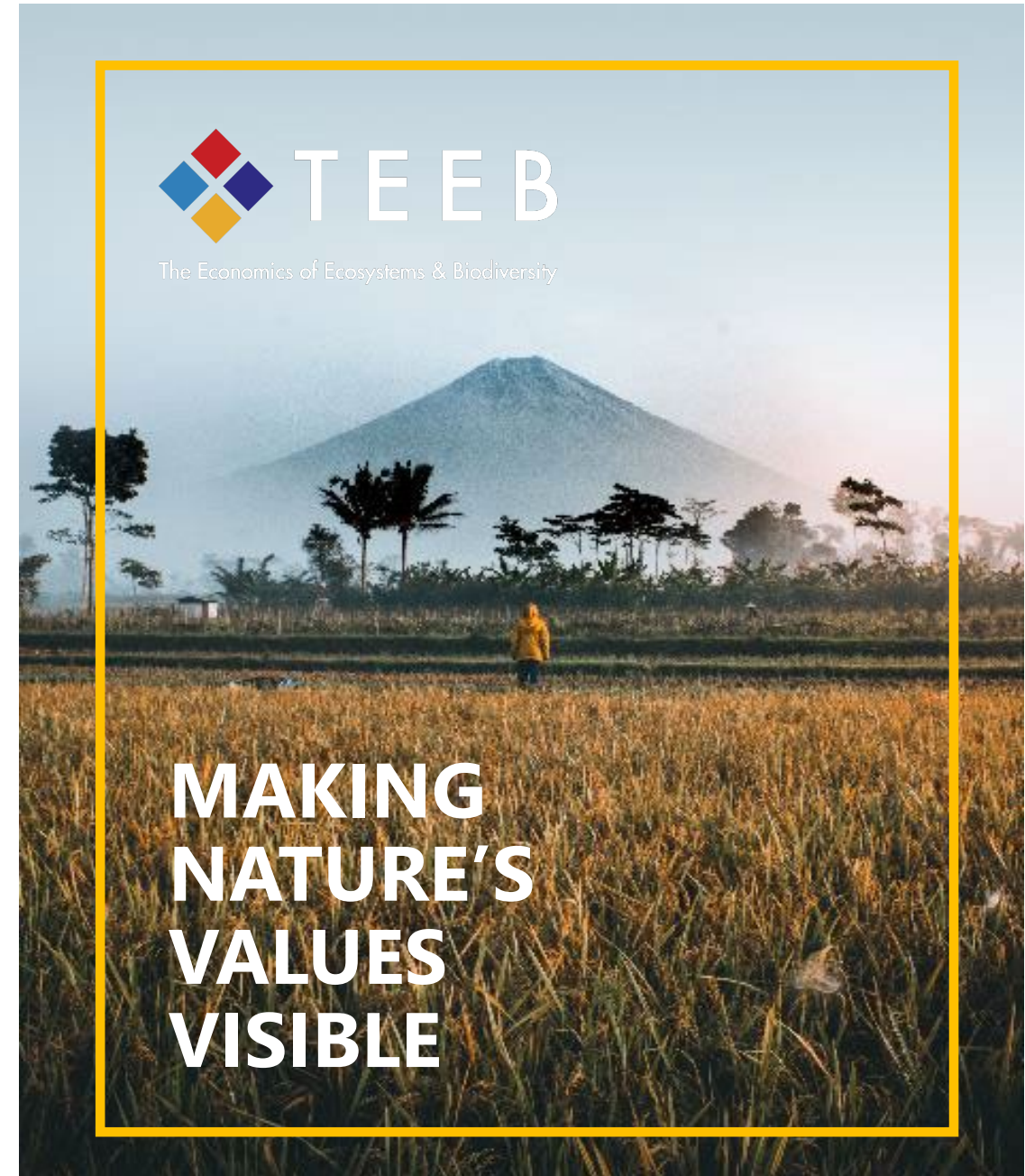
UNEP Capacity Building Initiatives

Capacity building for measuring progress towards the Environmental Dimension of the SDGs - enhancing the collection and dissemination of SDG indicators

- 12.2.1: Material footprint, material footprint per capita, and material footprint per GDP
- 12.2.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP
- 12.4.2: (a) Hazardous waste generated per capita; and (b) proportion of hazardous waste treated, by type of treatment
- 12.5.1: National recycling rate, tons of material recycled
- 17.14.1: Number of countries with mechanisms in place to enhance policy coherence of sustainable development.

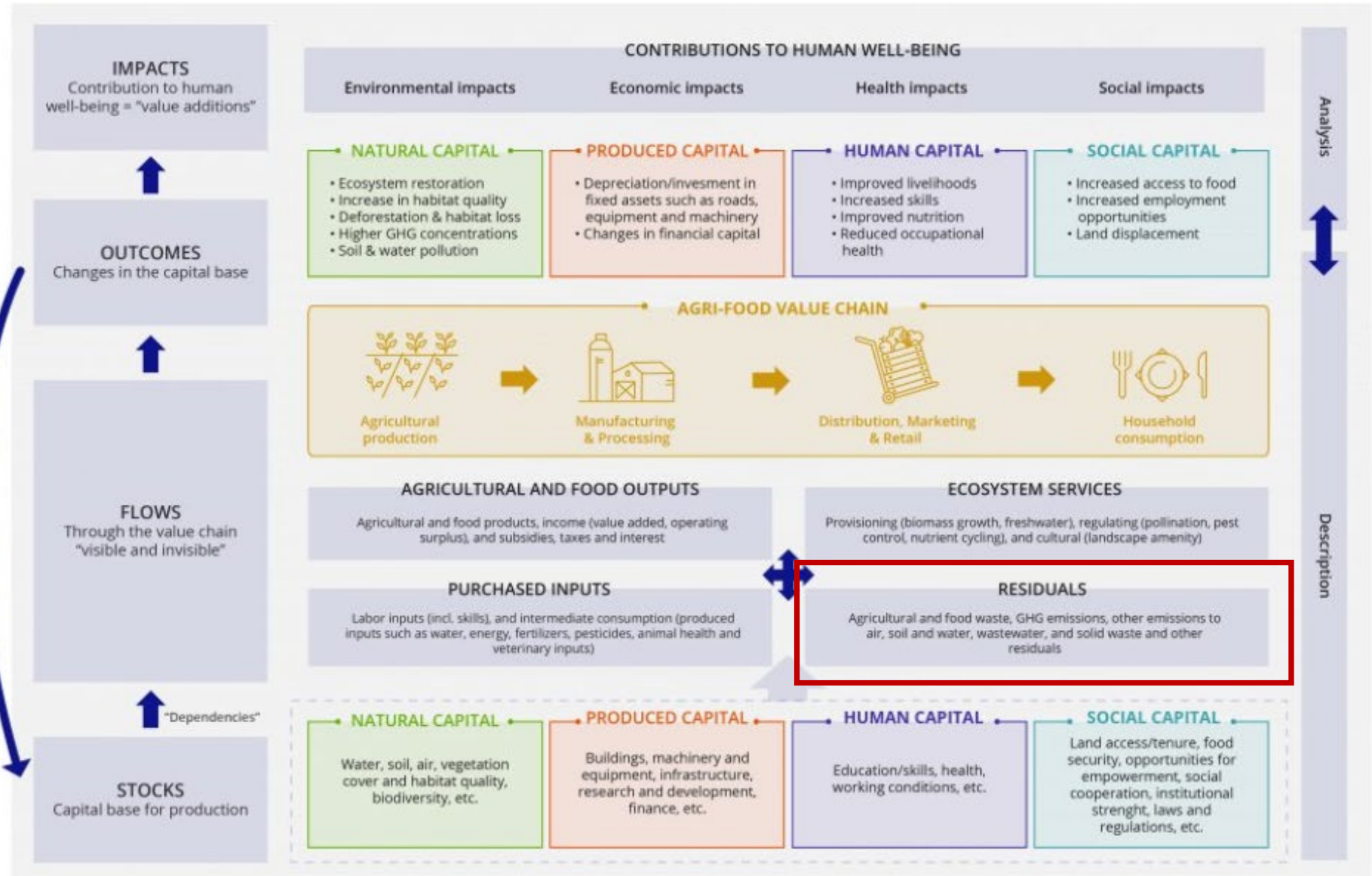
The Economics of Ecosystems and Biodiversity (TEEB)

- The Economics of Ecosystems and Biodiversity (TEEB) is a global initiative that seeks to recognize, demonstrate and capture nature's value in decision-making.
- TEEB for Agriculture and Food (TEEBAgriFood), an offshoot of TEEB applies this process of **economic valuation** to policies linked to food systems transformation.
- Purpose is to inform **public and private** decision-making about the visible and invisible impacts on natural, social, human and produced capital of choices.
- It does this is by offering a structured approach to valuation that helps decision-makers to
 - **Recognize** the wide range of benefits provided by ecosystems and biodiversity
 - **Demonstrate** their values in economic terms
 - Where appropriate, **capture** those values in decision-making



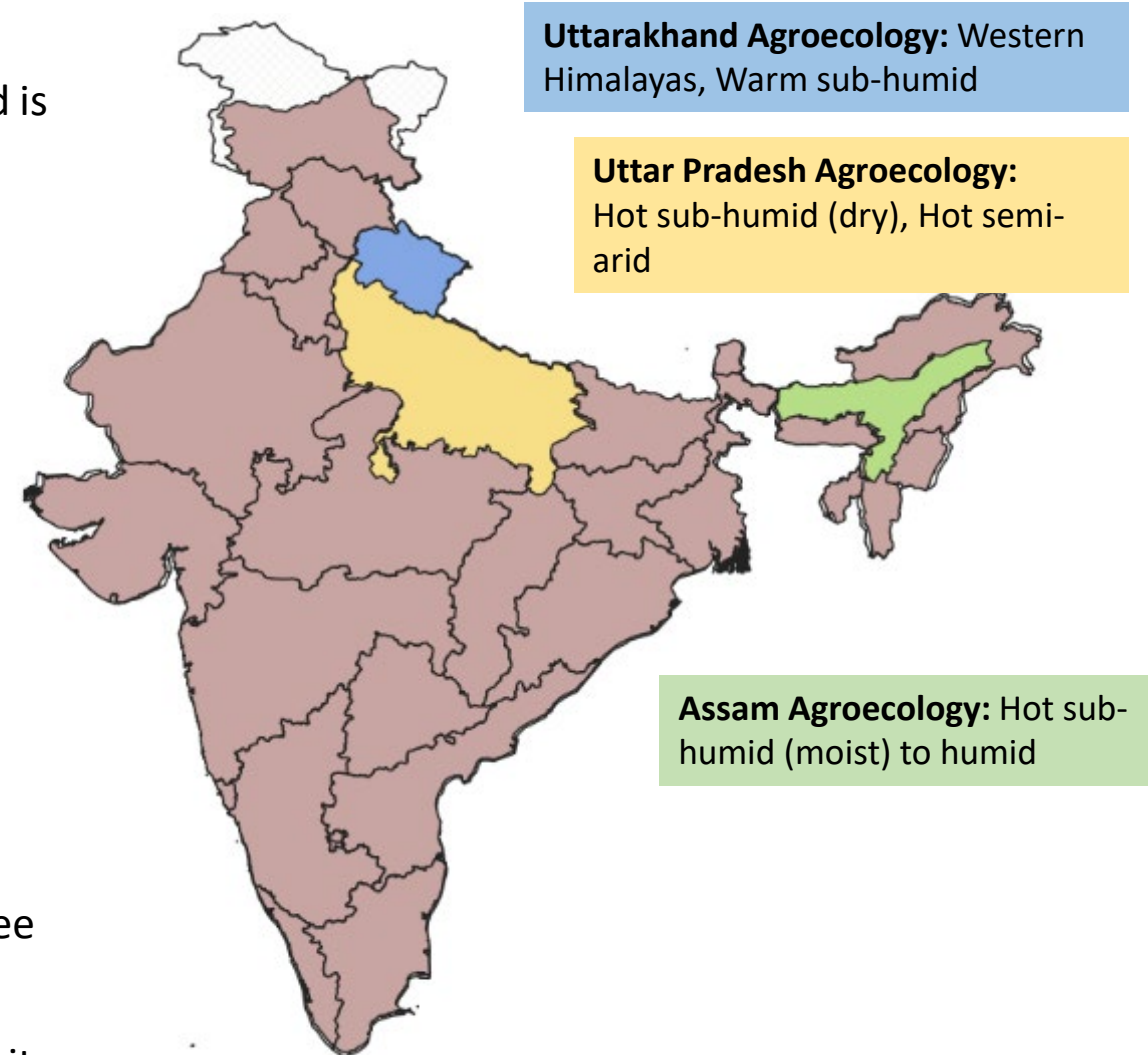
TEEB for Agriculture and Food Framework

Application of a holistic systems thinking to the economics of agriculture



The current application in India began in 2019 and is ending in 2023 and is funded by the European Union.

- Organic farming and agroforestry interventions in:
 - Ganga basin region of India (Uttar Pradesh and Uttarakhand)
 - Northeast region (NER) of India (Assam)
- Key national policy priorities and areas of action under assessment:
 - Paramparagat Krishi Vikas Yojana (PKVY)
 - National Mission for Clean Ganga (NMCG)
 - National Agroforestry Policy
 - Mission Organic Value Chain Development – Northeast Region
 - National Bamboo Mission
- Assessments with contribute in informing national priorities and India’s commitments on:
 - Doubling Farmers Income (DFI)
 - Crop Diversification
 - NDC on carbon sequestration through addition of Forest and Tree Cover (UNFCCC)
 - Restoration of 26 million hectares of degraded lands (UNCCD)
 - National implementation of Kunming-Montreal Global Biodiversity Framework





Project scope determined in consultation by **National Steering Committee** in consultation with TEEB Office followed by stakeholder consultations

- **Co-Chairs:** Ministry of Agriculture and Farmers Welfare, Ministry of Environment, Forest and Climate Change
- **Members (to be reconstituted after addition of Assam):** NITI Aayog, National Biodiversity Authority, Directorate of Agriculture – Uttar Pradesh, Directorate of Agriculture – Uttarakhand, Directorate of Agriculture – Assam, Uttarakhand Organic Commodities Board, Assam Agroforestry Development Board, Indian Council of Agricultural Research (ICAR), ICAR-IIFSR, ICAR-CAFRI, GB Pant University of Agriculture and Technology

Research Partners in the three states of India:

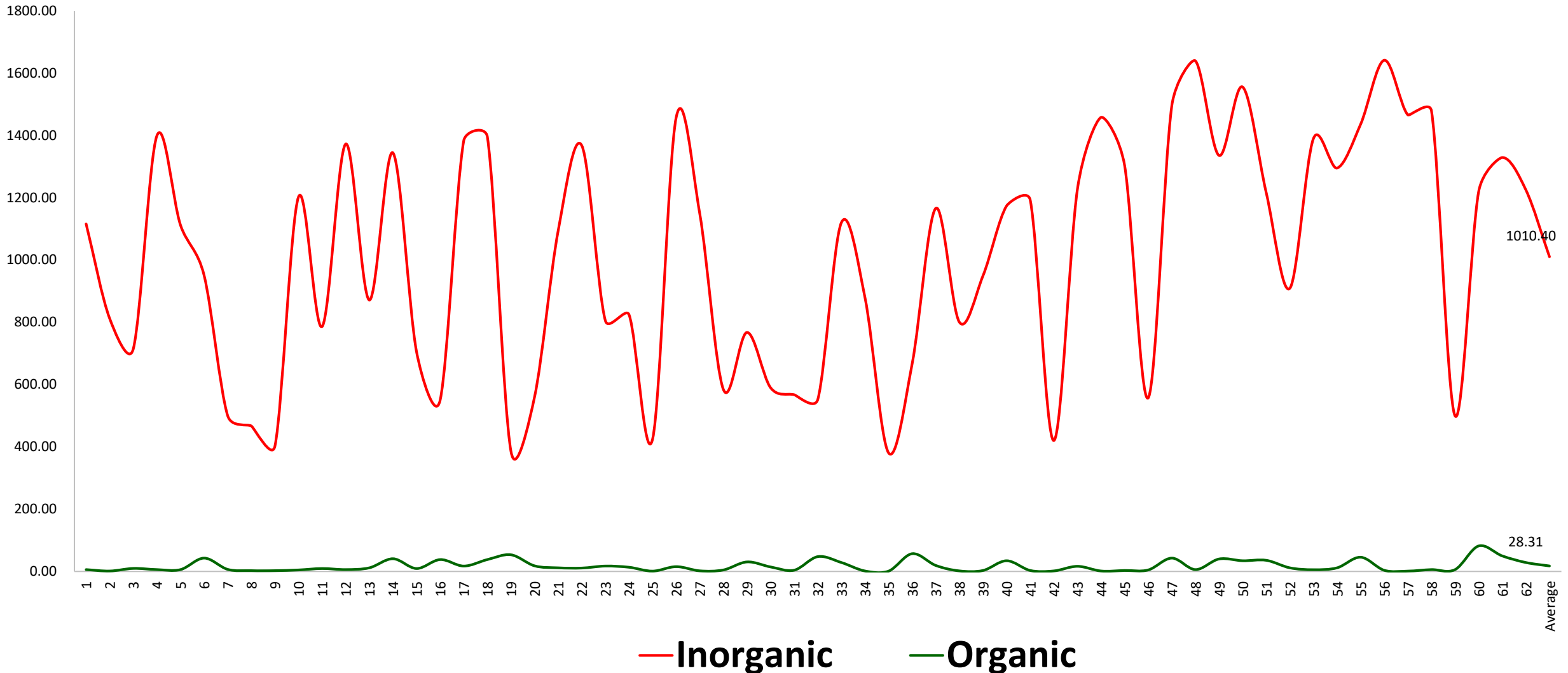
- **Uttarakhand:** G.B. Pant University of Agriculture and Technology
- **Uttar Pradesh:** Indian Institute of Farming Systems Research - Indian Council of Agricultural Research (ICAR-IIFSR)
- **Assam:** Central Agroforestry Research Institute – Indian Council of Agricultural Research (ICAR-CAFRI)



ESI-SLSI (GHGs emission from Agrochemicals/organic)

Comparative release of GHGs from Organic and Inorganic

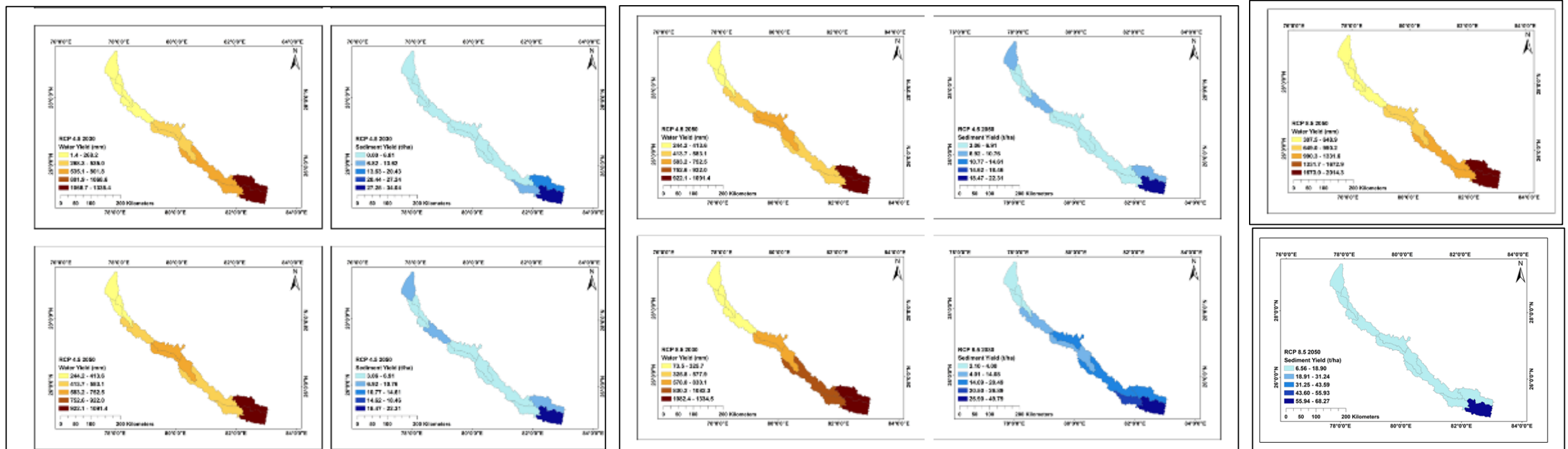
GHG emission from fertilizer use (CO₂ eq./kg/ha)



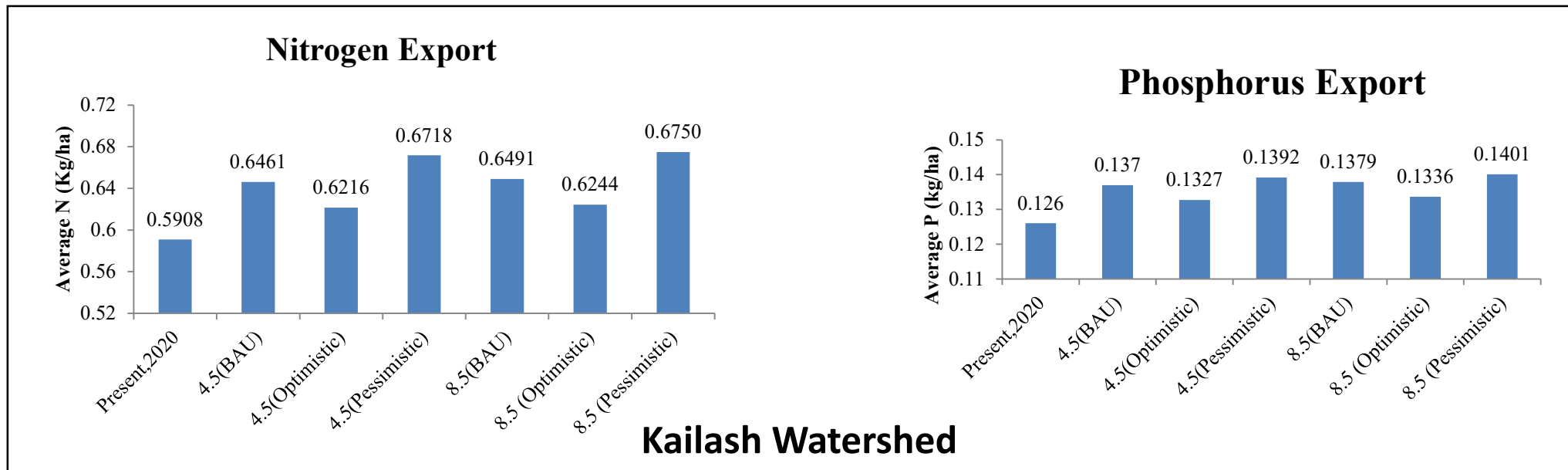
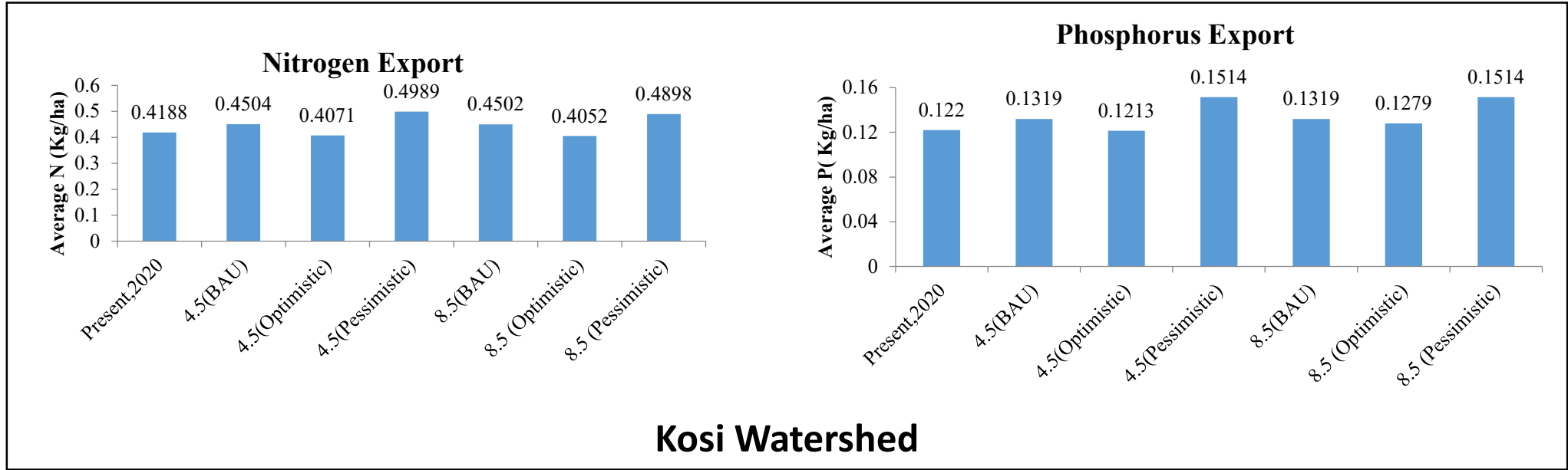
Water and Sediment quantification in Ganga sub-basin

Scenario	P (mm)	SQ (mm)	LQ (mm)	WY (mm)	ET (mm)	SY (t/ha)
Current 2000-2020	837.13	233.54	0.53	340.96	481.13	7.37
RCP 4.5 2020-2030	948.08	323.80	0.76	466.16	470.55	8.49
RCP 4.5 2020-2050	956.56	330.68	0.72	466.20	473.52	8.14
RCP 8.5 2020-2030	931.18	340.37	0.61	453.79	451.24	9.81
RCP 8.5 2020-2050	939.35	324.78	0.65	446.98	470.38	9.14

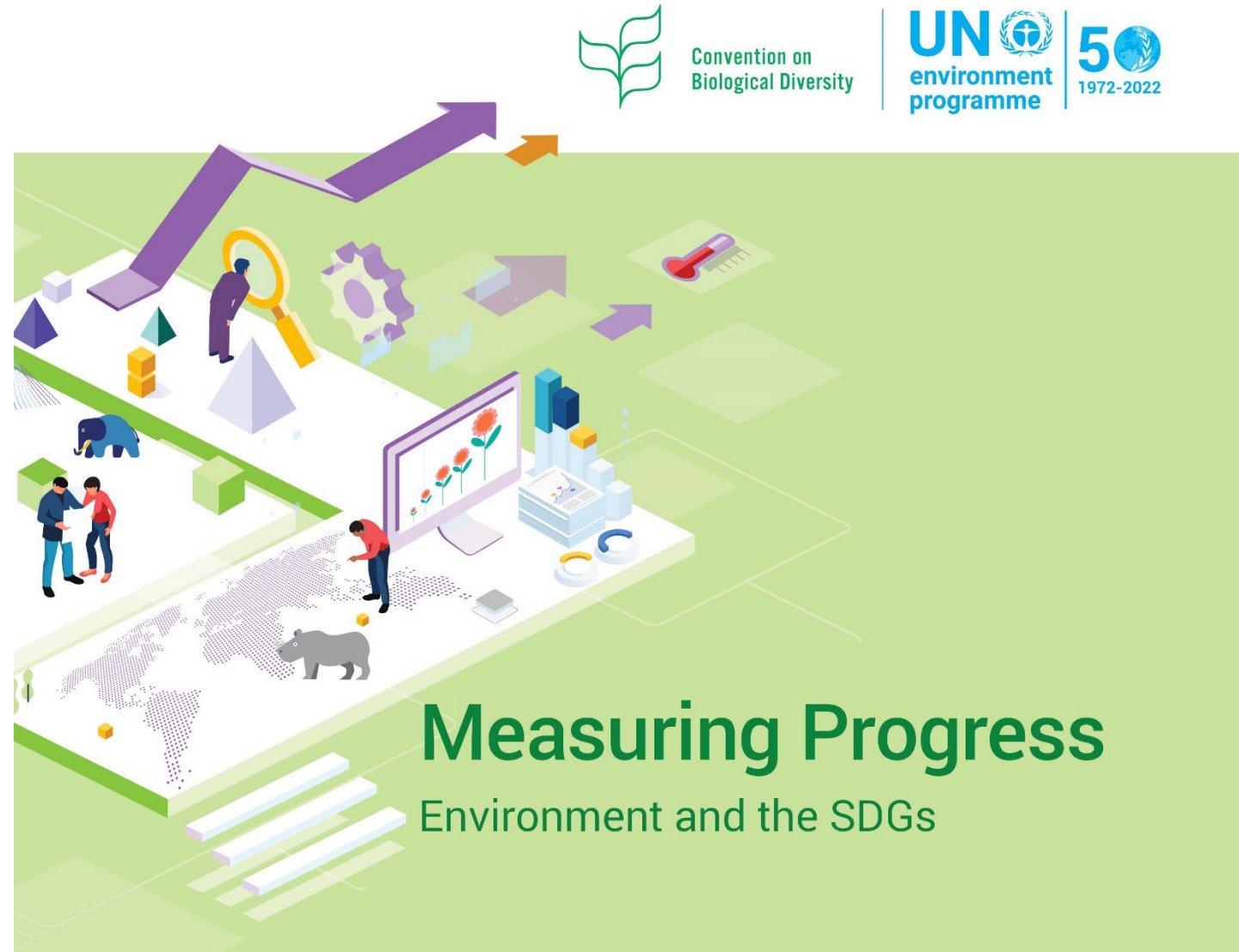
Rainfall, SQ: Surface runoff, LQ: Lateral runoff, WY: Water yield, SY: Sediment yield



Nutrient Export (2020-2050) under different policy and climate scenarios



Thank you



Measuring Progress

Environment and the SDGs