

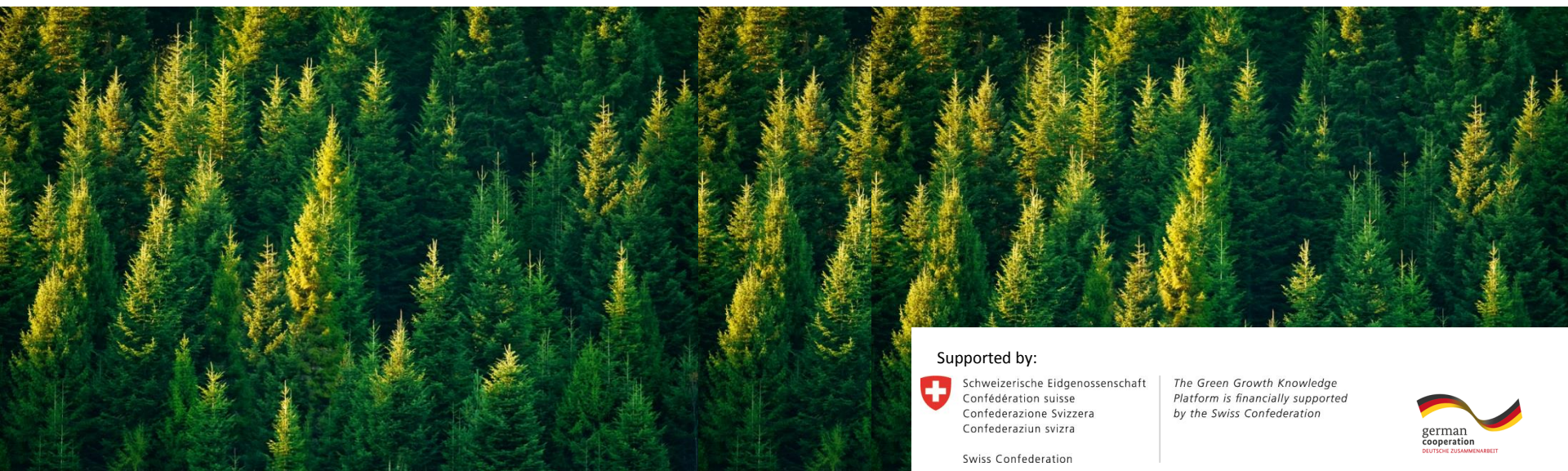


The webinar will begin shortly...

Green Growth, Indicators, and the SDGs

20 April 2016

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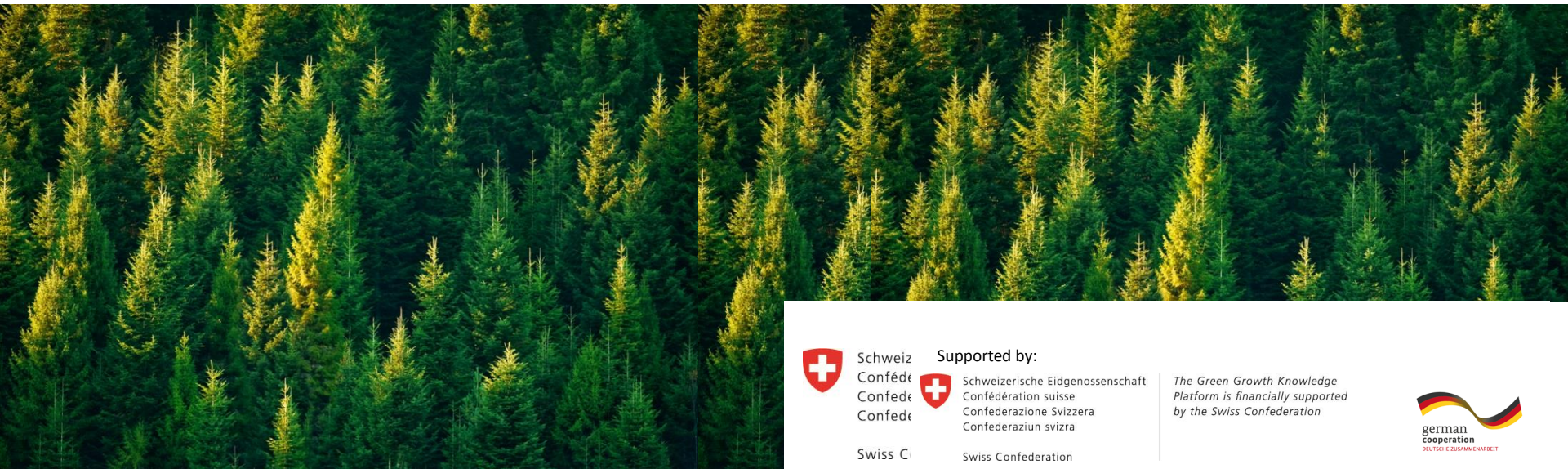
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HIGH

Moderator: Carlo Carraro

Vice-Chair, IPCC WG III and GGKP Advisory Committee

LOW

Measuring Inclusive Green Growth (IGG) at the Country Level

GGKP Research Committee on
Indicators & Metrics

Ulf Narloch (World Bank) & Tomasz Kozluk (OECD)

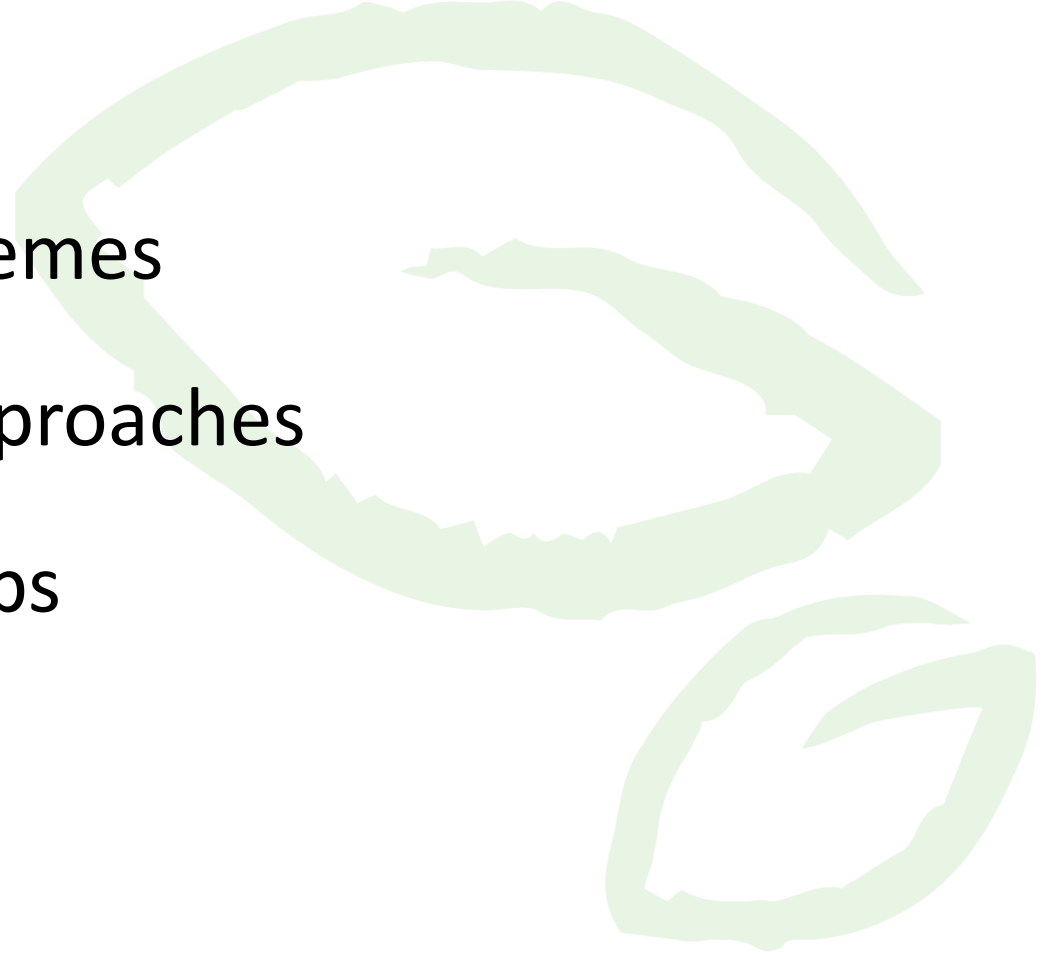


Overview

- IGG combines economic, social and environmental dimensions → measurement challenge
- No single indicator or standardized, “one-size-fits-all” approach
- Countries can choose different measurement approaches and indicators
- Significant advances in the field, but considerable measurement gaps remain

Outline

- I. Measurement themes
- II. Measurement approaches
- III. Measurement gaps



I. Measurement Themes

5 themes of relevance for IGG identified by the research committee:

1. Natural assets
2. Resource efficiency and decoupling
3. Resilience and risks
4. Economic opportunities and efforts
5. Inclusiveness

1. Natural assets

- *Stocks of natural assets and changes and flows of ecosystem services related to economic growth*
- ➔ Plenty of data on current status and changes over time, but limited coverage of qualitative aspects or economic costs & benefits

Examples:

- New geo-spatial datasets on air pollution, land degradation, forest cover etc
- Web-based tools to assess spatial data, such as UNEP Live
- Open data platforms such OECD Green Growth Indicators, WB Little Green Data Book and WRI Forest Watch, Aqueduct and Climate Data Explorer

2. Resource efficiency and decoupling

- *How efficiently (wastefully) economic outputs are produced and how economic growth is decoupled from resource use*
- ➔ Data only available at fairly aggregate levels and focuses mainly on the production side

Examples:

- IEA, EEA, OECD, UNSD provide various efficiency and productivity indicators mainly for developed countries
- OECD's adjusted multi-factor productivity
- OECD's demand-based indicator for CO₂ productivity

3. Risk and resilience

- *Resilience of economic growth and wellbeing to ecological risks*

➔ Indicators to measure various resilience aspects, but truly comprehensive metrics missing so far

Examples:

- National disaster loss databases indicating human losses and economic damages
- Global Burden of Disease study measuring environmental risks
- Hazard data: e.g. through Aqueduct Global Flood Maps
- WB's Atlas of Social Protection Indicators of Resilience and Equity (ASPIRE)
- Various indices: e.g. EU-JCR INFORM, IDB's iGOPP, ND-GAIN

4. Economic opportunities and efforts

- *Policies to facilitate green transformations and economic opportunities created*
- ➔ Existing indicators limited in coverage, generally scarce and underdeveloped

Examples:

- EUROSTAT Environmental Goods and Services Sectors (EGSS)
- IEA, OECD and IMF data on fossil fuel subsidies
- OECD data on green patents, environmental taxation, and environmental policy stringency

5. Inclusiveness

- *Distribution of costs and benefits of environmental policies among different groups*
- ➔ notable lack of environmental data capturing social dimensions

Examples:

- Access to water, sanitation, non-solid fuels (not yet disaggregated by social groups)
- Exposure to outdoor and indoor pollution (not yet disaggregated by social groups)
- Participation in environmental decision-making, e.g. FAO's Gender and Land Rights Database

II. Measurement Approaches

4 approaches to combine granular environmental, economic and social information:

1. Dashboard of indicators
2. Composite indices
3. Environmental footprints
4. Adjusted economic measures

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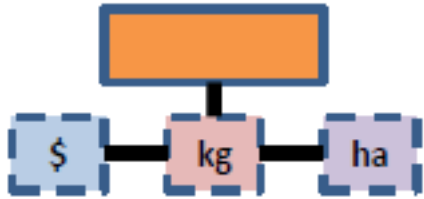
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1. Dashboard of indicators

- *present a set of metrics related to IGG in different units*
- ➔ Most widely used; frameworks and data available for various (mostly developed) countries

Examples:

- OECD Green Growth indicators framework
- UNIDO/CAF/OECD green growth indicators for Latin America & Caribbean
- Korea's IGG dashboard
- Canada's Environmental Sustainability Indicators (CESI)

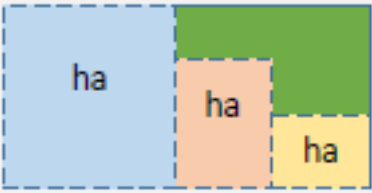


2. Composite indices

- *aggregate different metrics into one by scoring and weighting the underlying indicators*
- ➔ No IGG index readily available, although a number of environmental indices of relevance for IGG

Examples:

- UNEP work to develop a Green Economy Progress Index
- China Green Development Index
- Several applications of the Yale Environmental Performance Index (e.tg. China, Malaysia)
- Bhutan's Gross National Happiness Index

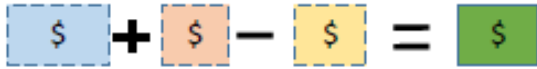


3. Environmental footprints

- *indicate if current production/ consumption patterns are within planetary boundaries*
- ➔ Hardly applied at national-level, but can be an important ingredient of measurement frameworks

Examples:

- Ecological Footprint published by Global Footprint Network
- Global Resource footprint of Nations calculated for 43 countries
- Switzerland's Environmental Impact of Consumption and Production


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4. Adjusted economic measures

- *correct GDP, savings and wealth measures by valuing environmental or social aspects*
- ➔ Considerable advances, but do not yet comprehensively cover all aspects of natural assets or environmental degradation

Examples:

- Natural capital accounting, as applied by several countries and supported through WAVES
- TEEB country case studies
- Index of Sustainable Economic Welfare or Genuine Progress Indicator calculated for various countries
- WB's Adjusted Net Savings and Comprehensive Wealth
- UNU-IHDP and UNEP Inclusive Wealth Report

III. Measurement Gaps

1. Economic values of stocks and flows of natural assets
2. Qualitative dimensions of natural assets
3. Sustainable use of natural assets, and ecological thresholds
4. Combining micro-level economic and environmental data
5. Resilience of socioeconomic systems to ecological shocks
6. Green jobs, investments and other opportunities
7. Aggregate impacts of environmental policies
8. Distributional impacts of environmental changes and policies

Gap 1: Economic values of stocks and flows of natural assets

- Increasing application of **natural capital accounting**
- **SEEA** provides guidance, but in practice, the implementation lagging
- **Monetary valuation is cumbersome:**
 - Non-market benefits, with complex distributions e.g. across population
 - Values are v context specific – case studies difficult to generalize, e.g. marginal values or non-linear relationships

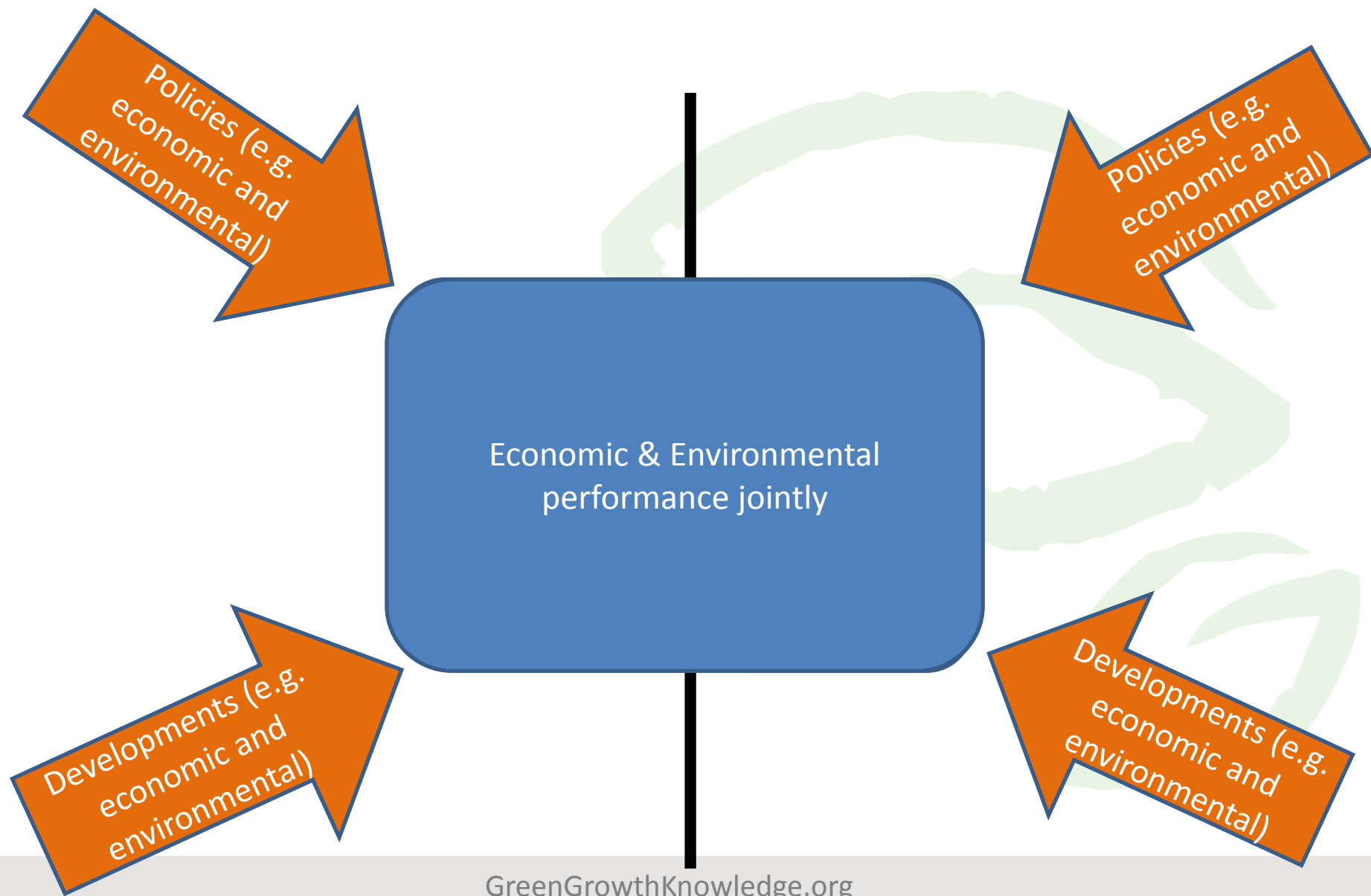
Gap 2: Qualitative dimensions of natural assets

- Easier to track changes in **quantities and flows** than on **quality**
- Monitoring of pollution or functionality on the ground can be very **costly**, but **new approaches** can help, e.g. remote sensing: satellite data, drones, mobiles

Gap 3: Sustainable use of natural assets and ecological thresholds

- What levels of **use of environment** (natural assets, sinks, etc.) are **sustainable in the long run**?
- **Tipping points** beyond which the ecosystem changes its functions
- **Thresholds** and **non-linearities** often not well identified - data on the current stocks and flows insufficient to identify threats
- Often subject to **temporal and spatial variability**

Gap 4: Combining economic and environmental data at the micro level



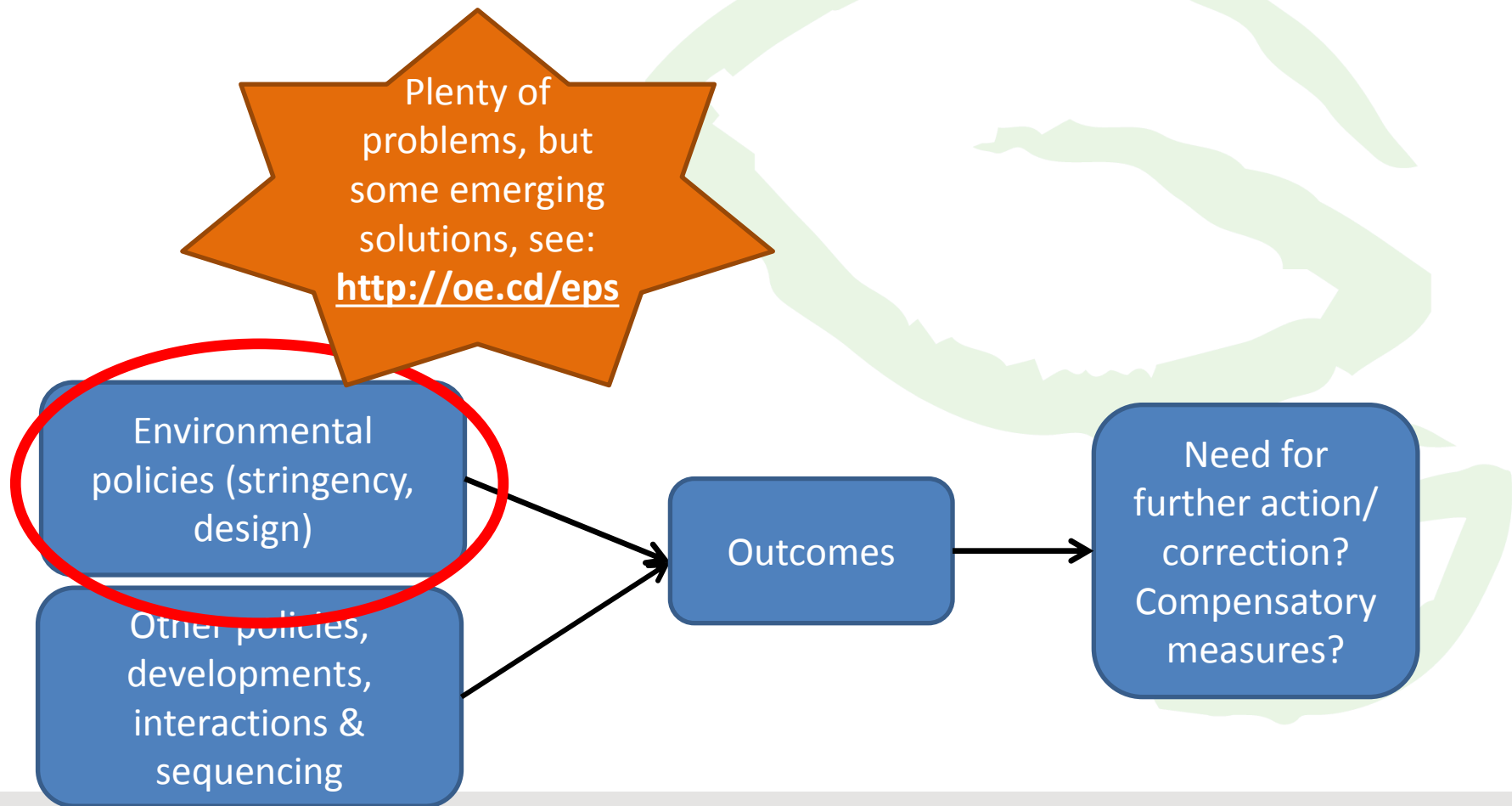
Gap 5: Resilience of socioeconomic systems to ecological shocks

- Need operational **definitions of resilience**: easier to translate into measureable variables
- **Multidimensional nature** across aspects, sectors, and levels
- Resilience is **difficult to observe** – until “disaster” strikes, it is elusive; once it does – counterfactual not obvious
- Direct **data gaps** on risk preparedness, response capacity and recovery time

Gap 6: Green jobs, investments and other opportunities

- The IGG discussions often focus on the **long-term benefits** and **(short-term) costs** – while showing some short-term opportunities would be more attractive...
- “Opportunities” are often elusive, indirect and difficult to assess
- Distinguishing **efforts** and **transition dynamics** from **opportunities** (and **costs**)
- Definitions: “**green**” investment, jobs, innovation, infrastructure (...) are cumbersome to define in practice

Gap 7: Aggregate impacts of environmental policies



Gap 8: Distributional effects of environmental changes or policies

- Who is affected by environmental changes and policies? Costs and benefits (of action & inaction) across different socio-economic groups and time
- Combining data on **environmental indicators** & **socio-economic status**:
 - Overlaying of geo-spatial datasets and population or poverty maps
 - Integration of environmental questions into household surveys (with location identifiers, e.g. zip-code)?


What next? The role of GGKP

- How to fill in the gaps?
- Building community around the themes: researchers, statisticians, donors, users, etc.
- Using innovative data collection and processing approaches (crowd-sourcing, big data, remote sensing)
- SDGs may provide a unique opportunity to create demand for new indicators and to spur investment in data collection and analysis capacities

An aerial photograph of a river meandering through a vast, dense tropical forest. The river is light-colored, possibly due to sand or silt, and winds through the lush green landscape. In the background, rolling hills and mountains are visible under a bright blue sky filled with large, white, fluffy clouds.

Discussant: Eve de la Mothe Karoubi

*Manager,
Sustainable Development Solutions Network*



How can we identify data sources that are reliable, meaningful, and easy to collate in different jurisdictions?

How do we make sure that green growth indicators are within planetary limits and broken down into country limits?

Q&A *Themes*

How do we clearly identify a definition for green growth indicators for each country?

How can we capture the multiple dimensions of green growth sectors appropriately?

Thank you for attending this webinar on “Green Growth, Indicators, and the SDGs”

- This webinar was recorded and will be uploaded to the GGKP website: www.greengrowthknowledge.org
- If you have any further questions about the webinar please email: contact@ggkp.org
- The GGKP asks you to complete a survey which will be sent out after this webinar.