



Measuring Progress: Green Growth Indicators

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Towards Green Growth



OECD Economic Surveys KOREA

APRIL 2012



OECD Green Growth Studies Energy



Towards Green Growth: Monitoring Progress

OECD INDICATORS



DELIVERING ON GREEN GROWTH



OECD Green Growth Papers, March 2013

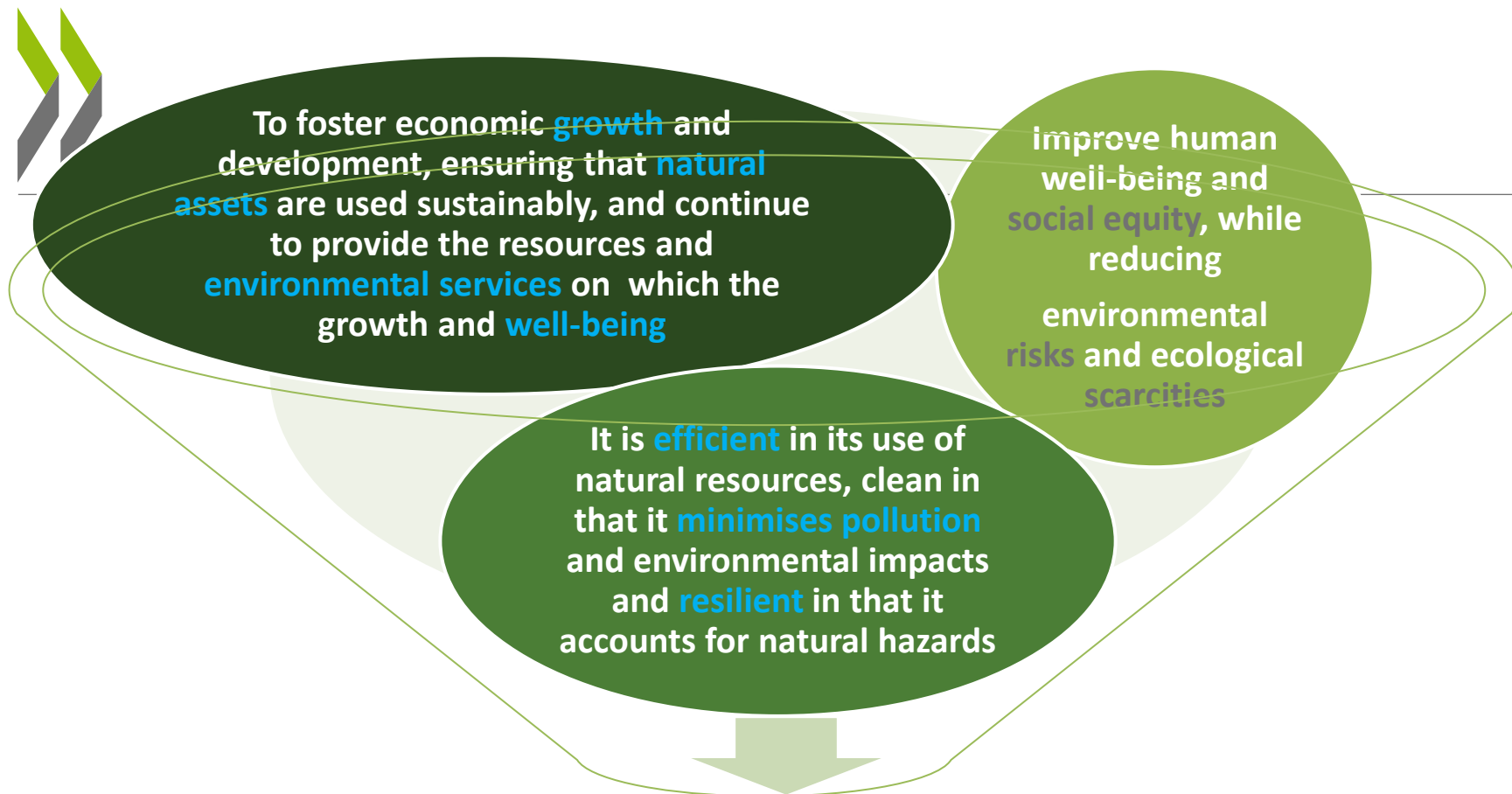
What have we learned
from attempts to introduce
green-growth policies?



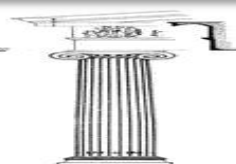
OECD Green Growth Studies Putting Green Growth at the Heart of Development







CONVERGING ON GREEN GROWTH / GREEN ECONOMY

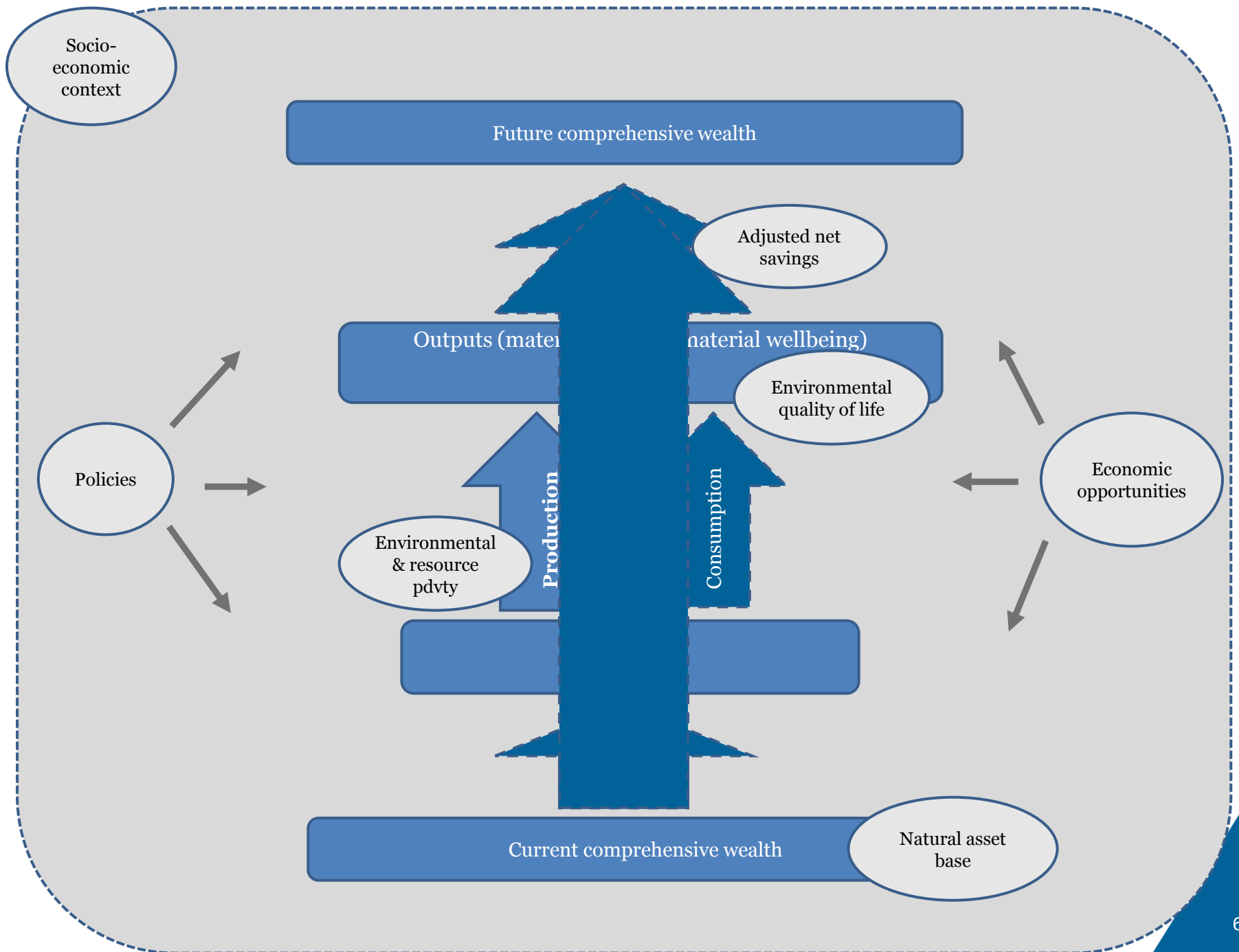


Source



What to Measure?

Stepping towards a Common Basis



NATURAL ASSETS

Aquatic

Forest

Minerals
and energy

Land and
soil

Water

Biodiversity

ENVIRONMENTAL AND RESOURCE PRODUCTIVITY

Innovation

Energy

Materials

Carbon

Water

Waste

SOCIO-ECONOMIC CONTEXT

ENVIRONMENTAL LIFE QUALITY AND SAFETY

Health

Risk

Value

Ecosystem services

GG/GE POLICIES AND OPPORTUNITIES

Employment

Policy instruments

International cooperation

COMPREHENSIVE WEALTH ACCOUNTS

Adjusted net savings

Adjusted net income



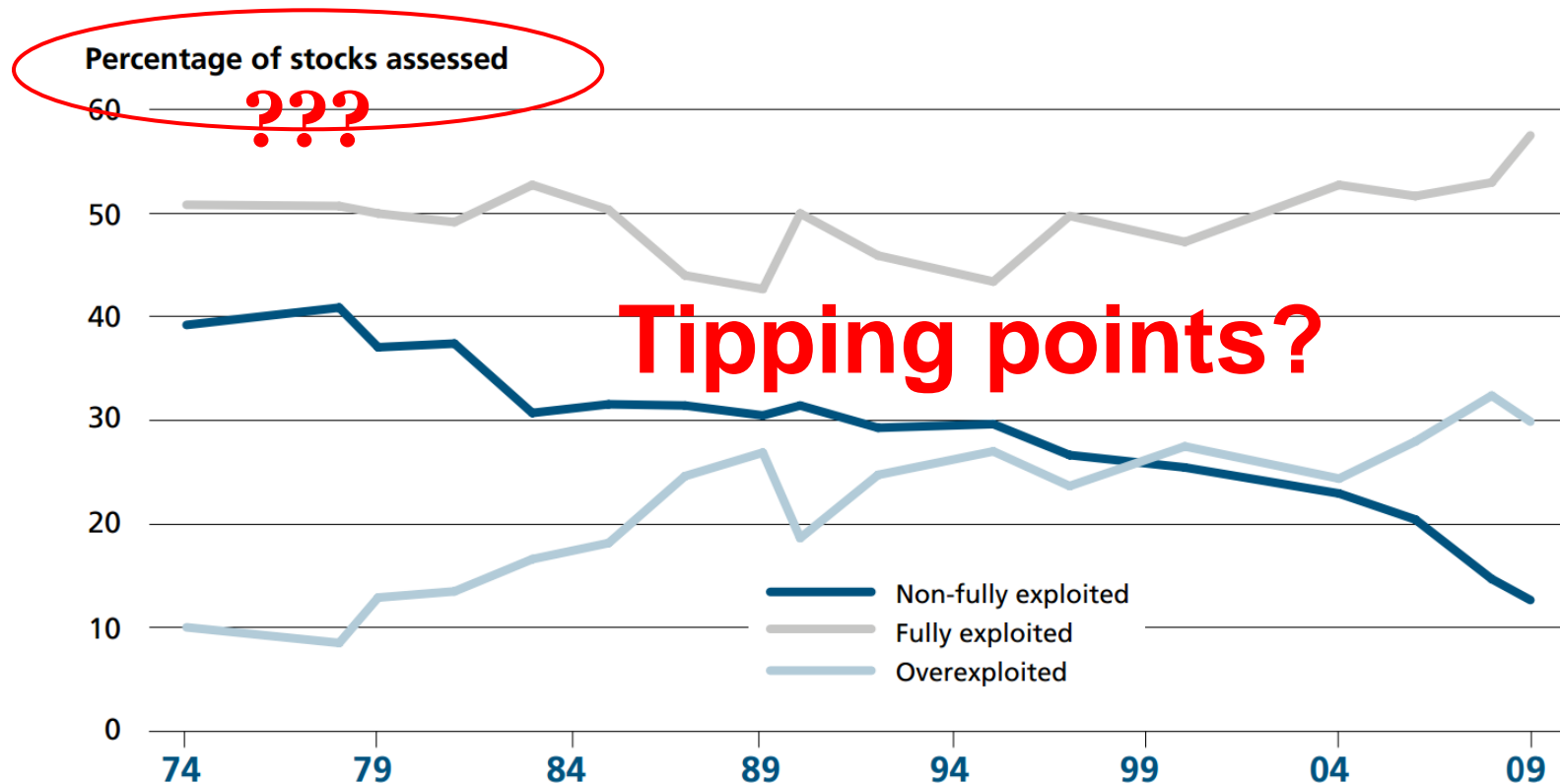


Support Decisions w/ Facts
Make Policies Work Better



Natural stocks

World trends in the state of world marine stocks, since 1974



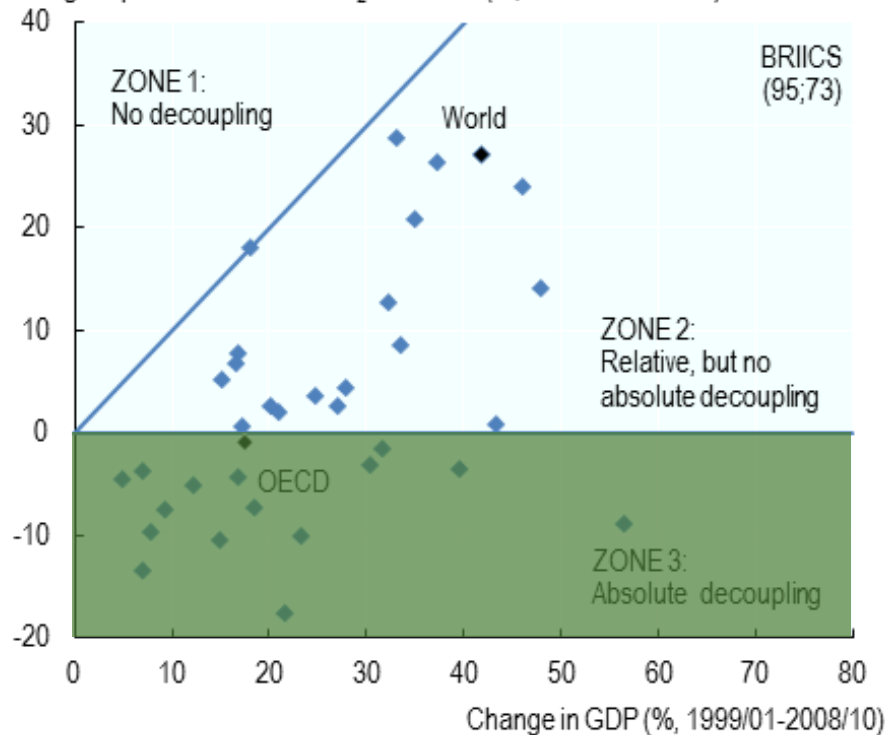
Source: FAO, *The State of World Fisheries and Aquaculture*.



Environmental and resource productivity

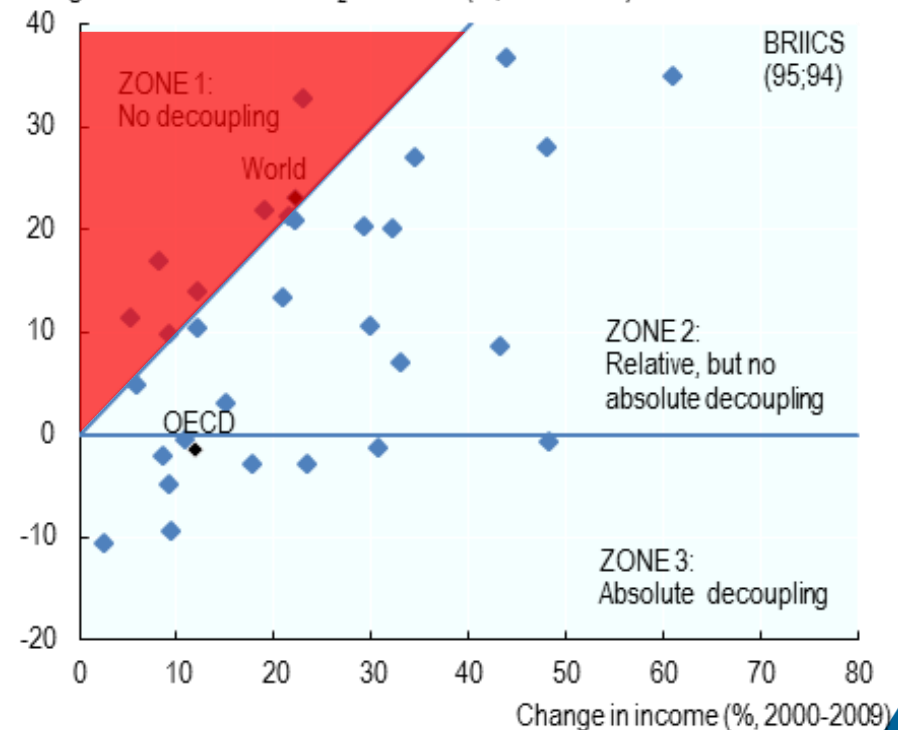
Production-based CO₂ emissions vs. GDP, OECD countries

Change in production-based CO₂ emissions (% , 1999/01-2008/10)



Demand-based CO₂ emissions vs. income, OECD countries

Change in demand-based CO₂ emissions (% , 2000-2009)

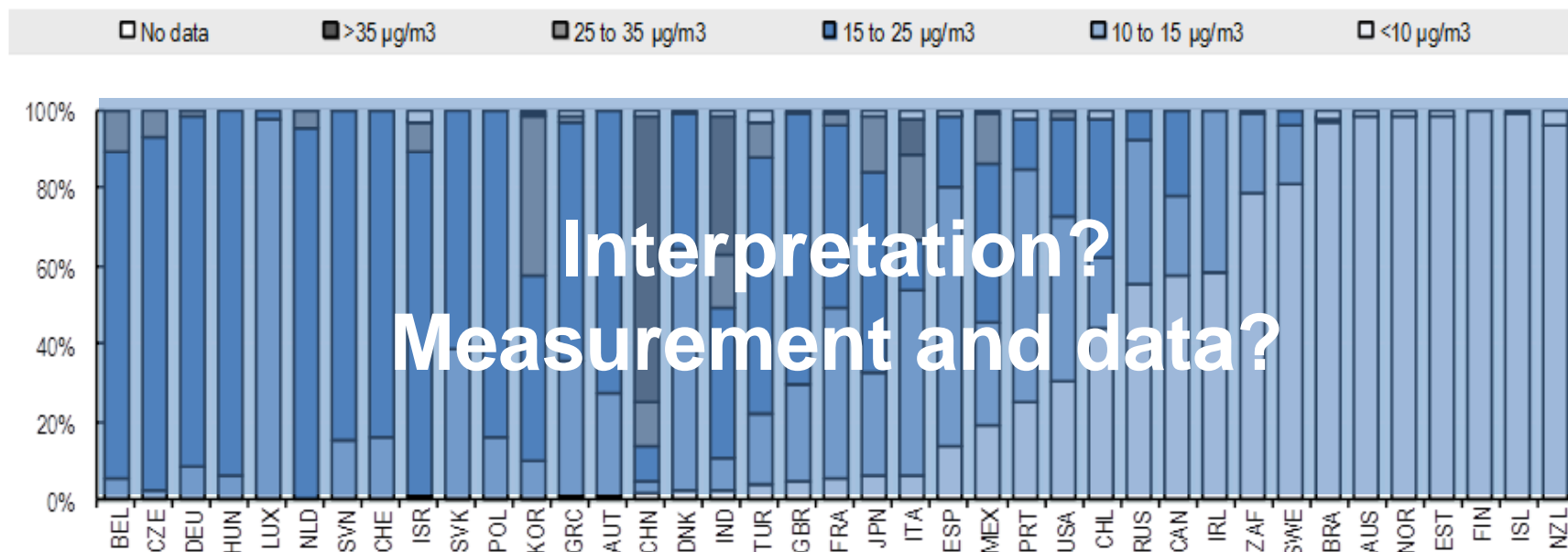


Sources: GGKP (2013): [Moving towards a Common Approach on Green Growth Indicators](#);
OECD: [Green Growth Indicators Database](#); [Carbon Dioxide Emissions Embodied in International Trade](#)



Environmental quality of life

Population exposed to air pollution by WHO PM_{2.5} thresholds Average 2001-06, OECD and BRIICS countries

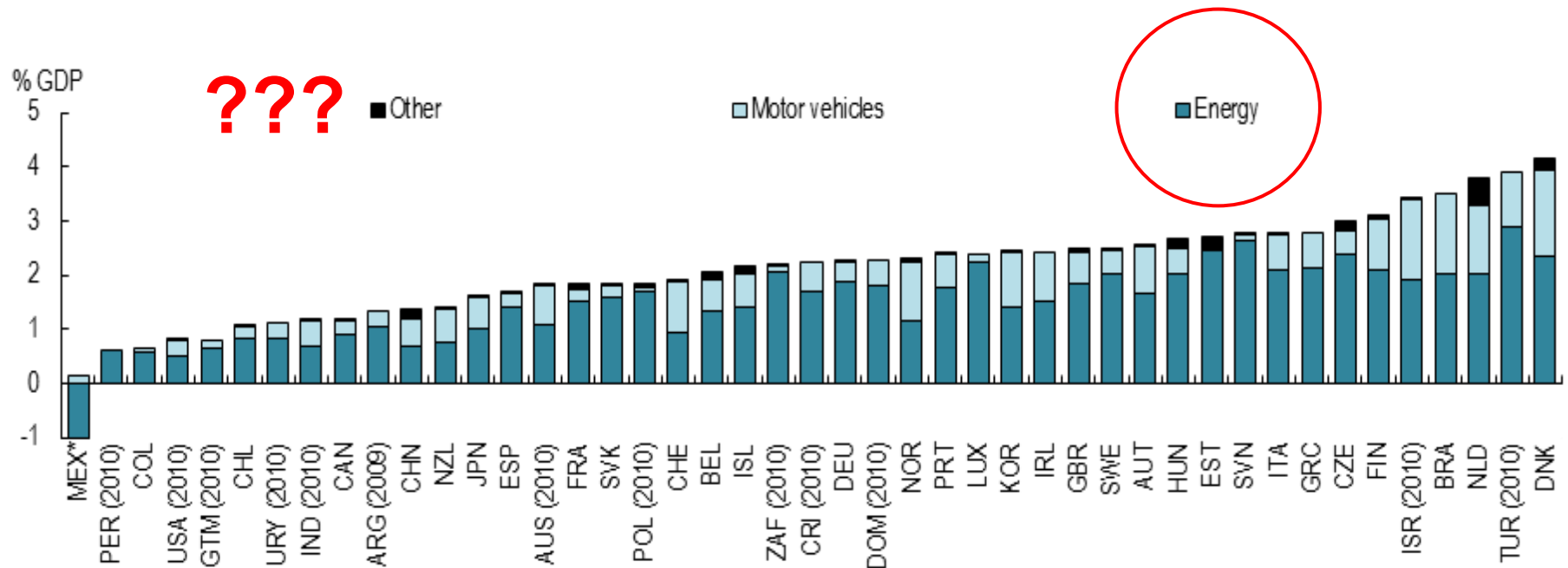


Sources: GGKP (2013): [Moving towards a Common Approach on Green Growth Indicators](#); OECD, *Regions at a Glance 2011: Satellite-Derived Surface PM_{2.5} map derived by Van -Donkelaar et al. (2010).*



GG/GE policies and opportunities

Environmentally related tax revenues, 2011 or latest OECD and non-OECD countries

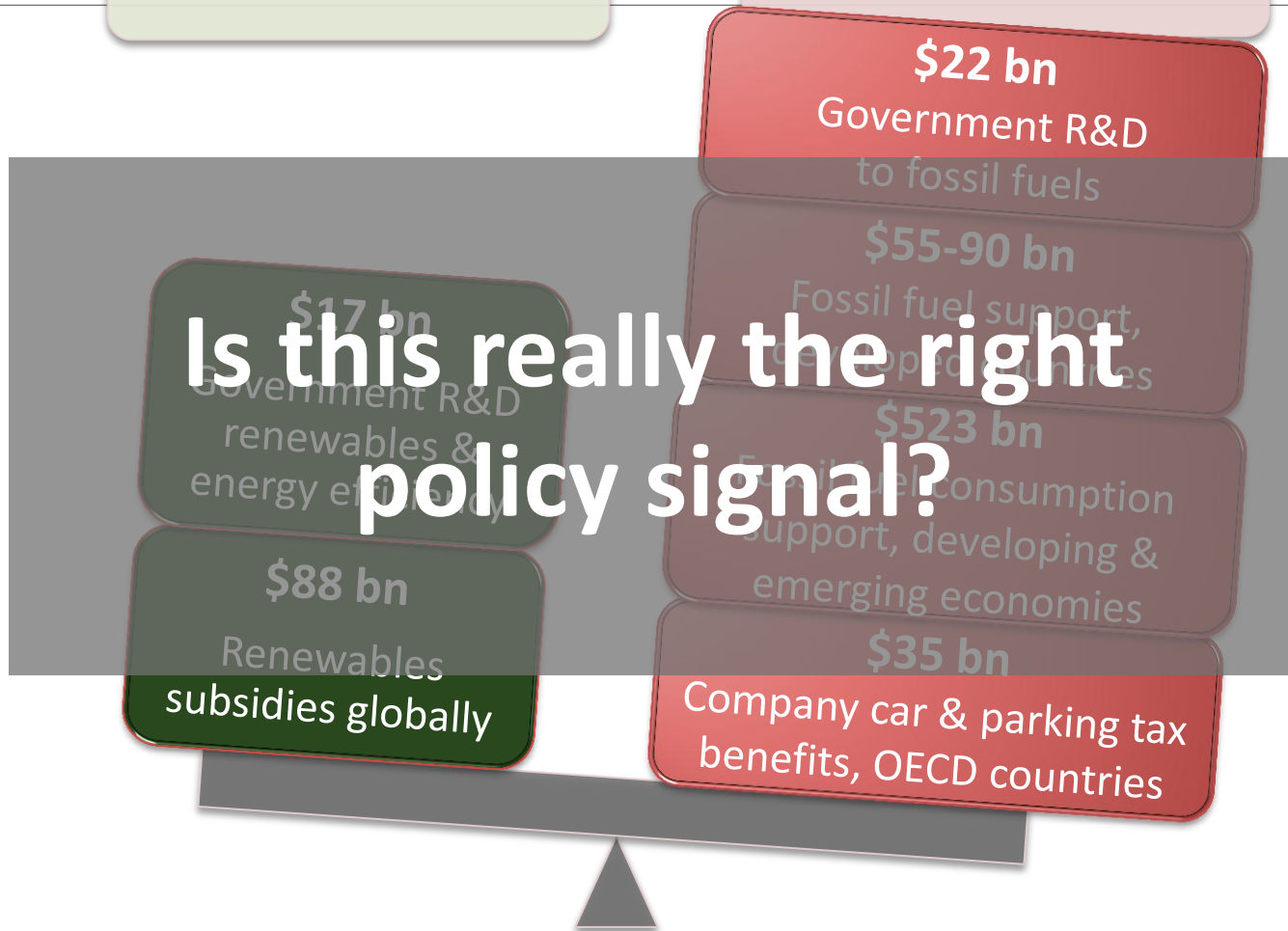


Sources: GGKP (2013): [Moving towards a Common Approach on Green Growth Indicators](#);
OECD: [Green Growth Indicators Database](#); OECD Environmentally related Taxation
Database.



INCENTIVES FOR GREENER GROWTH

INCENTIVES AGAINST GREENER GROWTH



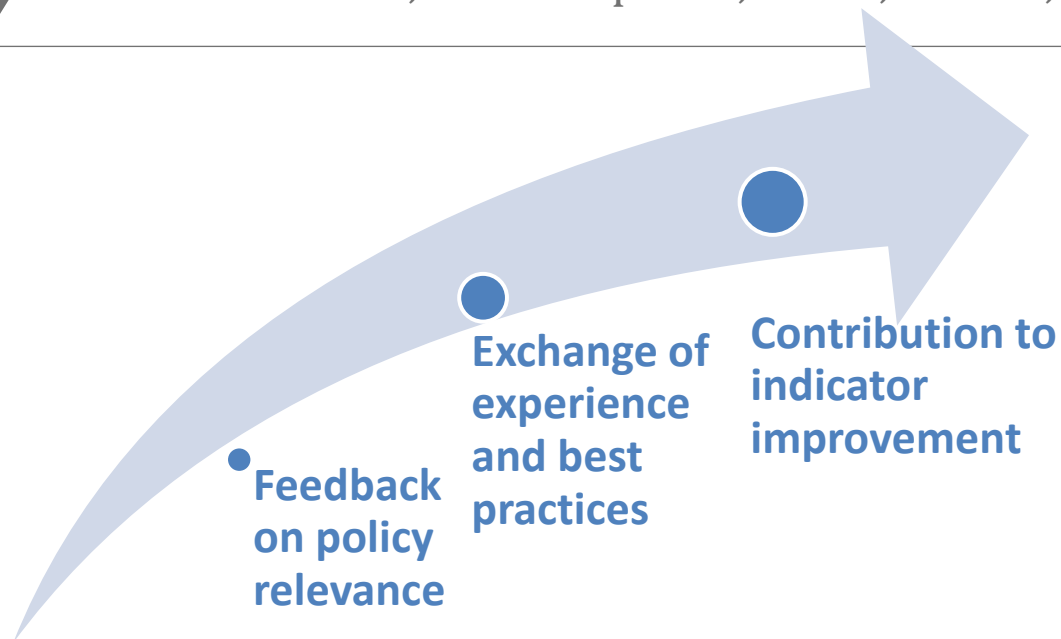
Sources: OECD (2013), *Inventory of Estimated Budgetary Support and Tax Expenditures for Fossil Fuels*; IEA (2012), *World Energy Outlook*; IEA (2011) *Clean Energy Progress Report*; OECD (2013 forthcoming).





Applications in countries

The Netherlands, Czech Republic, Korea, Mexico, Latin America ...



- **OECD: the Netherlands the Czech Republic, Korea, Mexico, Denmark, Germany**
- **OECD: New Zealand, the Slovak Republic, Slovenia**
- **LAC: Colombia, Costa Rica, Ecuador, Guatemala, Paraguay, Peru**
- **Eastern Europe, Caucasus and Central Asia**
- **East Asia (e.g. GG strategy, Investment Policy Reviews)**

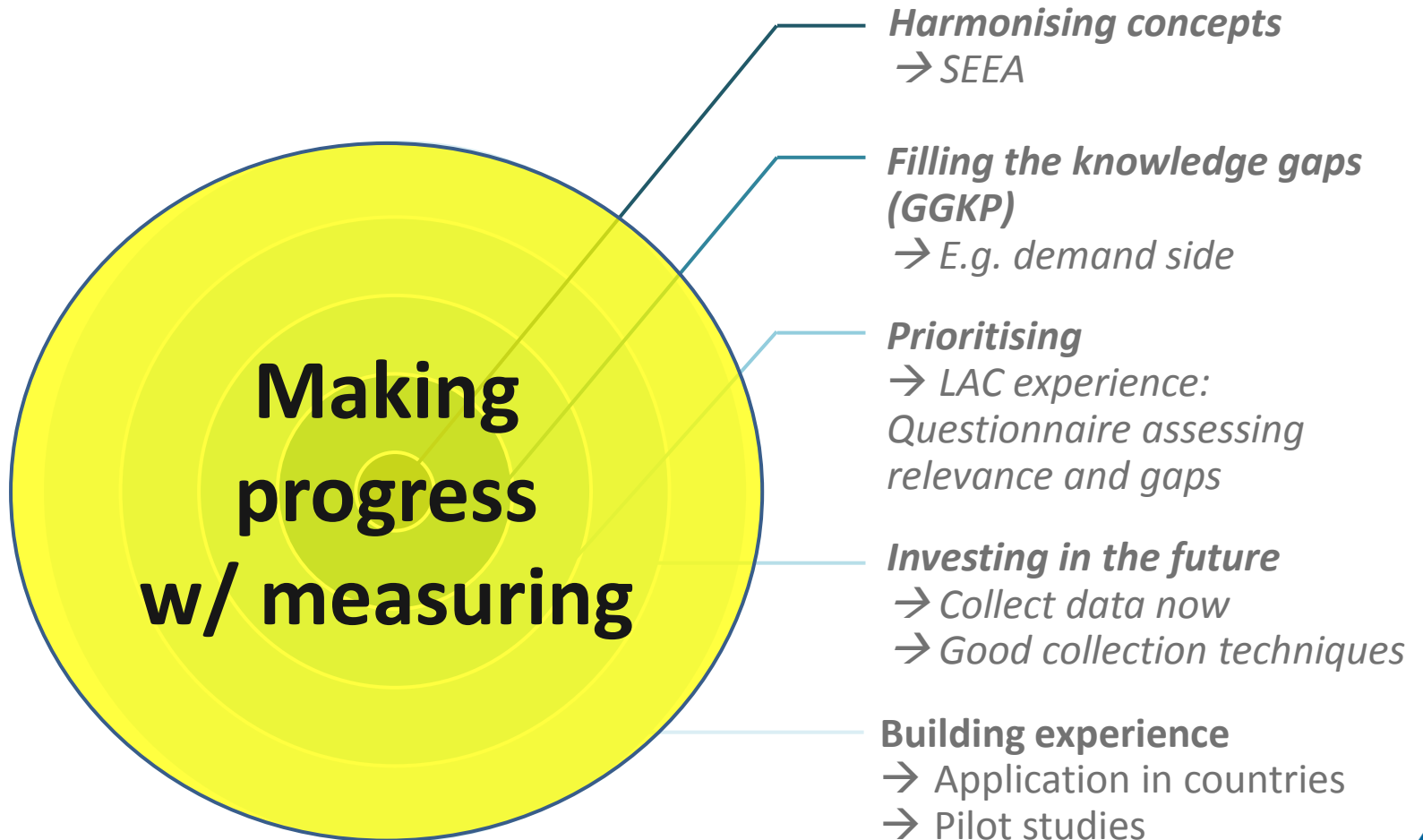
Green growth in the Netherlands

06 07 08
09 10
11
12 13





Coping with challenges





Benefits from using GG/GE indicators





What's Next?

Filling the Gaps





Converging on headline indicators

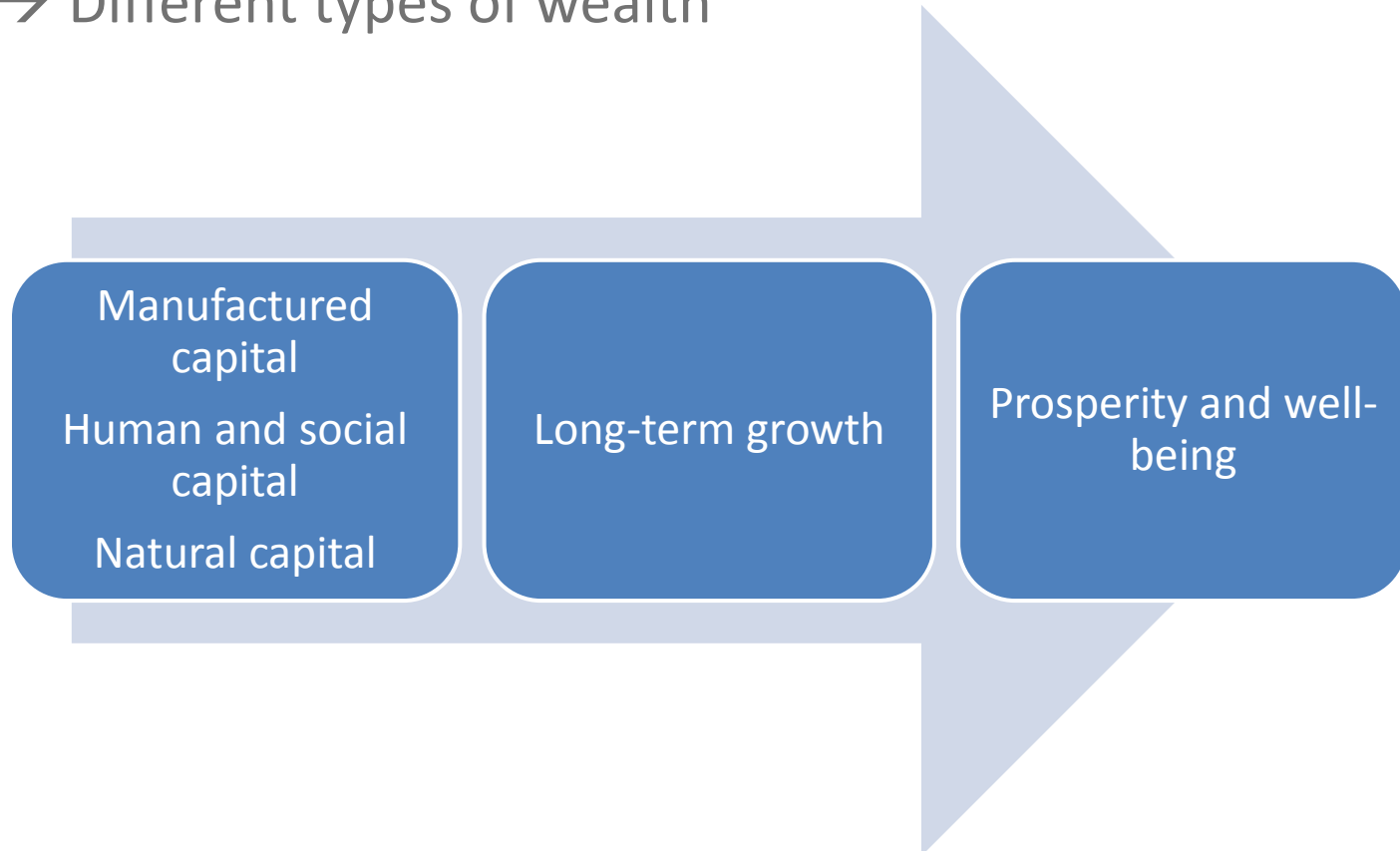
Proposed set of 6+1

Group	Theme	Proposed headline indicator
Environmental and resource productivity	Carbon productivity	1. CO ₂ productivity
	Resource productivity	2. Non-energy material productivity
	Multifactor productivity	3. Multifactor productivity incl. environmental services
The natural asset base	Renewable and non-renewable stocks	4. Index of natural resource use
	Biodiversity and ecosystems	5. Changes in land use and cover
Environmental quality of life	Environmental health and risks	6. Air pollution (population exposure to PM 2.5)
Economic opportunities and policy responses	Tech. and innovation, EGS, jobs, prices, taxes, transfers, ...	+ 1 placeholder : For countries to choose • “Green” is difficult to isolate; Cross-country variation in policies



Wealth Accounting

- Wealth is key to sustain future consumption
- Different types of wealth





... more work in progress

→ Scope for cooperation within the GGKP

GREENING MULTIFACTOR PRODUCTIVITY MEASURE

- OECD methodological note: Natural resources as input factors, selected pollutants as undesirable outputs in the production function;
- Testing for OECD and partner countries.

INDEX OF NATURAL RESOURCE USE

- OECD methodological note: Use of natural resource stocks sustainable?
- Testing for OECD and partner countries.

GREEN GROWTH INDICATORS DATABASE

- OECD and partner countries, time series since 1990:
www.oecd.org/greengrowth/greengrowthindicators.htm



Thank you!



Contact (OECD work on green growth):

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Save the Date:

Green Growth & Sustainable Development Forum, OECD, 5-6 December 2013:
“Encouraging and leveraging private investment for green infrastructure and technologies, including through innovation policies”





SEEA – Environmental and Economic Accounting

Part 1

- Physical supply and use
- Monetary transactions
- Asset accounts
- Macroeconomic aggregates and indicators

Part 2

- Experimental Accounts for Ecosystem, 1st draft 2013

Part 3

- Applications and Policy Uses, 2013

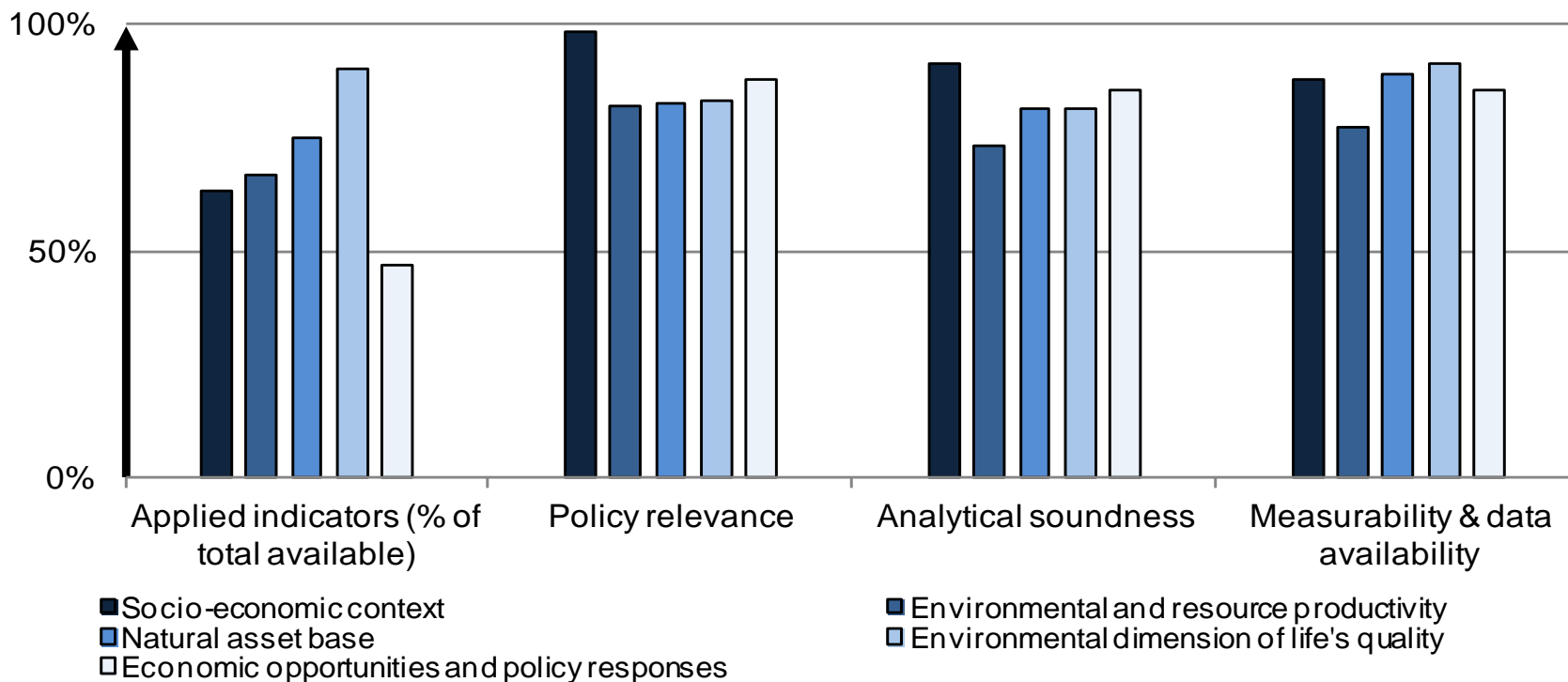
→ Needs to be populated with data.



ANNEX : Learning from applications in the LAC

Questionnaires to authorities for assessing each indicator

– Highest*

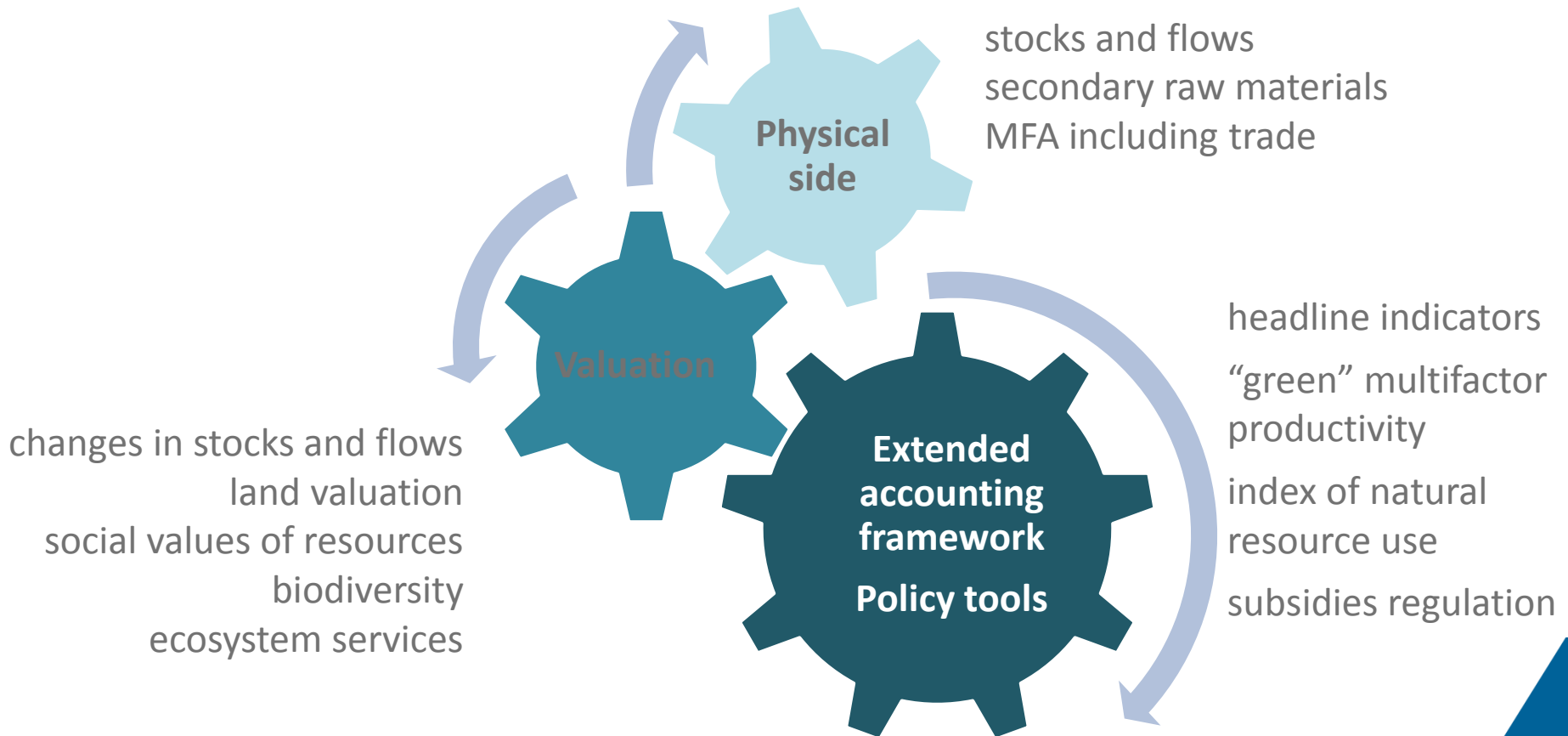


* Refers to the highest level of i) data availability, ii) analytical soundness, iii) policy relevance, or iv) applied indicators as percent of total indicators considered in the country case studies. The underlying information is based on preliminary responses of participant countries on the applicability of green growth indicators to their national contexts (refers to Annex summary table).

Source: CAF-OECD-UNIDO (forthcoming), *Monitoring GG in the LAC Region: Progress and Challenges*.



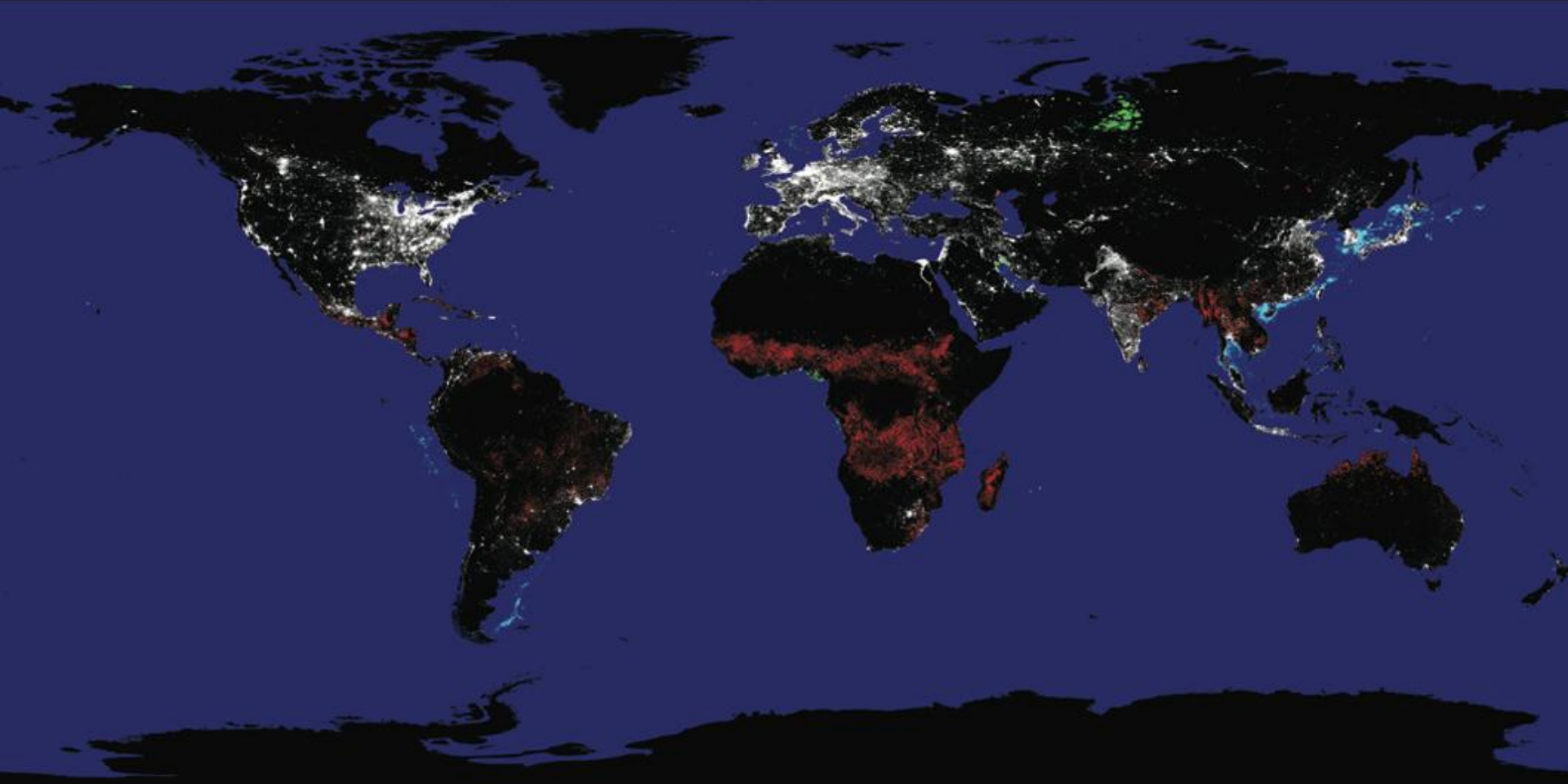
ANNEX: Some specific measurement & data gaps to fill ...



SEEA Central Framework - **adopted** as the international statistical standard, 2012;
Needs to be **implemented** to ensure consistency and comparability of measures.

ANNEX: Spatial dimension TOWARDS A HOLISTIC INTEGRATED VIEW

Investment — CITIES — ENERGY — TRANSPORT ... Opportunities



White: Lights

Green: Gas flares

Blue: Boats

Red: Fires