


Roundtable on Science and Technology for Sustainability, National  
Academy of Sciences, Washington DC, 12-13 November 2015

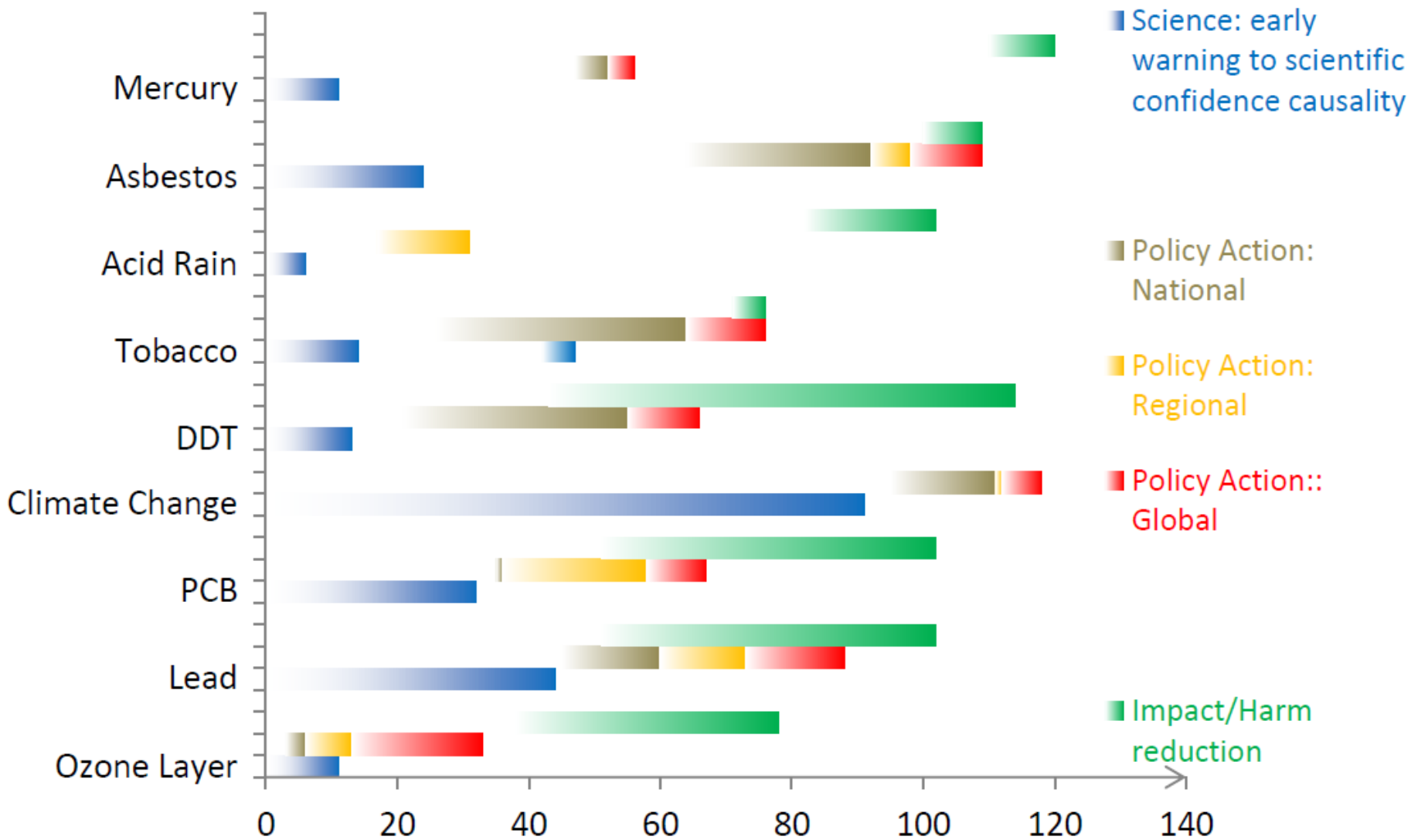
# UN Global Sustainable Development Report

*New UN entry points for science*

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# Time lags between science and policy (in years)



# Origins of the Global Sustainable Development Report (GSDR)

- HLPF mandate to strengthen the science-policy interface
  - including through a GSDR
  - Rio+20, GA 67/290, Agenda 2030
- Agenda 2030, para. 83: *“The HLPF will also be informed by the Global Sustainable Development Report, which shall strengthen the science-policy interface and could provide a strong evidence-based instrument to support policy-makers in promoting poverty eradication and sustainable development.”*
- Inspired by *“Our Common Journey”* (NRC, 1999)
- *“Prototype”* reports in 2014 and 2015.

# What is the GSDR?

- A new UN window for science-policy dialogue on sustainable development at the highest political level
- A UN report - one of two to inform the 2030 Agenda
- Assessment of assessments to make sense of existing knowledge: challenges, actions, progress, and innovative solutions.
- Multi-stakeholder approach: many perspectives, multilingual inputs, multiple knowledge channels
- Policy relevant, not prescriptive
- Scope: global, 2+2 generations, SDGs+ emerging issues
- 4-year cycle: annual reports towards an in-depth GSDR in 2019 (comprehensive SDG review in HLPF).

# GSDR: two threads

- Science-policy interface for SD: how it works at different levels, how it might work better
  - With a view to informing HLPF
  - Look at assessments of different kinds
  - (Emerging) science issues for the attention of policy makers
  - At national level, including countries in special situations
- Sustainable development goals as integrated network: different lenses on integration
  - Global: through integrated assessments
  - Nexus approaches: examining sub-systems
  - Cross-cutting issues (e.g. disaster risk reduction)
  - Review of past progress and SDG scenarios
  - Big data and new solutions
- Approach can be applied to any theme
  - e.g. subject of thematic reviews at HLPF in given year

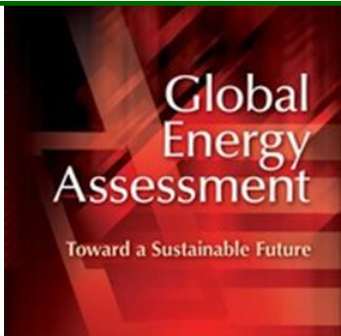
# Assessment of Assessments - The challenge?

- **150,000+ articles in sustainability science per year (> 6 times more than 10 years ago)**
- **37,000+ authors in 174 countries**
- **1,000s of relevant assessments**
- **More than 8,000 academic disciplines**
- **More than 100 UN flagship publications and 23 outlook reports**
- **43 Rio process issues/themes maintained by DSD**
- **Many national sustainable development reports**

# Scientific stakeholders

- **UN reports and outlooks teams:** DESA, Regional Commissions, UNCTAD, ECE, UNESCO, UNEP, UNDP, WB, UNU
- **Key UN groups:** Committee for Development Policy, UN SG's Scientific Advisory Board, London Group, SE4All, GEO board
- **Thematic scientific expert groups:** e.g., IPCC, IPBES, GEA, etc.
- **Non-UN organizations:** South Center, OECD, EC, AU, regional development banks,
- **Think-tanks and NGOs:** SDSN, Future Earth
- **Academies of sciences:** World Academy of Sciences, IIASA, prominent national academies, the Inter-Academy Council
- **Science-related major groups:** ICSU, ISSC, WBCSD, WFEO
- **Scientists among the government officials**

57 int'l assessments;  
72 models



>1,000 academic articles & contributions

Global CLEWS model;  
Survey of chief scientists

13 expert group meetings



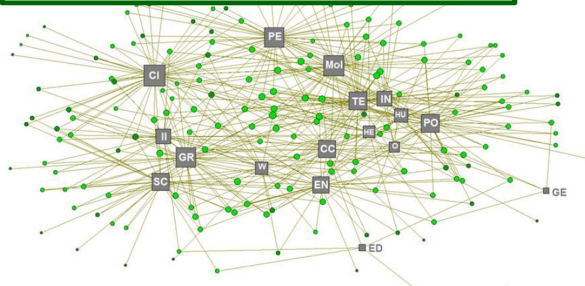
Briefings & stakeholder consultations (major groups, organized science, MS, CDP, SAB)

26 UN entities,  
57+ staff;  
125 UN flagships;  
23 outlook reports;  
SG report

35+ government officials;  
69 national SD reports;  
MS survey

**GSDR 2014  
and 2015**

Open call →  
187 science briefs



Multi-lingual crowdsourcing platform (2,000+ scientists)

Which message on global sustainable development progress do you prefer for Chapter III?

World food production per capita rose by 22% from 1950 to 2000.

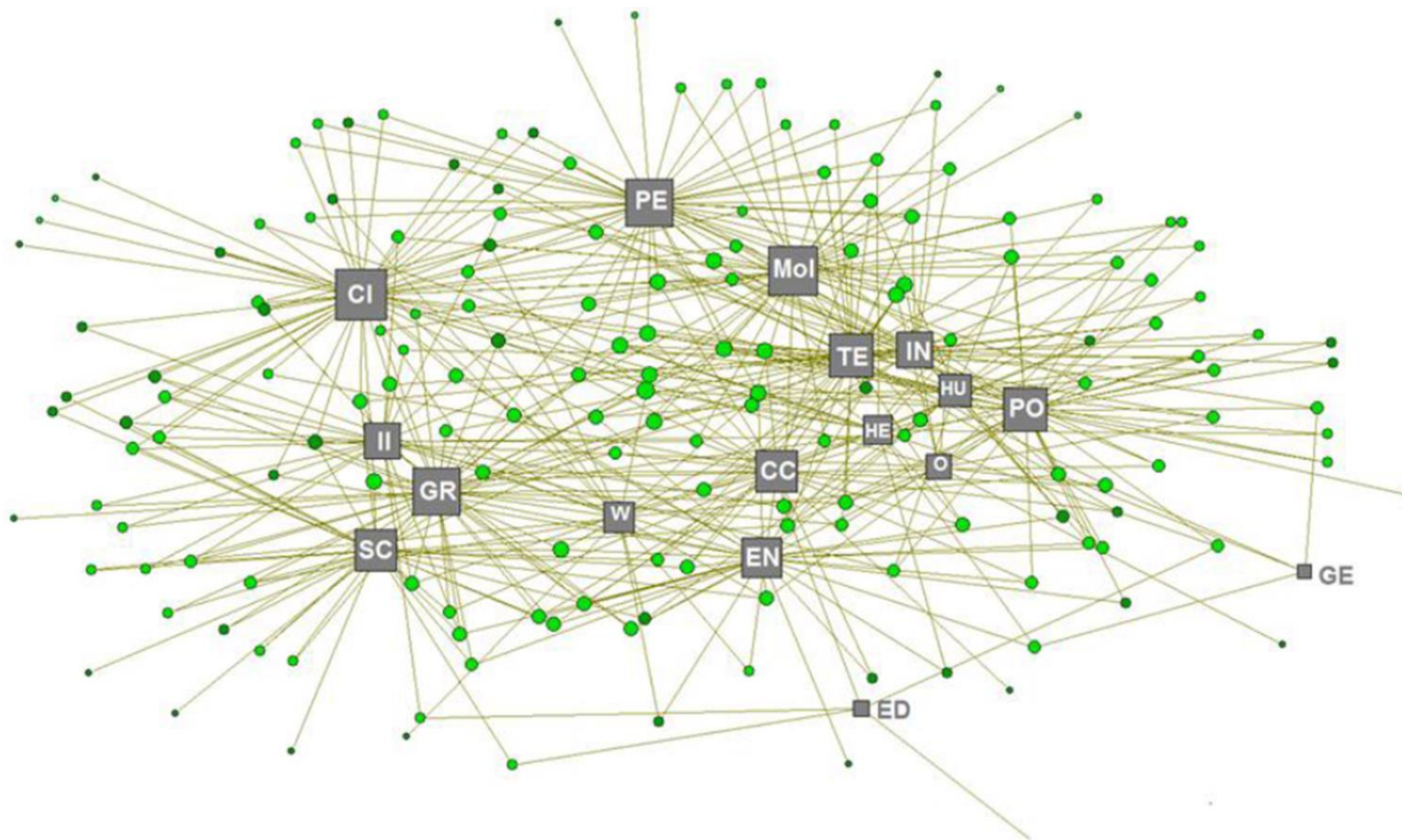
Rapidly industrializing countries have reduced SOx emissions, but NOx and non-methane volatile organic compounds continue to grow rapidly.

I can't decide  
0 votes on 165 ideas

Add your own idea here...



# SDG coverage of the submitted science briefs



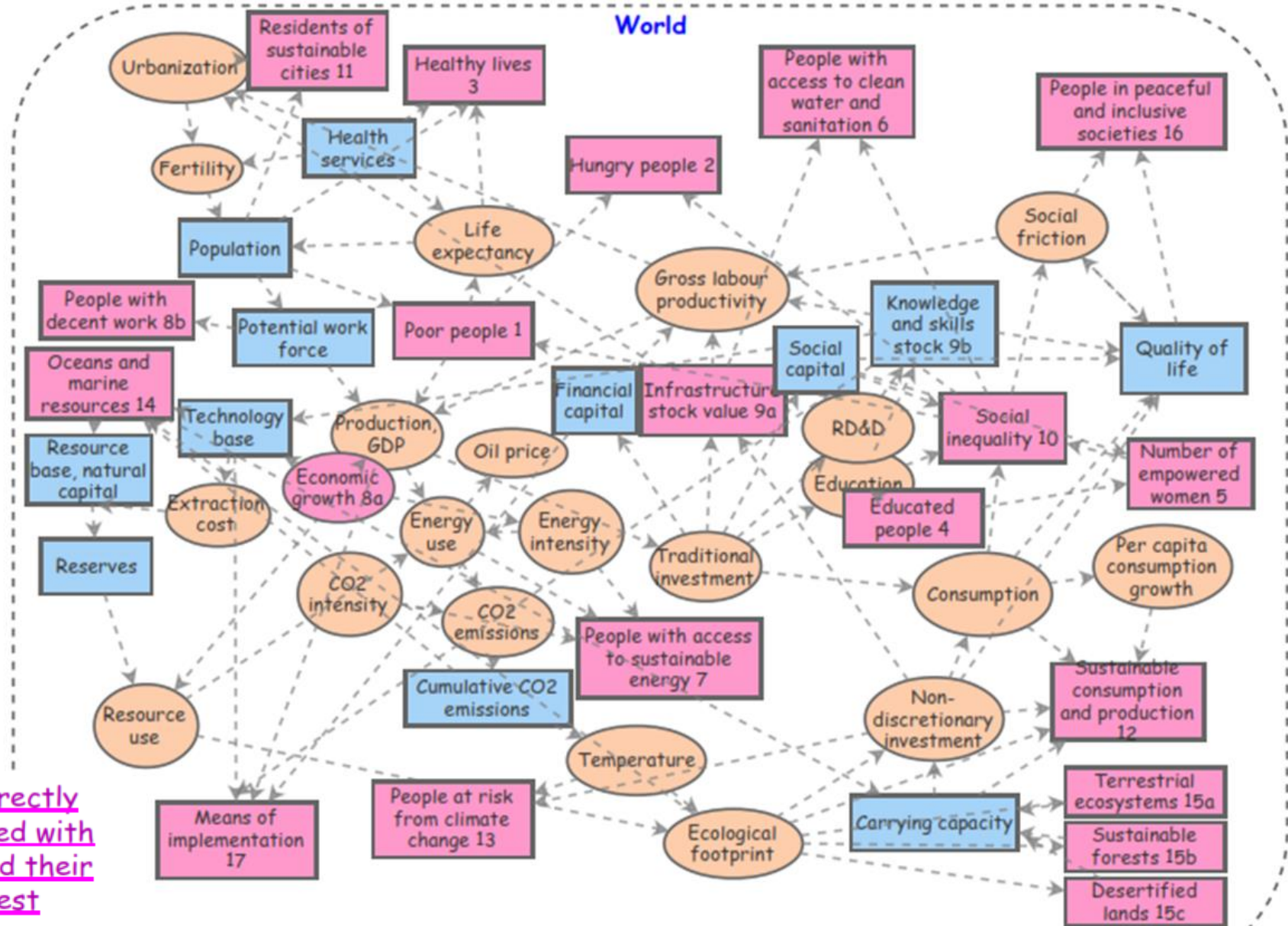
CI Cities  
CC Climate Change  
ED Education  
EN Energy  
GE Gender Equality  
GR Growth & Employment  
HE Health  
HU Hunger  
IN Inequality

II Infrastructure & Industry  
Mol Means of Implementation  
O Oceans  
PE Peaceful & Inclusive Societies  
PO Poverty  
SC SCP  
TE Terrestrial Ecosystems  
W Water

# SDG indicators

- Inputs for the work of statistical offices and UN entities in the IAEG-SDG (deadline 7 Dec. 2015)
- Need for a complementary, scientific approach:
  - ICSU/ISSC report recommendations: overall progress measures, interlinking targets, scenario pathways and narratives
  - Capture complex systems, thresholds, adaptive decoupling strategies, interconnected global risks
  - Overall measures without arbitrary weighting:
    - Resilience and capabilities approach, Sen's "key freedoms"
    - Economic valuation (e.g., revised GPI)
  - Simple set of indicators built into a fully integrated SDG model (units: people, \$, unitless)

# SDG meta-model



Pink: directly associated with SDGs and their target

Blue: other stocks

# Peer review of GSDR: suggestions by scientists

- Organize peer review by international scientific institutions, e.g., ICSU network, inter-academy council, Global Research Council, TWAS, .....
- Engage the national level, involving academies of sciences and national sustainable development reports.
- Explore options for conducting multi-stakeholder review of GSDR



# How you might want to get involved in the GSDR

- Submit a science-policy brief
- Brief synthesis of “emerging issues” as identified by work of the Academy or the Roundtable
- Engage in emerging “infrastructure” for science contributions and peer review
- National SDG roadmap and/or SDG technology roadmap. Support academies in poorer countries to do the same.
- Cooperate with GSDR team on a SDG scenario modelers forum and open-source tools
- Develop nationally appropriate SDG indicators set, overall progress measure and interlinking targets
- Engage in HLPF towards the 2019 SDG review

**I hope you will be interested to get involved!**

# Thank you

<http://sustainabledevelopment.un.org/globalreport>

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