



*vitenskapsåret*

# On global challenges and international research and innovation policy development

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KUNNSKAPSDEPARTEMENTET

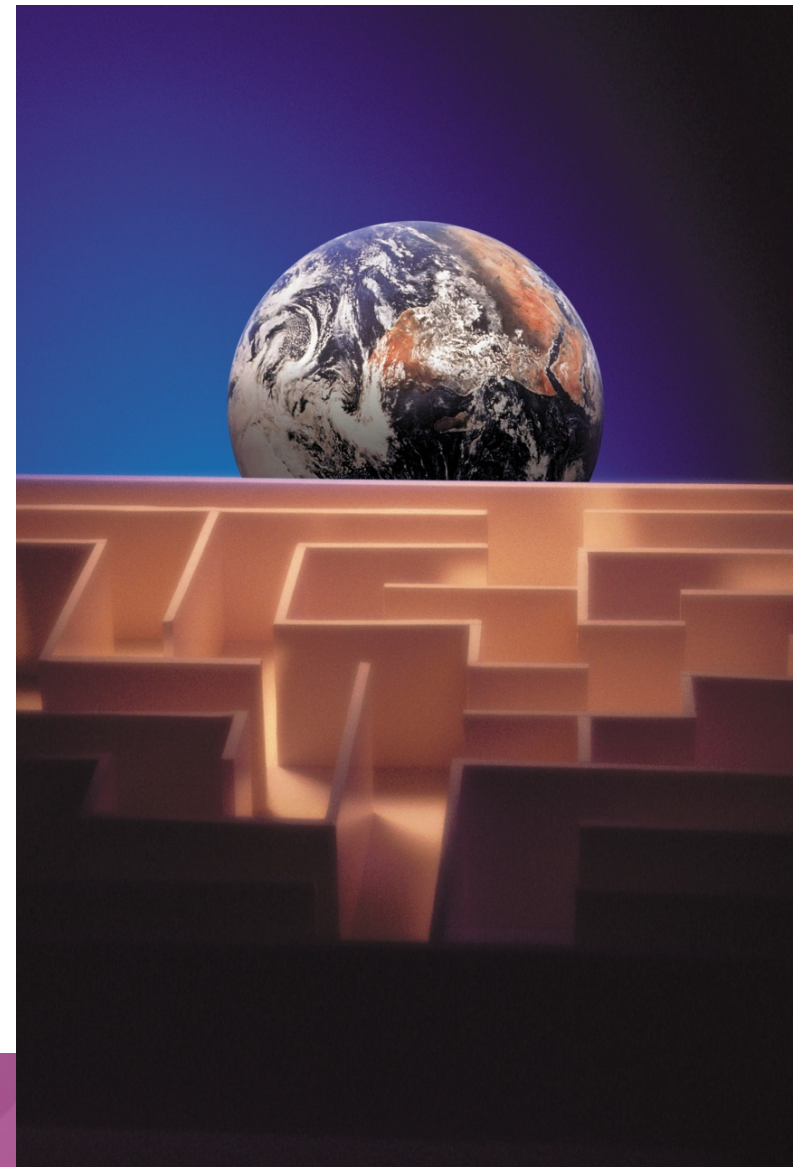
## **OECD STIG**

OECD STEERING GROUP ON  
GOVERNANCE OF INTERNATIONAL  
CO-OPERATION ON SCIENCE,  
TECHNOLOGY AND INNOVATION FOR  
GLOBAL CHALLENGES



# The Challenge

- Global challenges cannot be adequately addressed by single actors.
- We are all affected
- Problems caused by systemic failure consisting of social, economic, cultural, biological, technological and environmental factors.



# The role of science and innovation

- STI play a crucial role in
  - Understanding the impact chains underlying global challenges
  - Understanding the interaction between various factors framing global challenges
  - Developing solutions



# But S&T is also partly to blame for our problems



- We need to prepare for unintended consequences of STI and assess risks of alternative strategies

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# How to make STI part of the solution

- There is recognition of increasing importance of STI cooperation to address global challenges
  - SFIC
  - UN Summit (2009)
  - G8+7 S&T Ministerial meeting (2008)
  - OECD CSTP High Level Oslo Meeting (2008)
  - OECD Oslo STIG Workshop (2011)
- Still, STI is often not included in strategies



# STI challenges

- Single countries might not be willing to bear costs of action
  - free-rider problem, tragedy of the commons
- No agreement or comprehensive mechanism for multilateral STI cooperation in place
- No consolidated knowledge regarding the strengths and weaknesses of different institutional settings
- No coherent idea about what is good practice



# Policy challenges

- Develop a narrative that makes both policy makers and the general public understand the seriousness of the situation
- Include STI in other policy areas
- Requires a strategic mobilization of resources that goes far beyond traditional hands-off, bottom up, initiatives





# The new global dimension

- Until recently, global STI activities were mainly clustered in the “triad” (North America, Europe, Japan).
- New countries are appearing on the global STI arena
  - Korea as example of successful technological catch up
  - Brazil (aeronautics, biotech),
  - China (solar and wind energy)
  - India (ICT, wind energy)
  - South Africa (coal liquefaction)
  - ...

# Global research governance

- There is no world government
- But in many fields of human activities, global governance structures exist, e.g. :
  - Intergovernmental agreements and related organizations
  - International networks of public, semi-public and private institutions
  - Multistakeholder initiatives with strong influence of civil society
  - Private governance, e.g. standards imposed by lead firms in global value chains
  - Private and civil initiatives



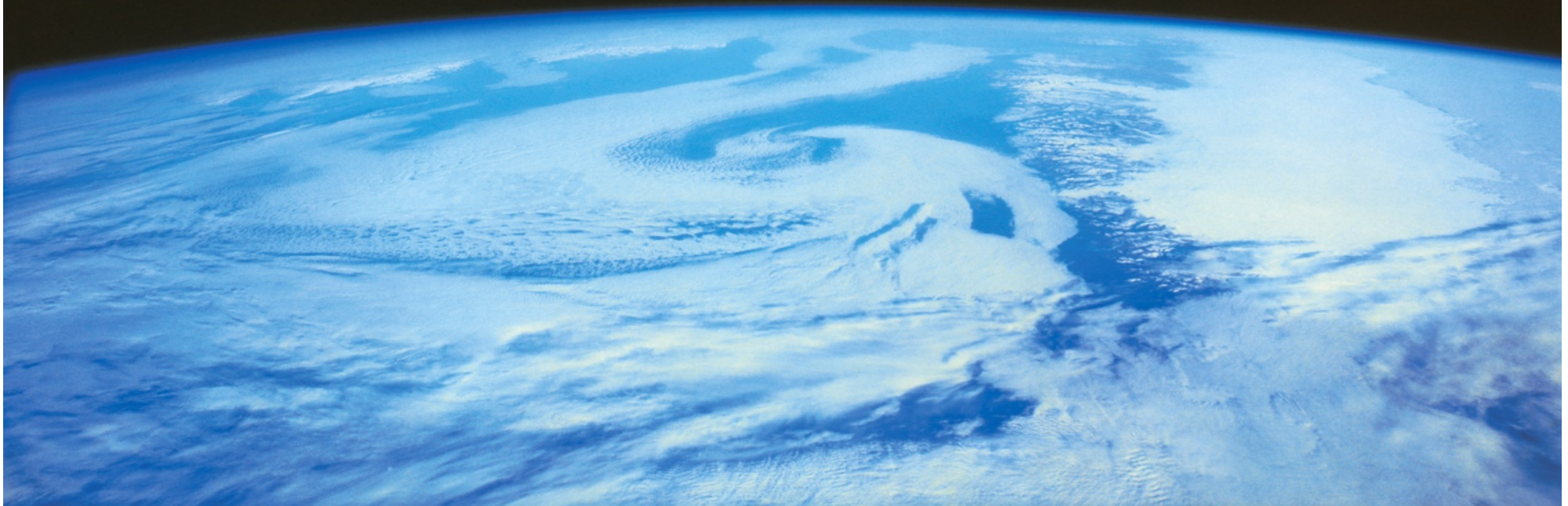


# Study the institutional settings

- Need for an accurate analysis of strengths and weaknesses of given institutional settings
  - Go beyond the scope of STI and global challenges.
- Governance ≠ government
  - A variety of modes of governance, blended public-private governance, including non-state actors (researchers, businesses, NGOs).

Research and innovation collaboration on a global challenges requires special skills:

- An ability to combine knowledge from various disciplines, technologies and businesses
- An ability to engage different research and innovation institutions in collaboration
- An ability to connect all the actors in the innovation system: universities, institutes and labs, private companies, public sector organizations, NGOs and stakeholder organizations.



- Need for a focus on:
  - international governance skills
  - international policy development
  - the interaction between society and research and innovation
  - Within-science collaboration and cultural development



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