MEETING THE CHALLENGES FACING THE AGRICULTURAL SECTOR: WHAT ROLE CAN THE GREEN GROWTH AGENDA PLAY?

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Outline of presentation

- Context
  - key challenges facing agriculture
- What does green growth imply in addressing these challenges?
  - Policy and monitoring progress challenges
- Key lessons

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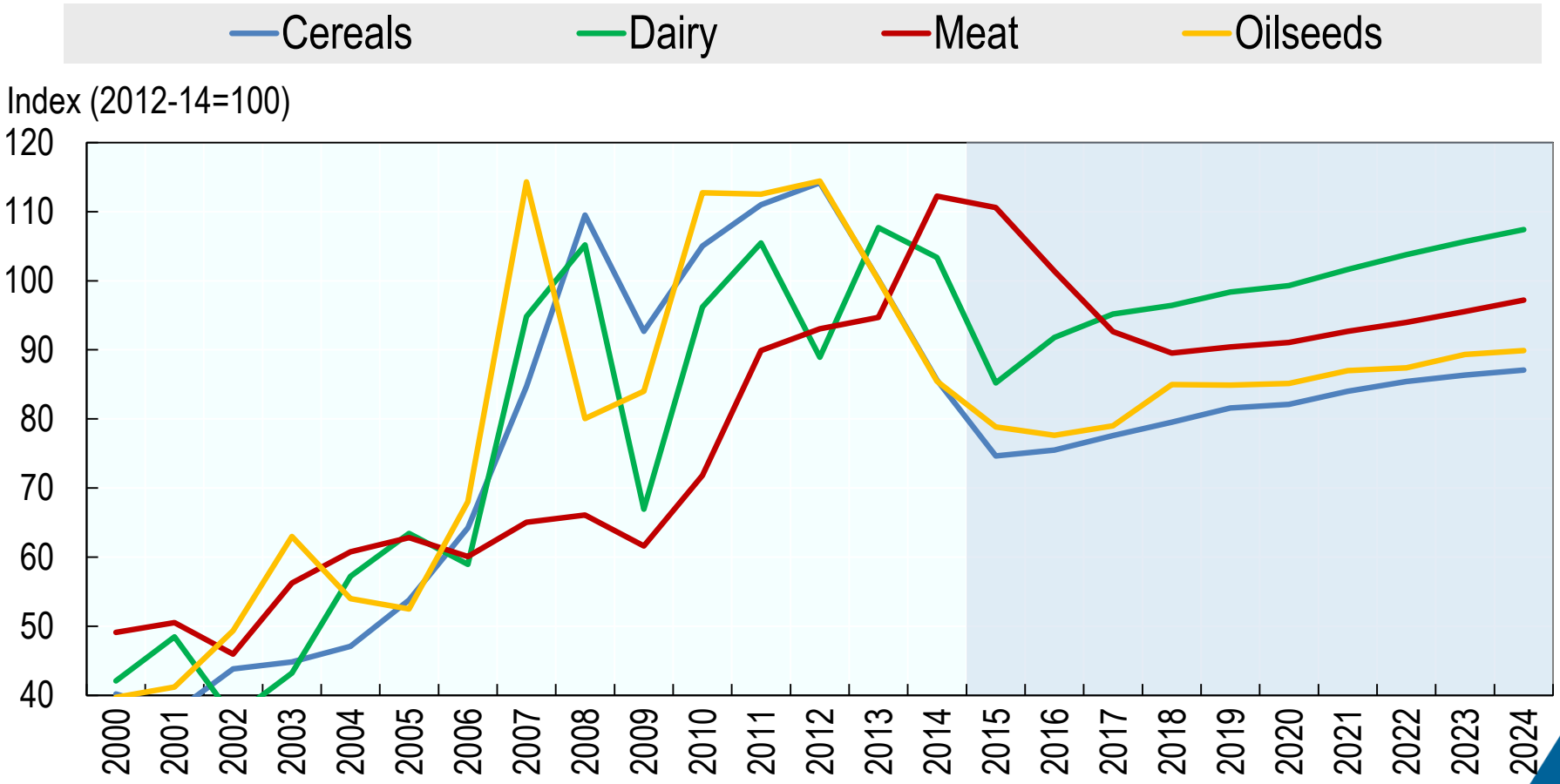
What are the key challenges facing the agricultural sector?

Good prospects for agriculture…

- Growing food demand
- Higher real prices

Prices to remain higher than the years preceding the 2007-08 price spike

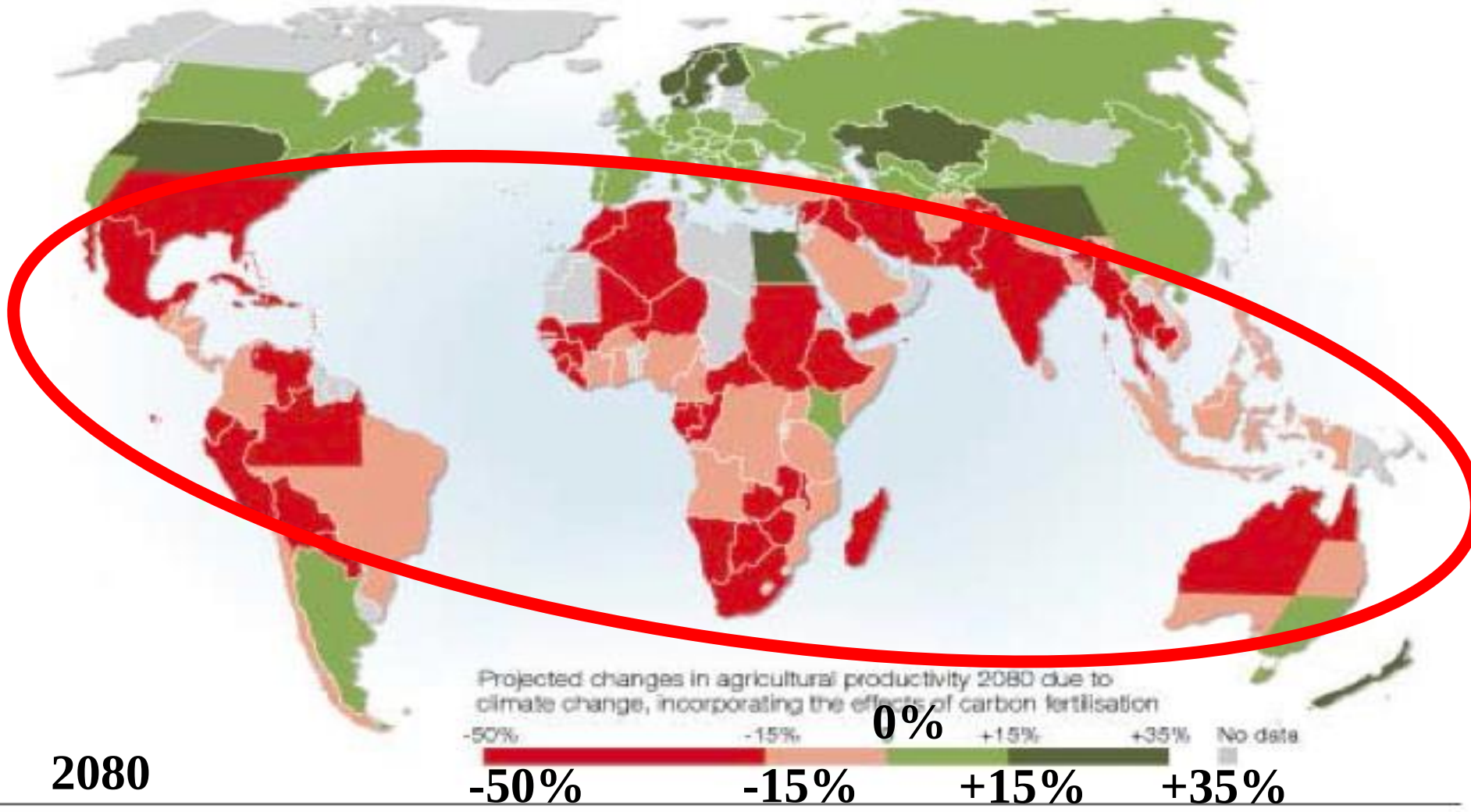


… but agriculture is facing a multitude of challenges

- ***Old issues that remain relevant***
  - Income support
  - Price stability
  - Competitiveness
- ***New and emerging challenges***
  - Food security
  - Sustainable use of natural resources
  - Climate change
  - Changing consumer demands
  - Innovations – 4th industrial revolution

Business as Usual is not an option

Figure 8 Projected losses in food production due to climate change by 2080.



Source: The environmental food crisis - the environment's role in averting future food crises. A UNEP rapid response assessment. United Nations Environment Programme, February 2009, www.grida.no, page 46, quoting: Cline, W. R. (2007). Global warming and agriculture: Impact estimates by country

Risks in not going green: shocks to food supply

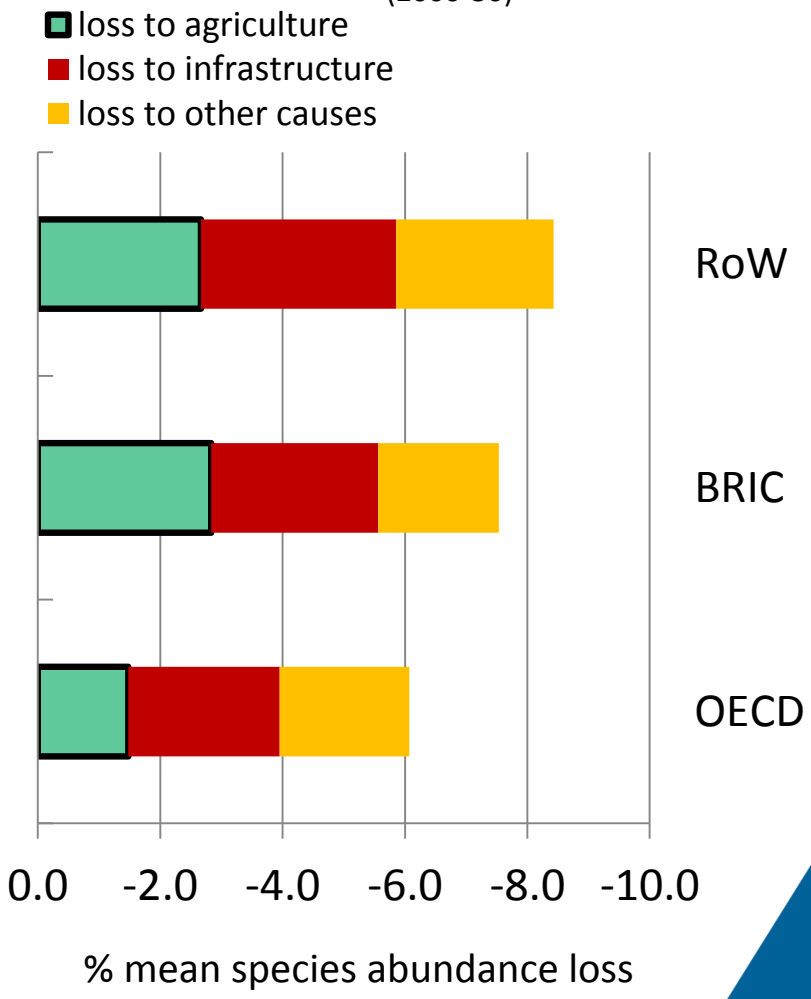
Pressures on natural capital

By 2030, business as usual:

- Food production +35%
- Land +9%
- Land at risk of erosion + 17%
- Water scarcity +30%

Biodiversity loss

(2000-30)



Source: OECD

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What does green growth imply in addressing the challenges facing the agricultural sector?

The Green Growth Agenda – Key characteristics

- No necessary conflict between growth and environment in the long run
- Tool to achieve sustainable development
- Focus on fostering innovation, investment and competition that can give rise to new sources of economic growth
- Coherence of policies

Green Growth in agriculture means

- providing enough food, feed, fibre and fuel for 9 billion people in 2050…
- …with greater pressure on land, water, energy and biodiversity resources - and the impact of climate change…
- …and the need to limit the harmful and enhance the beneficial environmental impacts and reduce waste in the food supply chain
  - So **productivity** has to rise faster than population and income, while reducing environmental footprints – "sustainable intensification"…
  - … Increasing productivity in a sustainable manner – from R&D, innovation, to uptake all along the food supply chain, while addressing ***social concerns***.

The policy challenge …

Policies that mutually reinforce ***green and growth*** –

- Increasing productivity in a sustainable manner
  - Investing in knowledge generation (R&D, innovation)
  - Investing in knowledge creation – training, advisory and extension services
  - Investment and trade

Policies specifically aimed at ***greening growth***

- Market-based instruments
  - Agri-environmental payments, environmental taxes, etc.
- Non-market instruments
  - Regulation, voluntary agreements, technical assistance

❖**But a lot of green is not priced..**

The monitoring progress challenge

You can't manage what you don't measure

- If governments are going to pursue policies designed to promote green growth, they need indicators that can:
  - raise awareness
  - measure progress
  - identify potential opportunities and risks

The monitoring progress challenge: four dimensions

1	The environmental and resource productivity of the economy	• Carbon and energy productivity • Resource productivity: materials, nutrients, water • Multi-factor productivity
2	The natural asset base	• Renewable stocks: water, forest, fish resources • Non-renewable stocks: mineral resources • Biodiversity and ecosystems
3	The environmental dimension of quality of life	• Environmental health and risks • Environmental services and amenities
4	Economic opportunities and policy responses	• Technology and innovation • Environmental goods and services • International financial flows • Prices and transfers • Skills and training • Regulations and management approaches
	Socio-economic context and characteristics of growth	• Economic growth and structure • Productivity and trade • Labour markets, education and income • Socio-demographic patterns

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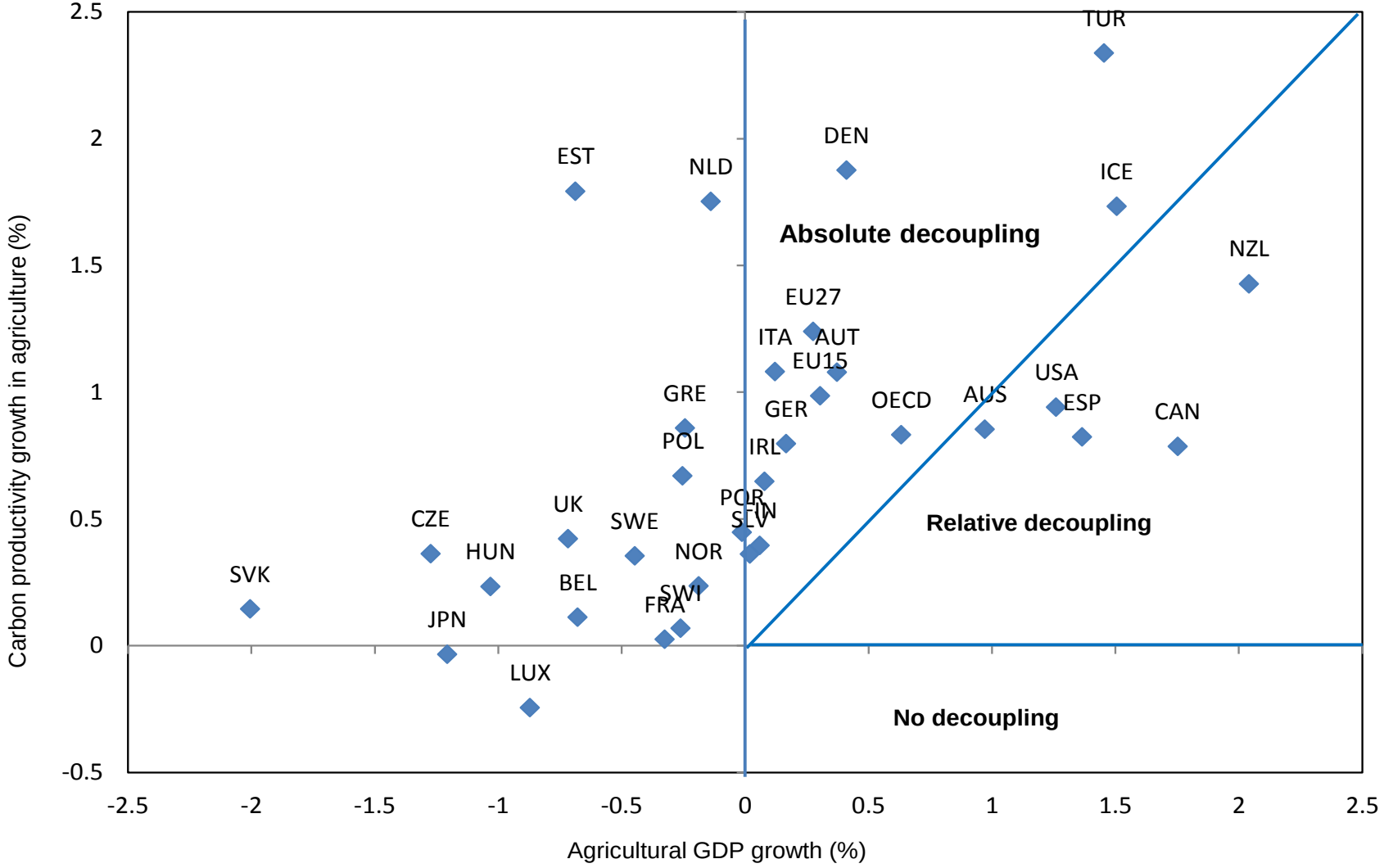
What progress are we making?

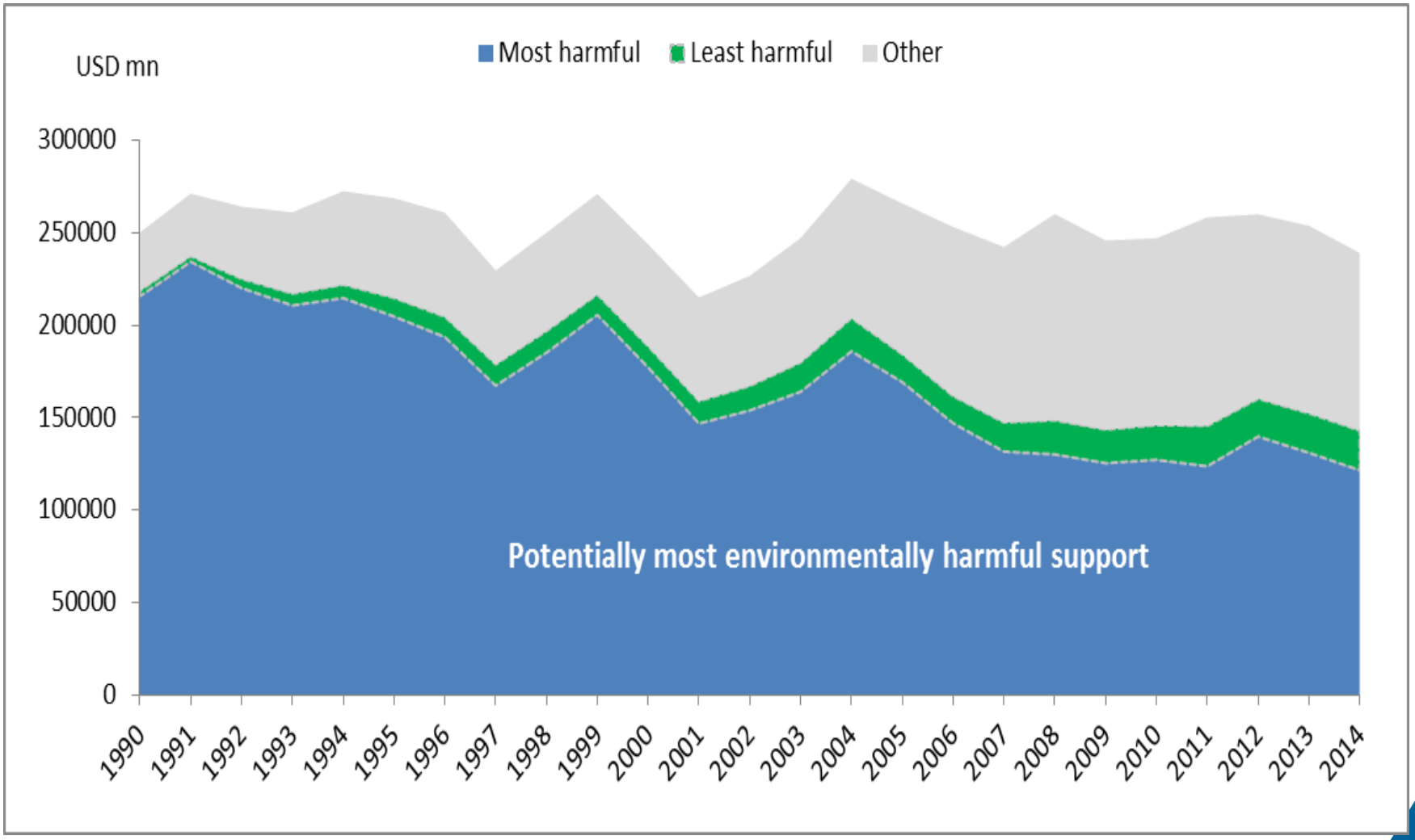
Green growth is gaining importance ….

- Specific, quantifiable and time-bound targets are mostly reported in the areas:
  - Reduce energy use and improve efficiency
  - Increase the share of renewable energy
  - Increase land under organic farming
  - and, to a lesser extent, reduce the use of harmful pesticides
- Most objectives and targets are driven by international agreements
- Recognition of the need for investment in agricultural R&D

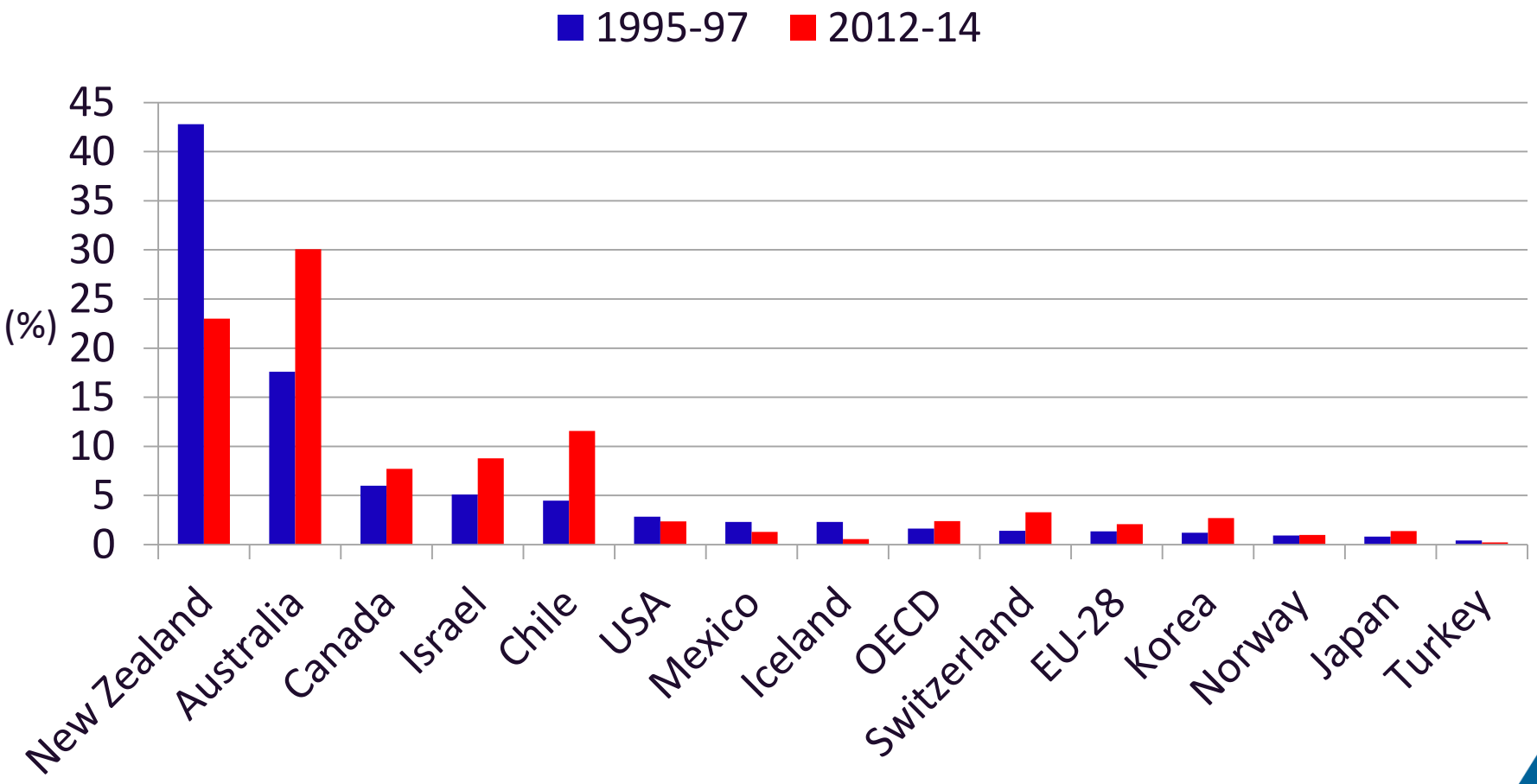
Progress with decoupling GHG emissions from production growth in several countries



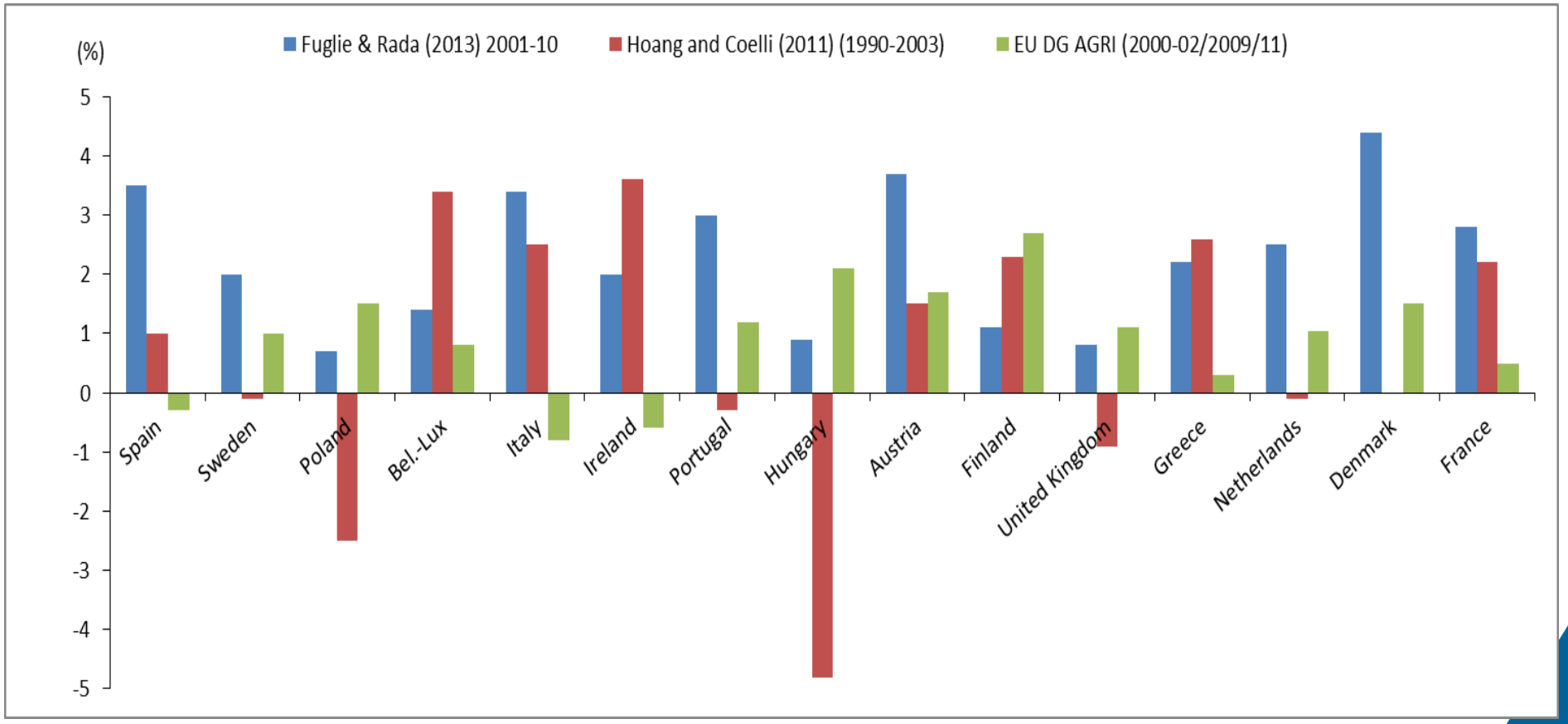
Ranking agricultural support to farmers by potential environmental impact: OECD area



Agricultural knowledge generation in total support to agriculture (%)



… but confusing evidence on MFP



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Key lessons

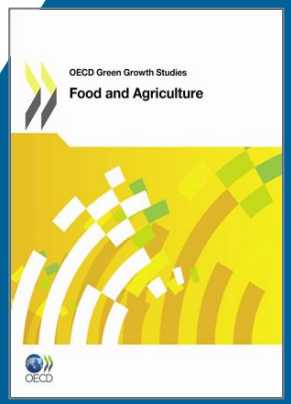
Key lessons

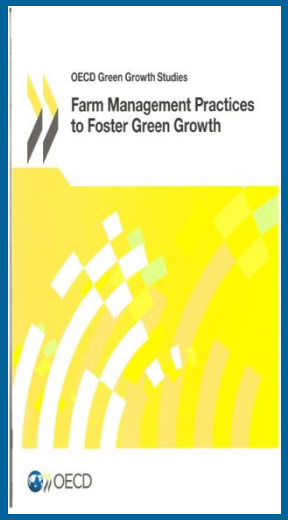
- Moving towards a greener growth model for agriculture is challenging, will involve trade-offs as well as synergies and will vary across countries and over time
- It's often difficult to overcome obstacles to implementation and the challenge is to provide concrete implementable policy advice, measure progress, and learn from experiences across countries/regions and businesses

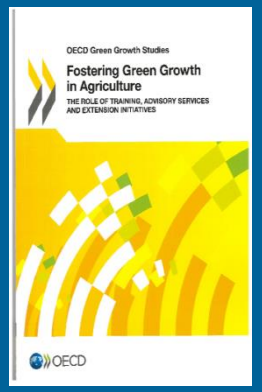
Key lessons

- Focusing on improving productivity in a sustainable manner is a *sine qua non* of a green growth strategy for agriculture
- Green growth provides new paradigm for research and innovation: **R for D** rather than **R&D**
- But measuring productivity in monitoring progress towards green growth entails several conceptual and methodological challenges to be addressed
- … and empirical evidence is confusing

Thank you for listening!







Visit our website: *www.oecd.org/agriculture/greengrowth*

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Green Growth framework

Enabling conditions

- Balanced tax structures
- R&D and innovation policy
- Competition
- Infrastructure investment
- Openness to trade and FDI

Major environmental issues

- Water scarcity
- Climate change
- Health impacts of pollution
- Biodiversity loss

Key policy tools

- Pricing of pollution and resource use
- Subsidy reform
- Regulatory and policy predictability
- Support to basic research and emerging technologies
- Governance of natural assets

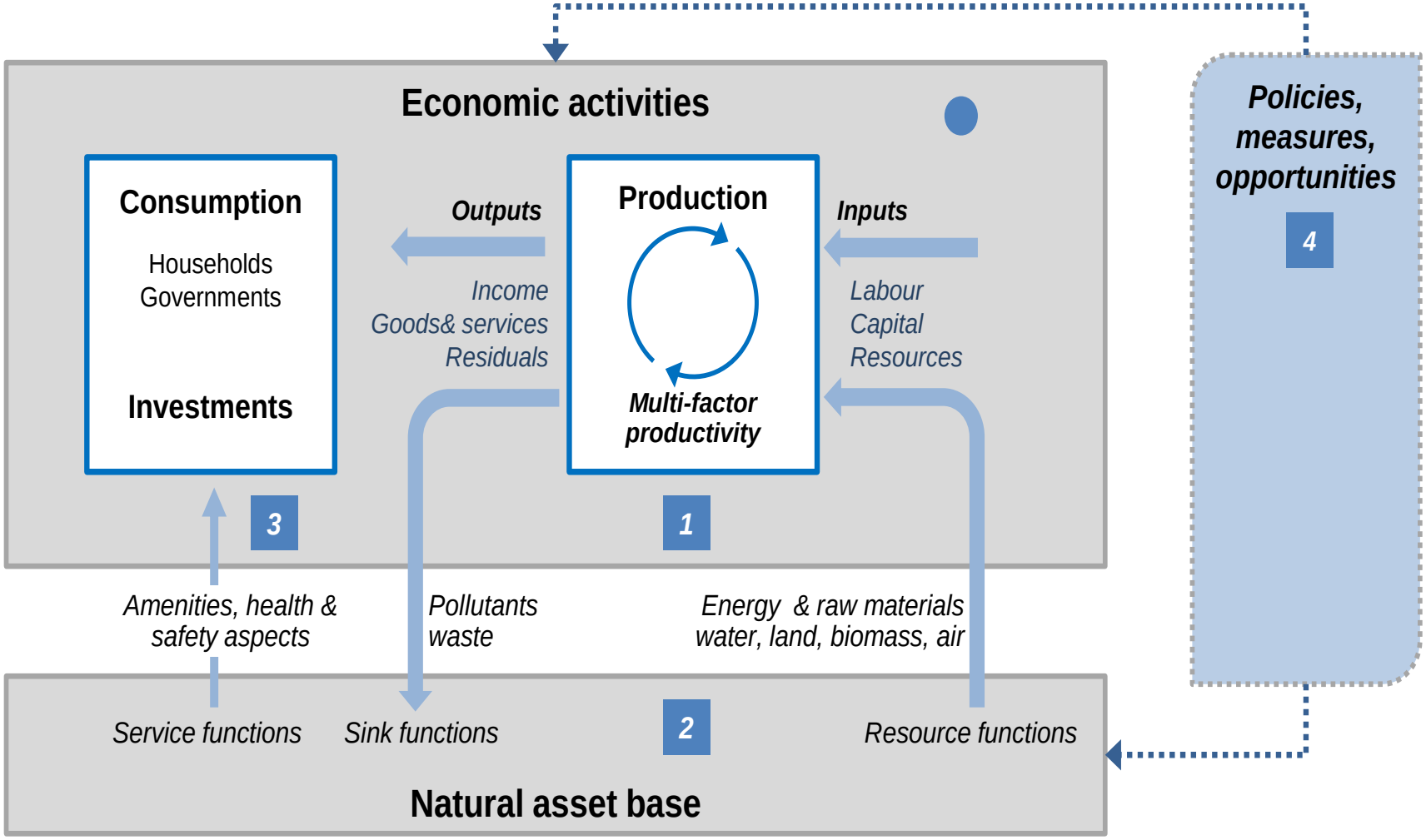
Promoting transition

- Skills and labour market adjustment
- Distributional and competitiveness concerns
- Science and technology cooperation
- Development assistance
- Management of global public goods

Measurement agenda

- Productivity of resource use
- Physical evolution of the natural asset base
- Environmental quality of life
- Opportunities arising from environmental considerations
- Evolution of policy and social responses
- Promoting efforts consistent with international standards

Framework for green growth indicators



Australia: *The Rural Research and Development Corporation Model*

- Partnership between the Australian government and the agriculture, forestry and fishery industries
- It commissions and manages targeted research and fosters uptake and adoption based on identified needs and priorities
- Funding can be targeted either to production (on-farm) or processing (off-farm)
- Fund projects that have a mix of both public good and private industry good-components

New Zealand: Public-Private Partnerships

- *Primary Growth Partnership*: Provides investment in research and innovation to boost sustainable productivity growth to primary, forestry and food sectors
- *Sustainable Farming Fund*: Partnership with land managers and local community to promote agri-environmental innovation and research in the country