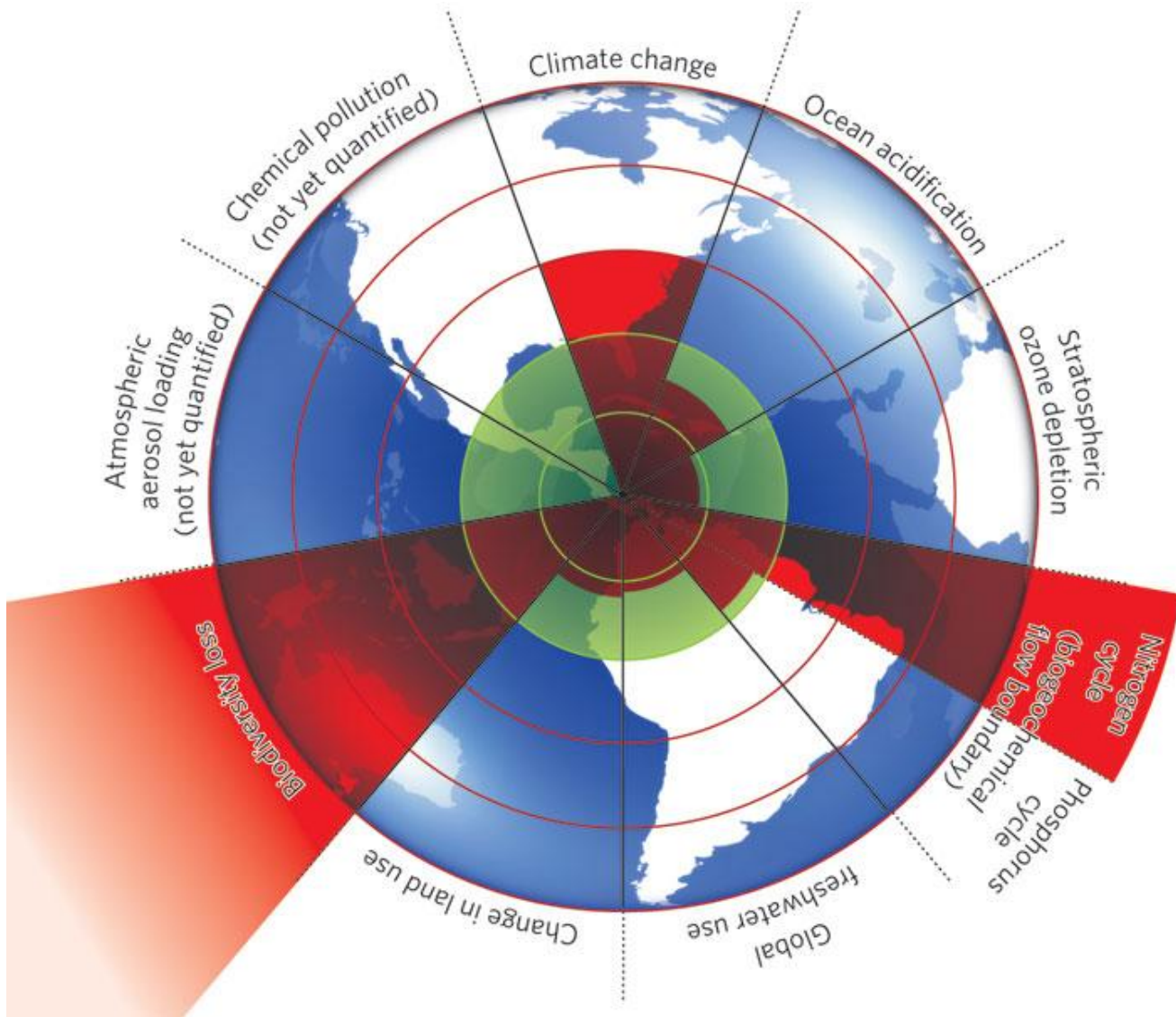




**Demand for low-carbon and
resource efficient solutions pulls
research and creates new
business opportunities**

Dr. Jonas Brändström
Chief Strategy Officer, Eco-innovation

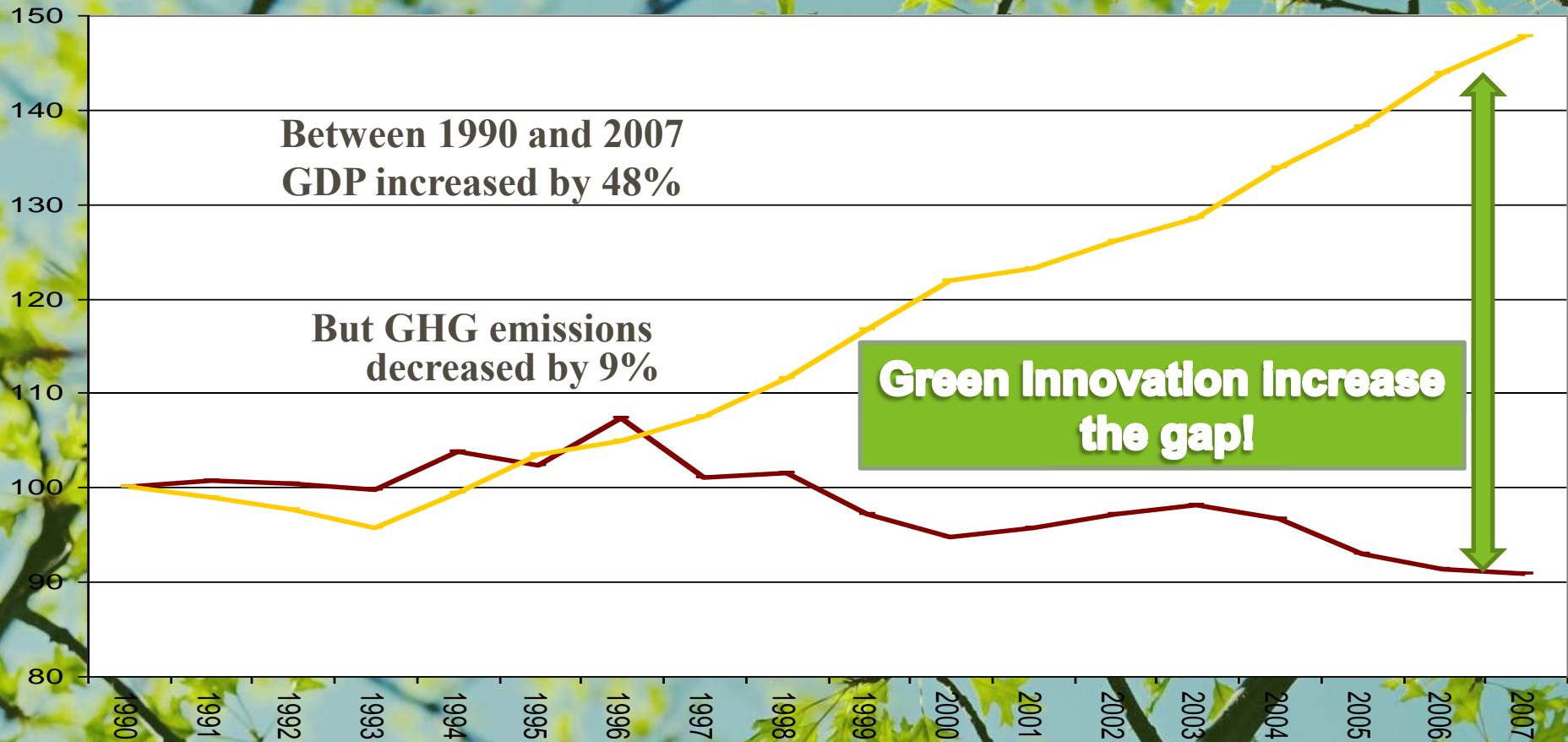
17/5/10



Johan Rockström et al. [A safe operating space for humanity](#)

Nature **461**, 472-475(24 September 2009)

Decoupling in Sweden





About VINNOVA

- Sweden's research and innovation agency
- Established 1st January 2001
- Under the Ministry of Enterprise, Energy and Communications
- Director General: Charlotte Brogren
- Budget approx. SEK 2 billion (doubled through co-financing)
- VINNOVA's R&D appropriation for 2009 was equivalent to 6.5% of national R&D funding
- Around 200 employees
- Offices in Stockholm and Brussels

Three examples

1. Excellent University Research and Companies working together for radical improvements
2. Effect targeted funding: The Eco-innovation call
3. Joint Programming: Nordic Top Level Research Initiative

Wood based diapers

- 50% reduction of fossil based material in hygiene products by 2012



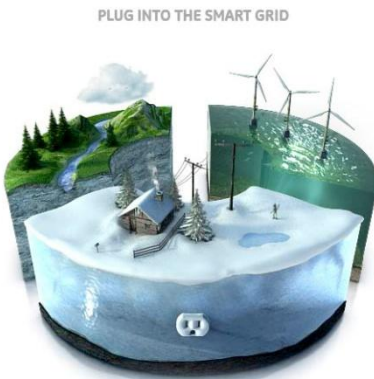
Research and Innovation for Green Growth,

”Eco-innovation”

2009-2013

Budget: 15 M€

- Sustainable use of Natural Resources
- ICT for environment
- Sustainable cities
- Efficient energy use





3

Joint Programming – The Nordic Top-Level Research Initiative



norden

Nordic Council of Ministers
Nordic Council

The Nordic Top-Level Research Initiative

- è Nordic Joint research and innovation program
- è First calls in 2009
- è Budget: 45 million Euros 2009-2013



Joint Programming – The Nordic Top-Level Research Initiative



norden

Nordic Council of Ministers
Nordic Council

The Nordic Top-Level Research Initiative

A total of six subprograms are addressed:



*From
understanding to
solution*

1. Effect Studies and Adaptation to Climate Change;
2. Climate Change's interaction with the Cryosphere;
3. Integration of large scale wind power;
4. Sustainable Biofuels;
5. Nanotechnology and energy efficiency;
6. Carbon capture and Storage.



VINNOVA

Lessons from the North – The Nordic Top-Level Research Initiative

Lessons learned and Implications for Joint Programming

1. The importance of high level commitment



Joint Programming – The Nordic Top-Level Research Initiative

Lessons learned and Implications for Joint Programming

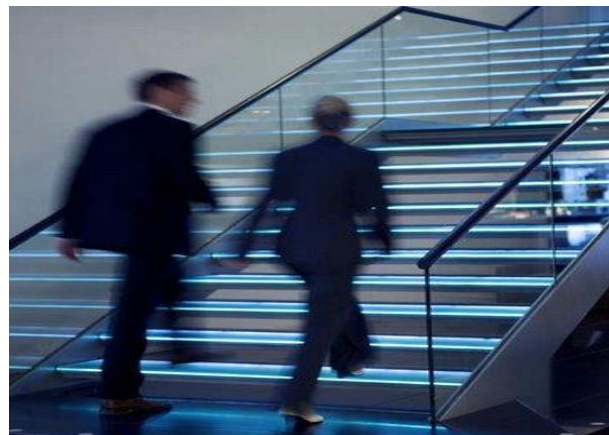
2. Based on Grand Challenges



Joint Programming – The Nordic Top-Level Research Initiative

Lessons learned and Implications for Joint Programming

3. Innovation focus - Industry involvement



Joint Programming – The Nordic Top-Level Research Initiative

Lessons learned and Implications for Joint Programming

4. Building on strengths – Increasing attractiveness



Joint Programming – The Nordic Top-Level Research Initiative

Lessons learned and Implications for Joint Programming

5. Importance of history and existing organizations



Challenges pull research and creates new business opportunities

Planetary boundaries

Climate change, stratospheric ozone depletion, ocean acidification, chemical pollution, biodiversity loss

Other social and physical restrictions

Energy and mineral security

Food security

Health

Growing population

Challenges (e.g.)

Sustainable use of natural resources

Sustainable cities

Enabling technologies

E.g. materials, nano, ICT, bio,

Applications

Raw materials, low carbon agriculture, Manufacturing, services, transportation, health recycling,

Attractivity

- Innovation hubs
- Strategic assets

Implementation and use

- Demonstration
- Test beds
- Strong R&D-milieus
- SME
- LEs as locomotives

Globalization

- Larger networks
- Strategic cooperation

Policies

- Legislation
- Certification
- Green Public Procurement
- Labeling
- Standards
- Tax incentives

Promoting Green Innovation, challenges and opportunities:

How do we:

- Identify, select and specify Grand Challenges?
 - Stakeholder involvement, industry and society? Climate not the only challenge
- Focus on solutions?
 - Investing rather than funding
- Act when business is global, research is global and innovation (often) is local?
 - Joint programming
- Address market pull or technology push?
 - Both

