



Draft Global Sustainable Development Report 2019: messages for the globe, insights for the EU

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European Parliament

Public Hearing

"The remaining 12 years: EU action towards achieving the 2030 Agenda for Sustainable Development

7.2.2019, Brussels

TRANSFORMATIONS – WAYS TO TACKLE ARISING PHENOMENA



AGENDA 2030 –
A VISION FOR HUMANITY
IN THE ANTHROPOCENE

KNOWLEDGE –
SCIENCE AND BEYOND



The independent group of scientists



Gonzalo
Hernández
Licona



Katherine
Richardson



David
Smith



Amanda
Glassman



Jurgis
Staniskis



Eun Mee
Kim



Muhammad
Saidam



Endah
Murniningtyas



Peter
Messerl



Jean-Paul
Moatti



Jean-Pascal
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Ypersele



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Lutz



Parfait
Ekoundou-
Enyegue



Eeva
Furman



Ernest
Foli



Global Sustainable Development Report

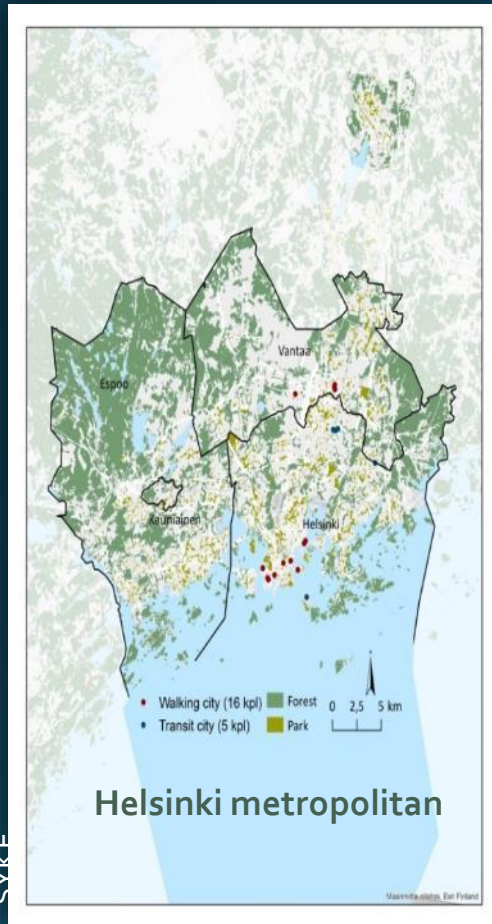
GSDR 2019



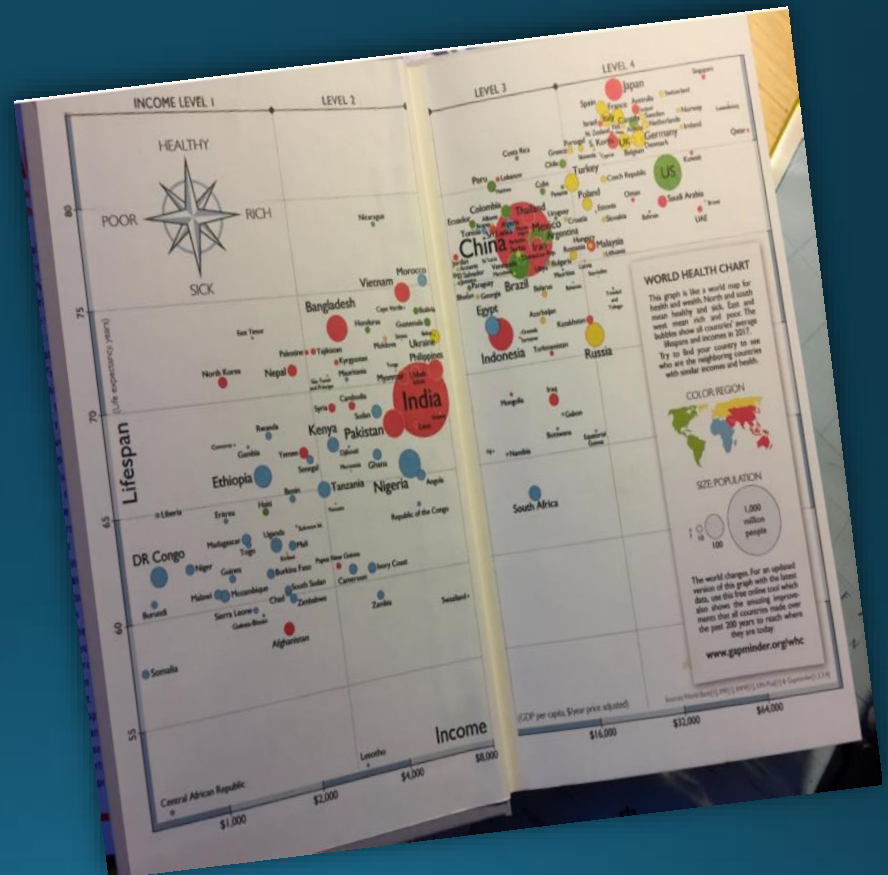
- Strengthen the science-policy interface to support policymakers in promoting poverty eradication and sustainable development
- Incorporate scientific evidence in a multidisciplinary manner—natural sciences and social sciences—considering all three dimensions of sustainable development
- Support the implementation of the 2030 Agenda, keeping in mind its universal and integrated nature
- Consider regional dimensions and diversity, as well as countries in special situations

Much good still exists and for many things humanity has made great progress...

Paloniemi, Tiitu & Viinikka
SVKE



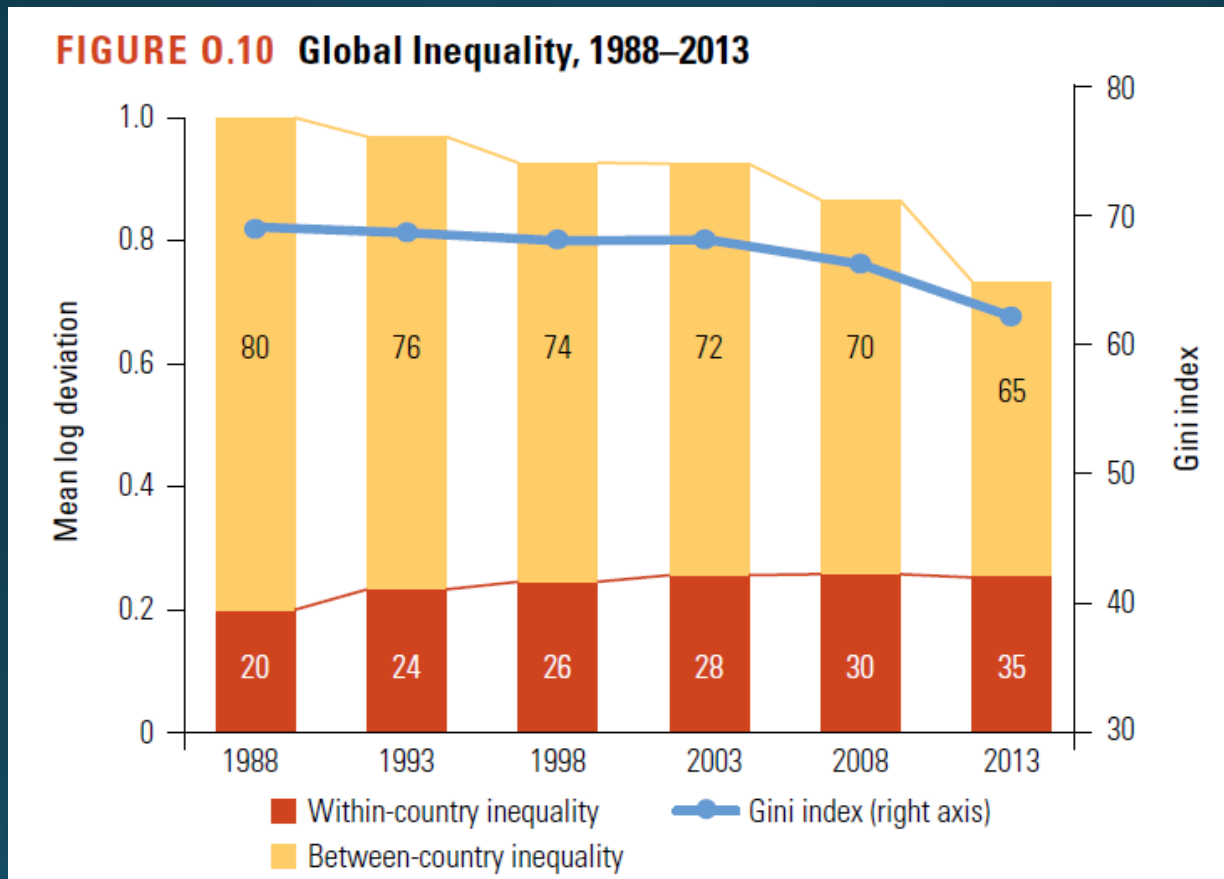
Green infrastructure
in European cities



Many countries have made their
way out of extreme poverty

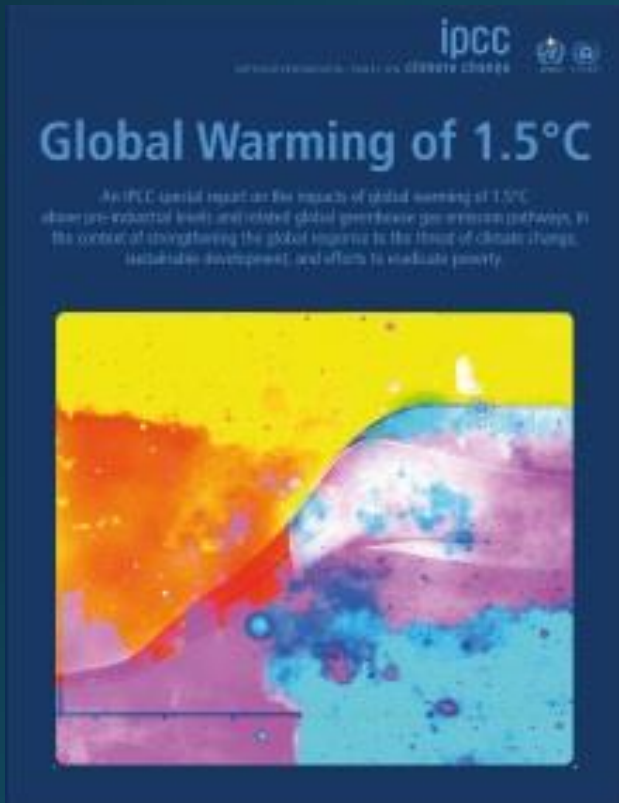
Rosling et al. Factfulness, 2018

Social turning points: poverty and inequality

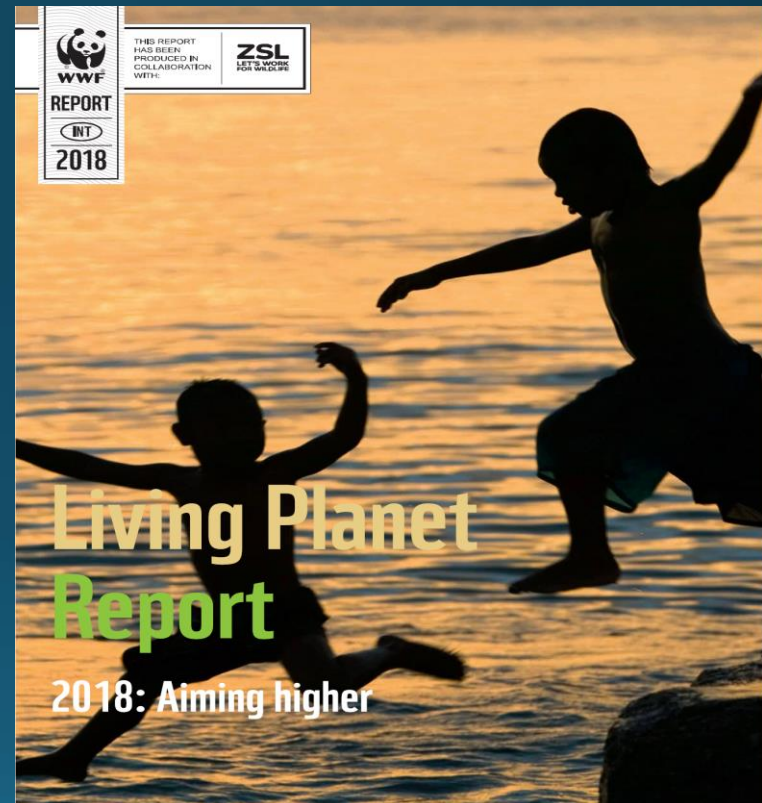


World Bank. 2016. Poverty and Shared Prosperity 2016: Taking on Inequality. The World Bank.

Environmental turning points: climate change and biodiversity



IPCC report on 1.5 °C

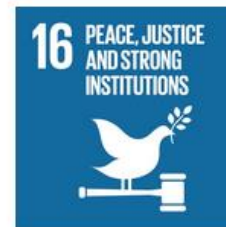
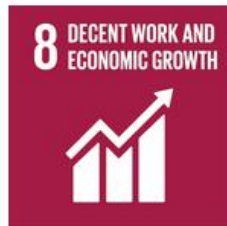


WWF Living planet report

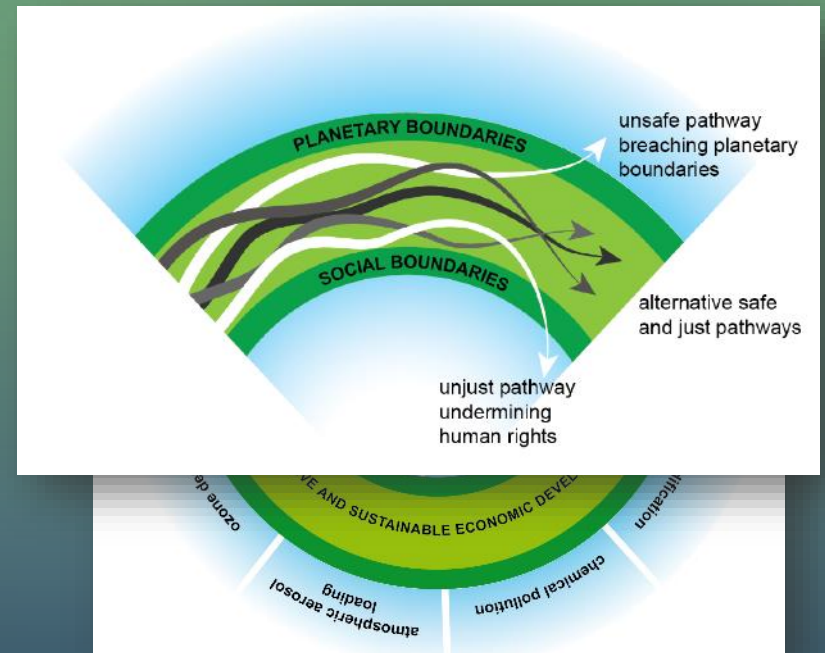
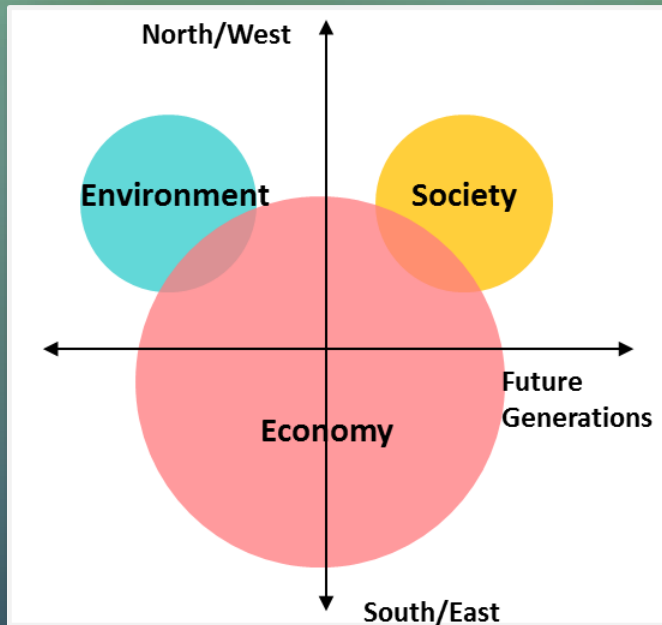
Counter-transformations: nationalism and populism



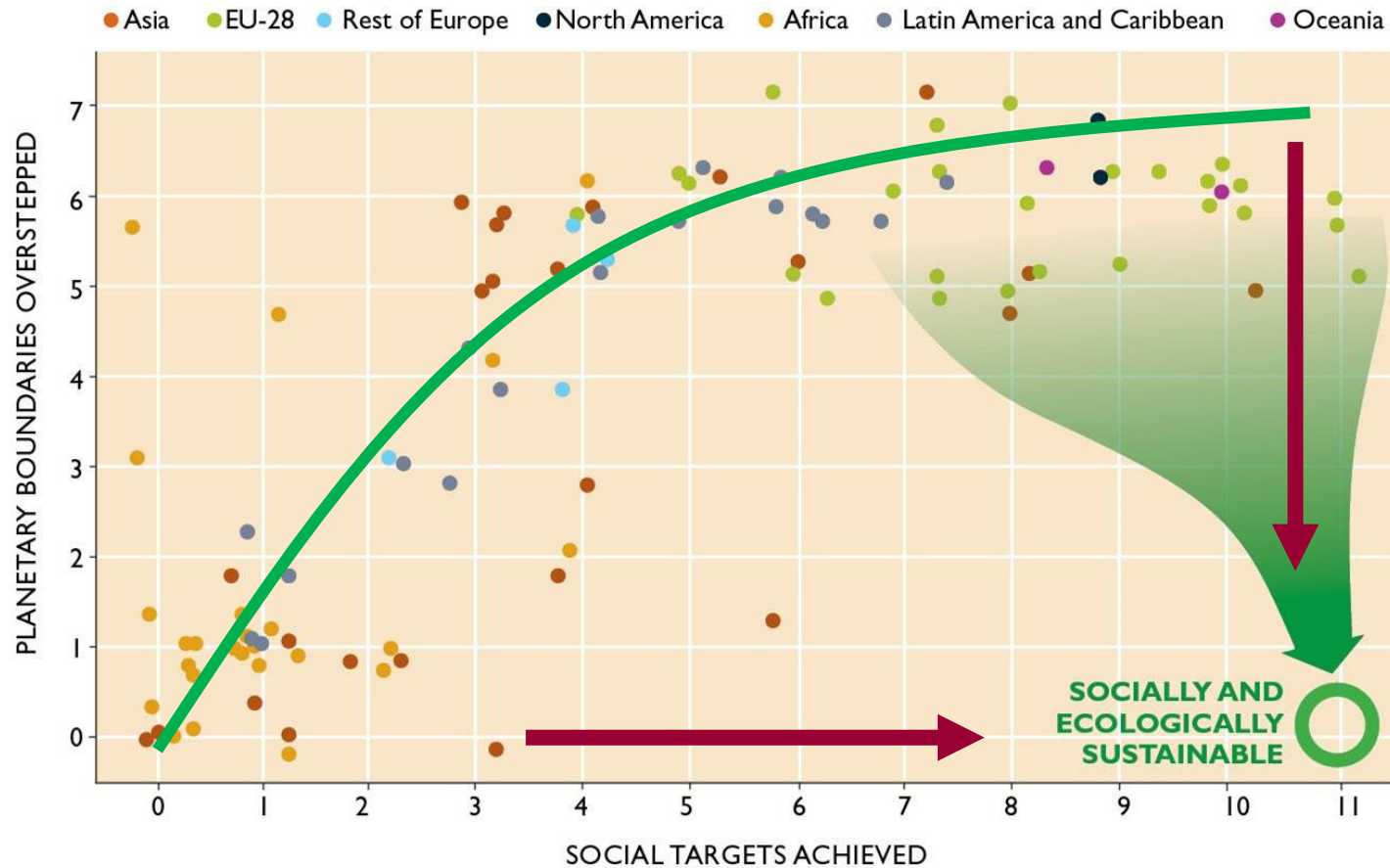
A decisive decade ahead



A Renewed Understanding of Transformations to Sustainable Development?



Not a single country has achieved a high level of well-being in an ecologically sustainable way



Systems thinking : Synergies and Trade-offs among SDGs

Work in progress – do not use this or refer to this!



Coding:

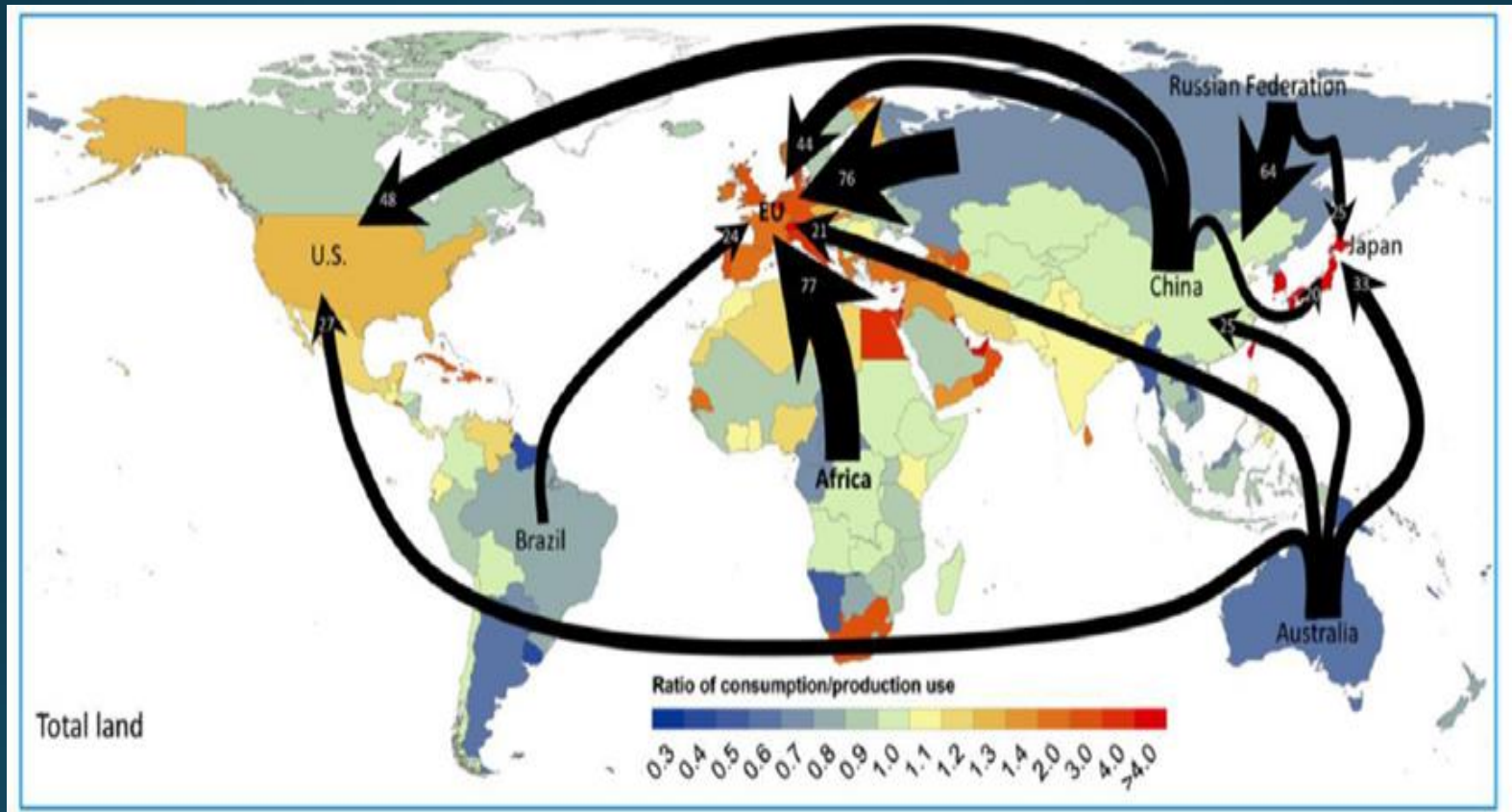
- 62 Global Reports and scientific assessments
- 110 scientific papers with explicit mention of SDG interactions

General pattern:

- 2080 interactions positively or negatively assessed at target level
- **85 % positive interactions**
- **14 % negative interactions**

To \ From SDG	To SDG																
	1 PEOPLE	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS
1 PEOPLE			-2.00		-2.00	-1.00		2.00					-1.00	-2.00	-2.00		2.00
2 ZERO HUNGER	-1.50	-1.60	-1.57			-1.58	-1.25						-1.80	-1.00	-1.64		
3 GOOD HEALTH AND WELL-BEING		2.10	1.83	1.63	1.50	2.00	2.29	1.64	1.75	2.00	1.50		2.00	1.93		1.92	2.00
4 QUALITY EDUCATION			-2.00				-1.00	-2.00									
5 GENDER EQUALITY	2.00	1.80	1.89	2.00	3.00	2.00		2.00		1.50			2.00		2.00		
6 CLEAN WATER AND SANITATION	-2.00				-1.00				2.00	3.00	2.00	2.00	2.00	2.00	2.00		2.00
7 AFFORDABLE AND CLEAN ENERGY	1.67	1.50	2.00	2.00	2.80												
8 DECENT WORK AND ECONOMIC GROWTH	1.80	1.87	1.75	2.00		3.00	1.00		2.00		1.67	1.00	-1.00				2.00
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE		-2.00			-1.00	-2.00	-1.00										
10 REDUCED INEQUALITIES	1.94	1.76	2.00	2.00	1.94	1.00	1.58	1.70	1.00	1.80	1.00	1.09	2.33	2.00	2.00	1.50	2.00
11 SUSTAINABLE CITIES AND COMMUNITIES	-1.20	-1.33	-1.00			-1.20		-1.00	-1.00	-1.00			-1.00	-1.00	-1.33		
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	2.00	1.81	1.68	1.00	1.17	1.92	1.89	1.48	1.71	1.20	2.11	1.86	1.88	1.67	1.78	2.00	
13 CLIMATE ACTION	-2.00		-1.00			-2.00	-1.00	-1.00		-1.00		-2.00	-2.00	-1.80			
14 LIFE BELOW WATER	2.15	2.00	2.11	2.00	3.00	2.86	1.09	1.75		1.57		1.50	2.00	1.67	1.25	1.50	
15 LIFE ON LAND	-2.00	-1.00	-2.00		-1.00	-1.00	-1.00	-2.00		-1.33			-1.00		-3.00		
16 PEACE, JUSTICE AND STRONG INSTITUTIONS	1.90	2.00	1.67	1.50	1.67	2.89	2.00	2.00	3.00	2.00	2.00		2.00		1.00	1.00	1.00
17 PARTNERSHIPS FOR THE GOALS			-2.00	-1.00	-2.00			-2.00									
1 PEOPLE		2.00	1.38	1.75	1.25	2.00	2.33	2.00	1.80	2.00	1.50	2.00	2.00	1.50	2.00	1.50	2.00
2 ZERO HUNGER			-1.00			-1.00	-1.00						-2.00	-1.57	-1.67		
3 GOOD HEALTH AND WELL-BEING	1.82	2.00	1.96	1.00	1.67	2.67	2.50	2.00		1.67		2.00	1.67	2.10	2.00	1.00	2.00
4 QUALITY EDUCATION		-2.00					-1.00							-2.00	-1.00		
5 GENDER EQUALITY	2.00	2.11	2.00		2.00	2.87	1.63	2.00			2.00	1.50		2.50	1.70	2.00	1.50
6 CLEAN WATER AND SANITATION	-2.00	-1.50	-1.50				-1.50				-1.00			-2.52	-2.00		
7 AFFORDABLE AND CLEAN ENERGY	1.87	2.36	2.31	1.00	1.00	2.00	2.00	2.40	1.75	2.00	2.08	2.00	2.00	2.04	2.12	2.00	2.00
8 DECENT WORK AND ECONOMIC GROWTH	-1.11	-1.00						-1.86			-1.50		-2.00	-2.00			
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	2.06	1.84	2.20	2.00	1.00			2.00	1.00	2.00	1.92	2.58	1.83	2.10	1.80	2.00	
10 REDUCED INEQUALITIES		-2.00				-2.00											
11 SUSTAINABLE CITIES AND COMMUNITIES	2.00	1.75	2.08		1.50	2.22	1.67	2.10		1.00		1.00	2.18		1.69	2.00	2.00
12 RESPONSIBLE CONSUMPTION AND PRODUCTION			-3.00		-2.00								-2.00				
13 CLIMATE ACTION	2.50	2.00	2.50	2.00	1.50	2.00	2.00	2.14	2.00	1.20	2.00	2.00	2.00	2.00	2.00	1.60	1.75
14 LIFE BELOW WATER				-1.00												-2.00	
15 LIFE ON LAND	2.00	1.88	1.50	2.00	1.50	1.88	1.70	1.56	1.71	2.00	2.00	2.00	2.00	1.50	2.00	2.00	1.90

Systems thinking: SDG interactions by flows across boundaries



Yu et al.
2013

- Environmental impacts arise in both ends of the flows, and in different pace
- Present action is unjust and distorts national strategies for striving towards sustainable development

Means and leavers of transformation

Means and levers of transformation

Governance

Economy and finance

**Society,
behaviour,
and culture**

Science & technology

Governance and social capital as means of transformation

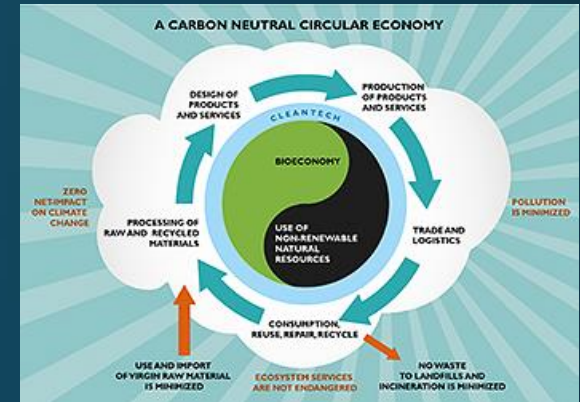
- **Bi-and multilateral and transboundary flow-based governance**
 - Shared responsibilities: public, business, people
- **National governance for effective implementation of SDGs**
 - Mainstreaming in policy framework, policy coherence, leadership
- **Local action towards sustainable development**
 - Experimentation & local innovation -> evaluation -> policy uptake for dispersion
- **Individual capacities in enhancing sustainable development**
 - Early age education for sd, links to social practices, group behaviour



Economy as means of transformation

Economy is not an aim but an effective tool

Mainstreaming sustainable development to all economic activities



SD teaching into economy studies

Circular economy, Public investments, Incentives for experimentation

Trickle-down theory is a myth (unprecedented concentration of world's wealth in the Top 10%)

Undisputable evidence (IMF, OECD, WB, World Inequality report) that reducing intra-country inequality is not simply a question of fairness but a prerequisite :

- For long-term eradication of poverty
- For sustainable economic growth

Business & financing: means for transformation

FINANCING FOR TRANSFORMATION

- ODA can at the most have a leverage effect
- There is a massive need for reallocation of both public and private investment (sustainable inclusive finance).

Estimated yearly investment need for SDGs implementation (UNDP) = 2500 billions US \$

BUSINESS FOR TRANSFORMATION

- Business ecosystems taking ownership of sustainable development
- Business models : sharing economy, circular economy, longevity
- New concepts of work: social innovations and green jobs

Science & technology: implementation of SDGs requires sustainability science

SYSTEMS APPROACH, MEANS FOR ANALYSING:

- complex causal chains
- interactions between SDGs
- path dependencies and alternative futures

LEARNING THROUGH RISKS:

- experimenting and analysing experiments

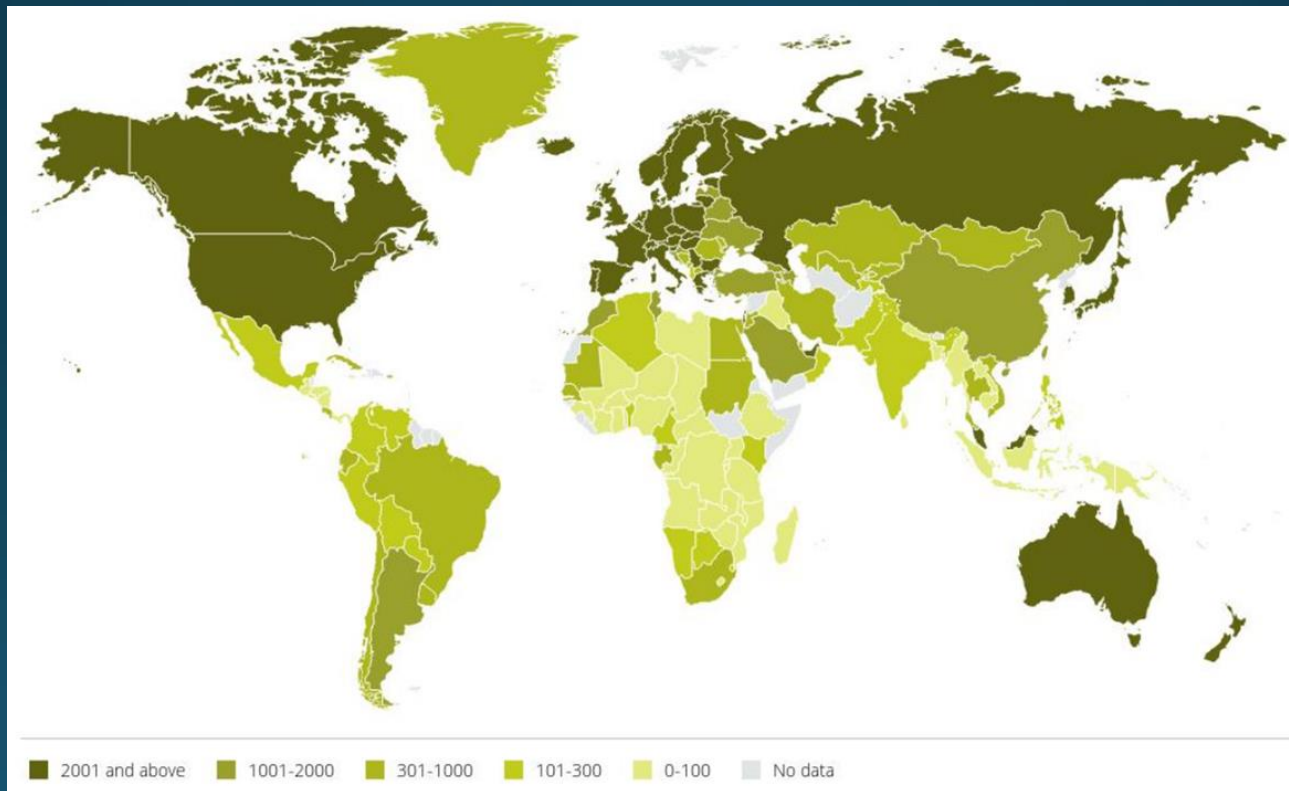
CO-CREATION:

- integrating stakeholders in the entire lifespan of research



Riots in Womey (16/09/2014) – Ebola and Guinea forest

Science & technology: need for contextualised and balanced perspectives on transformation to sustainable development

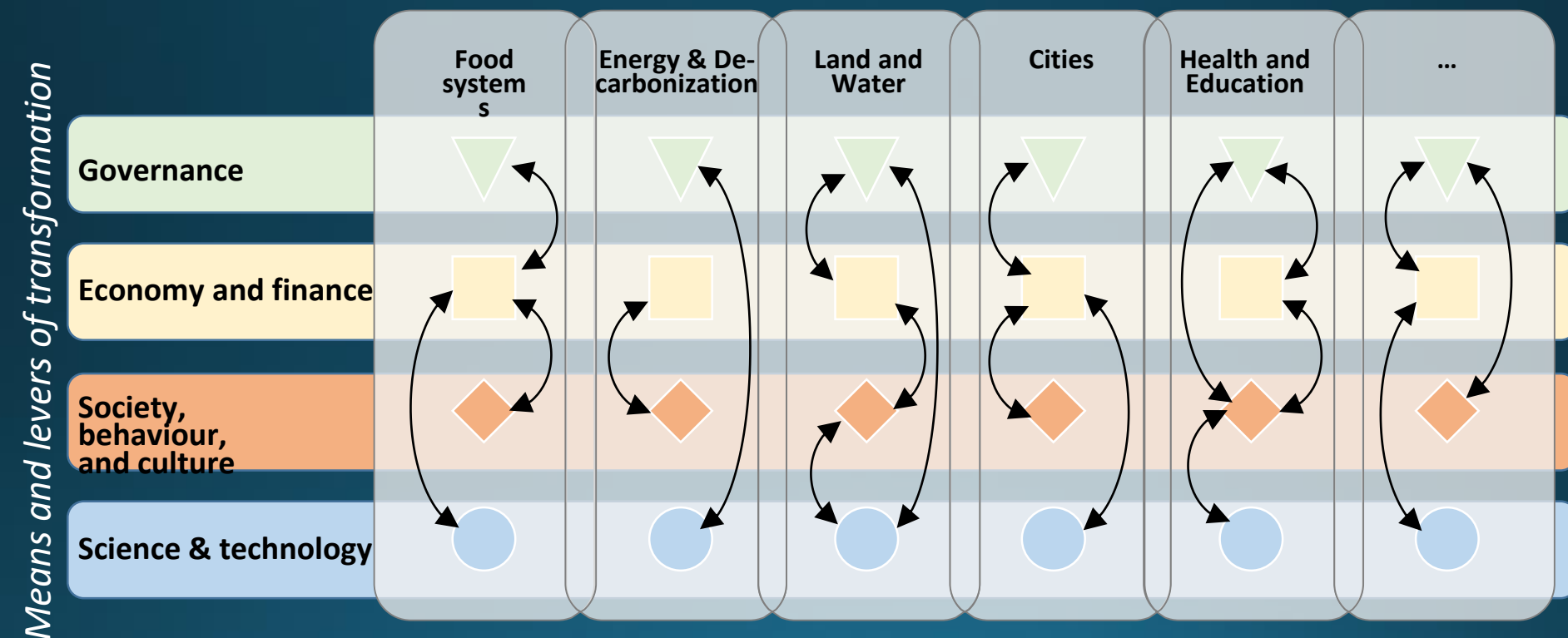


Source: UNESCO Institute for Statistics, June 2018.

7,8 million researchers in 2013

GSDR's structure

Areas of critical importance needing transformative change to achieve social and environmental fairness



Diverse Pathways to transformation interweaving different means and levers according to geographic context and level of scale

Pathways towards sustainable development: example on food systems

Example levers for pathways on food systems:

GOVERNANCE TRANSITION

- Greater transparency within food supply chains through improved certification processes and labels for sustainable food production

TECHNOLOGY TRANSITION

- Increased use of digital farming systems and improved access to information

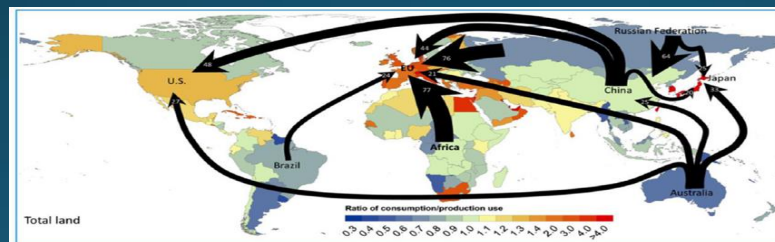
BEHAVIOURAL TRANSITION

- Enabling distributors and consumers to reduce food waste



EU from the GSDR2019 view

The most serious sustainability deficit for European welfare is its ecological debt, - caused by consumption and production patterns – impacts being externalised to other parts of the world



EU from the GSDR2019 view

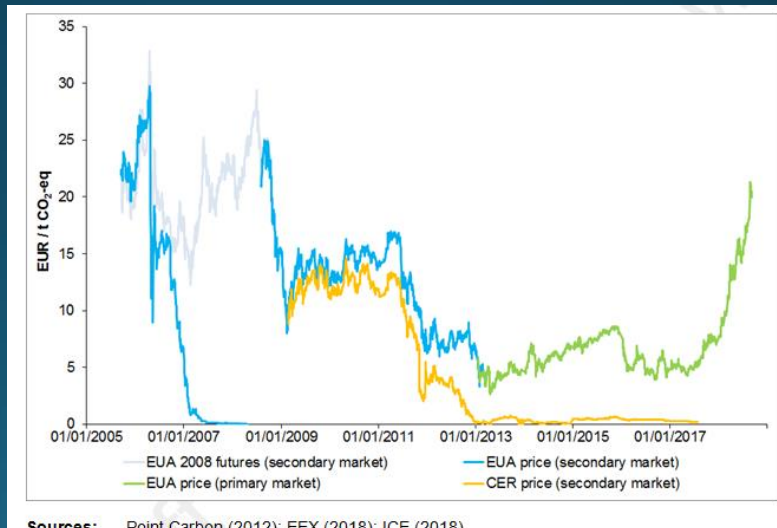
EU to showcase ambitious vision and concretism of SDG implementation for other parts of the world: the UN

- Institutional coherence and buy in
- Policy coherence and buy in
- Countries' coherence and buy in



EU forerunner in emissions trading systems (ETS)

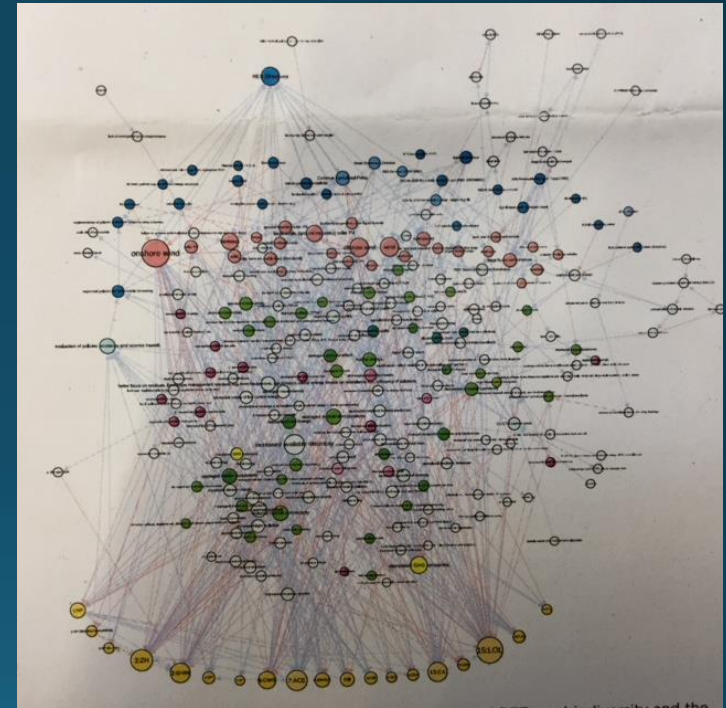
Sufficient price signal and policy coherence essential



European energy policy impacts in global context

Renewable energy technology (RET) in focus

- EU-supported RETs
 - Complex but balanced effects on SDGs
 - Benefit on climate-related SDGs
 - Negative impacts on SDG15 Life on Land
- Complex spillover effects must be assessed



Risk management across the UN SDGs

-

co-creation between science, policy, finance, insurance and industry

"Most risk management choices have costs that will appear as countering other goals: dealing with risks is about addressing trade-offs." said Anders Branth Pedersen from PEER partner DCE Aarhus University. This is where the sustainable development paradigm comes in handy. It requires that risks are not considered in isolation.



WHAT AFTER HORIZON 2020?

DRAFT BUDGET OF 100B€ (+33B€)

Horizon Europe: evolution not revolution

Specific objectives of the Programme

support the creation and diffusion
of high-quality knowledge

Strengthen the impact of R&I
in supporting EU policies

Foster all forms of innovation and
strengthen market deployment

Optimise the Programme's delivery for impact in a strengthened ERA



Pillar 1 Open Science

European Research Council

Marie Skłodowska-Curie Actions

Infrastructures



Pillar 2 Global Challenges and Industrial Competitiveness

Clusters

- Health
- Inclusive and Secure Society
- Digital and Industry
- Climate, Energy and Mobility
- Food and natural resources

Joint Research Centre



Pillar 3 Open Innovation

European Innovation Council

European innovation ecosystems

European Institute
of Innovation and Technology

Strengthening the European Research Area

Sharing excellence

Reforming and Enhancing the European R&I system

PATHWAYS & TRANSFORMATIONS BY INTERLINKING SDGs



CO-CREATED
GLOBAL
GOVERNANCE
OF FLOWS

SUSTAINABILITY
SCIENCE IN ALL
CONTINENTS



Thank you!