

Foresight and Scenario Development

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EEA, environmental messages about the future

Foresight and scenario development: why, how

Use of foresight for policy making

SOER 2020 and forward-looking information

About the European Environment Agency

The European Environment Agency:

- is established by EEC regulation
- is an independent information provider
- is an analyst and assessor
- is boundary organisation
- is co-ordinating Eionet network of countries
 - a network of more than 300 institutions in 39 European countries
 - Eionet National Reference Centres for Forward Looking Information

Foresight and Sustainability Unit in Integrated assessment programme

- Strategic unit for analysing drivers of change (GMT) and emerging issues with a long-term relevance for the European environmental policymaking
- Responsible for SOER development

... to support policy processes and inform the public



The European environment — state and outlook 2015

Based on a thorough review of Europe's environmental **state, trends and outlook**, SOER 2015 reflects on how to bring policies, knowledge, investments and innovations **into line with Europe's 2050 sustainability vision**.

SOER 2015 Synthesis report

SOER 2015 Assessment of global megatrends

Global
megatrends

11 briefings

European
briefings

25 briefings

Cross-country
comparisons

9 briefings

Countries and
regions

39+3 briefings

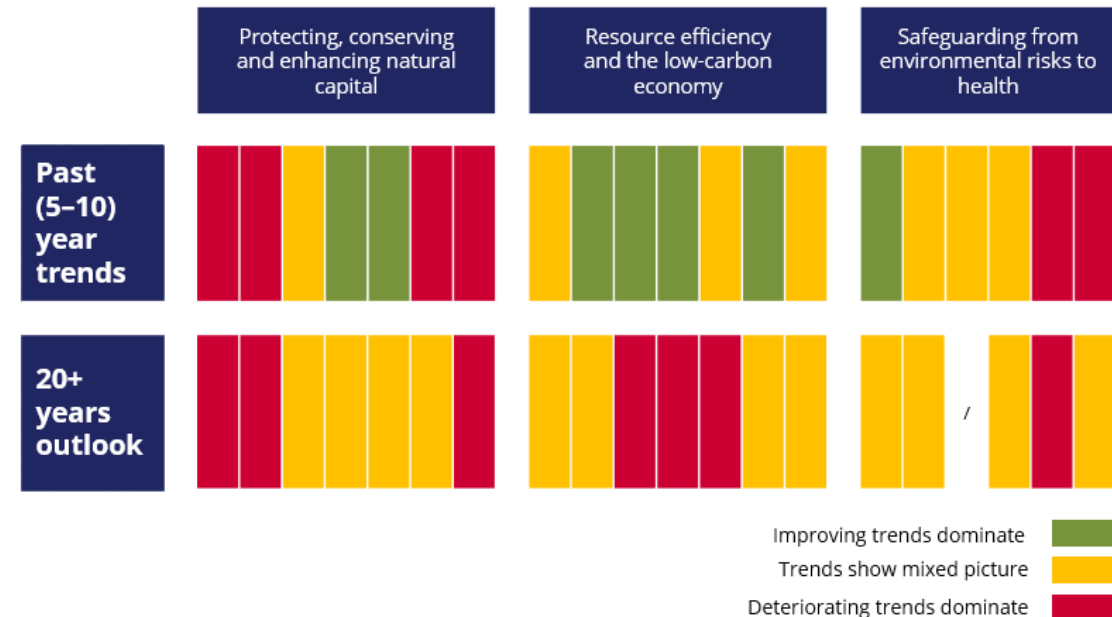


Recent trends and outlook in 7EAP priority areas 1–3

Environmental policies alone or economic and technology-driven efficiency gains **will not be sufficient to achieve the 2050 vision.**
Fundamental socio-economic transitions are needed.

This includes the systems that meet our needs such as energy, transport, food and material use. But also systems such as education, finance, taxation and health.

The long-term outlook is worrying.



Understanding past trends and future outlooks

Two major factors explain the uneven progress and prospects:

The changing global context

- Competition for resources
- Pressures from outside Europe
- Planetary boundaries

The systemic characteristics of environmental challenges

- Complexity and uncertainties
- Interdependencies within and across systems
- Lock-ins, feedbacks, trade-offs

Environmental acquis, 7th EAP

Europe 2020 strategy

Env. acquis, 7th EAP, SDGs

*Circular, low-carbon economy **transition***



From mainly problem-focused knowledge

*To more **solutions-oriented knowledge***

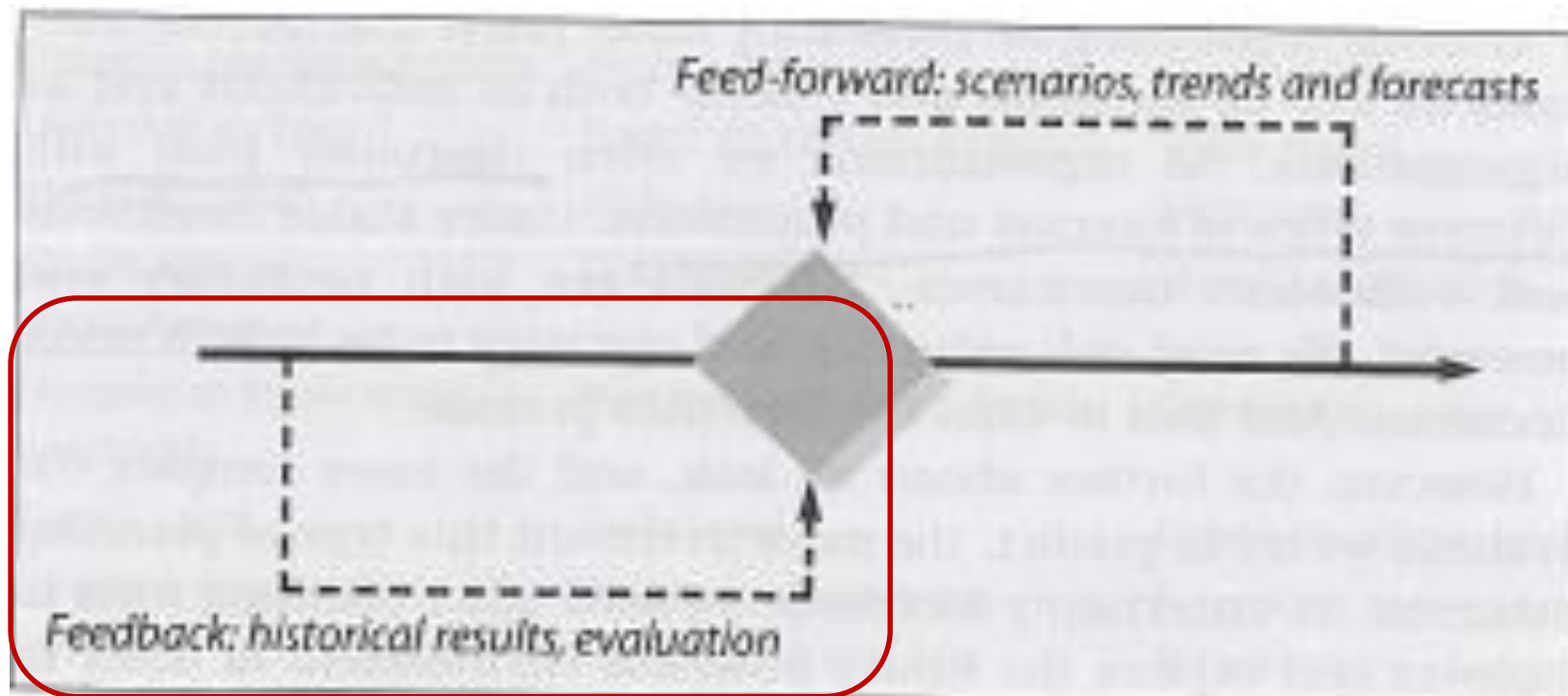
Are we well equipped to see and understand the futures that are coming?

FEEDBACK SYSTEM

evaluation of historical information

FEED-FORWARD SYSTEM:

information about the future



F

Mats Lindgren, Hans Bandhold, Scenario planning, 2009

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The Unknown

As we know, there are known knowns.
There are things we know we know.

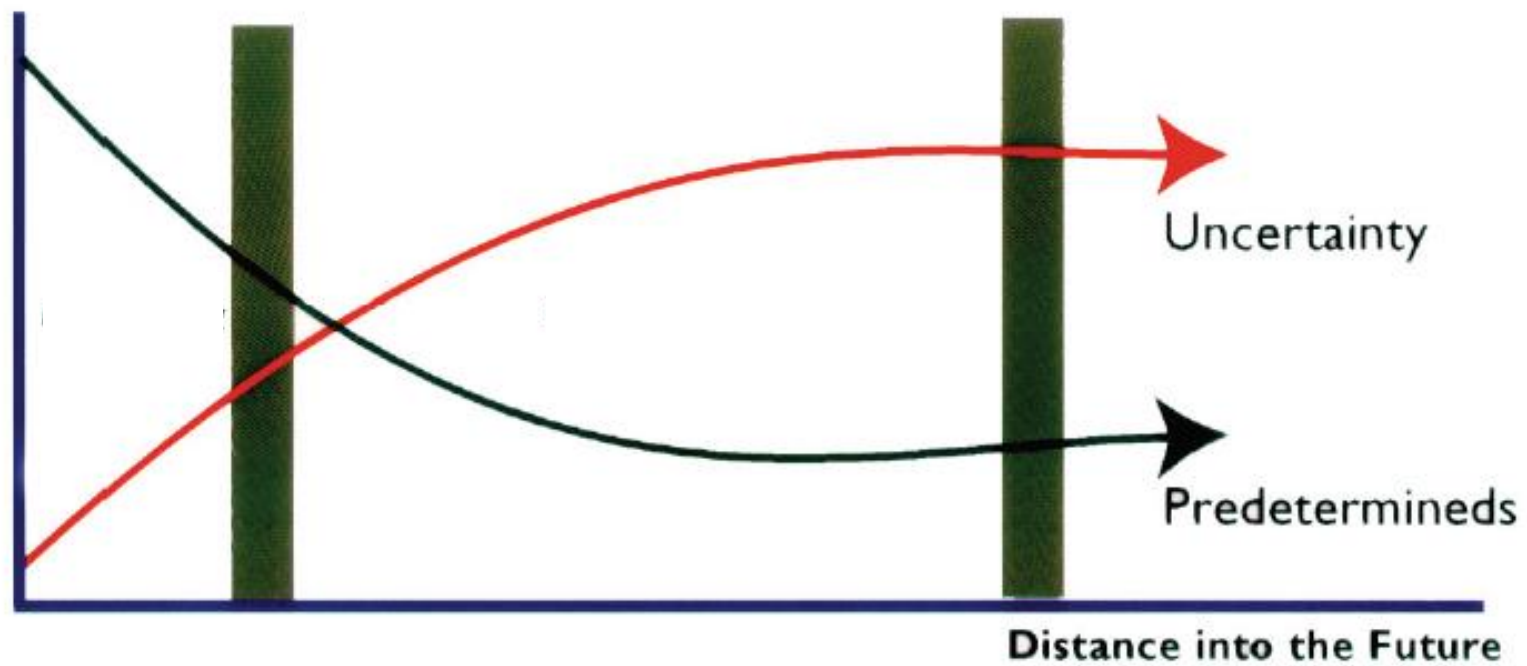
We also know, there are known unknowns.
That is to say we know there are some things
we do not know.

But there are also unknown unknowns.
The ones we don't know, we don't know.



*Donald Rumsfeld
(12. Feb 2003, DOD Press Conference)*

Degree of Predictability



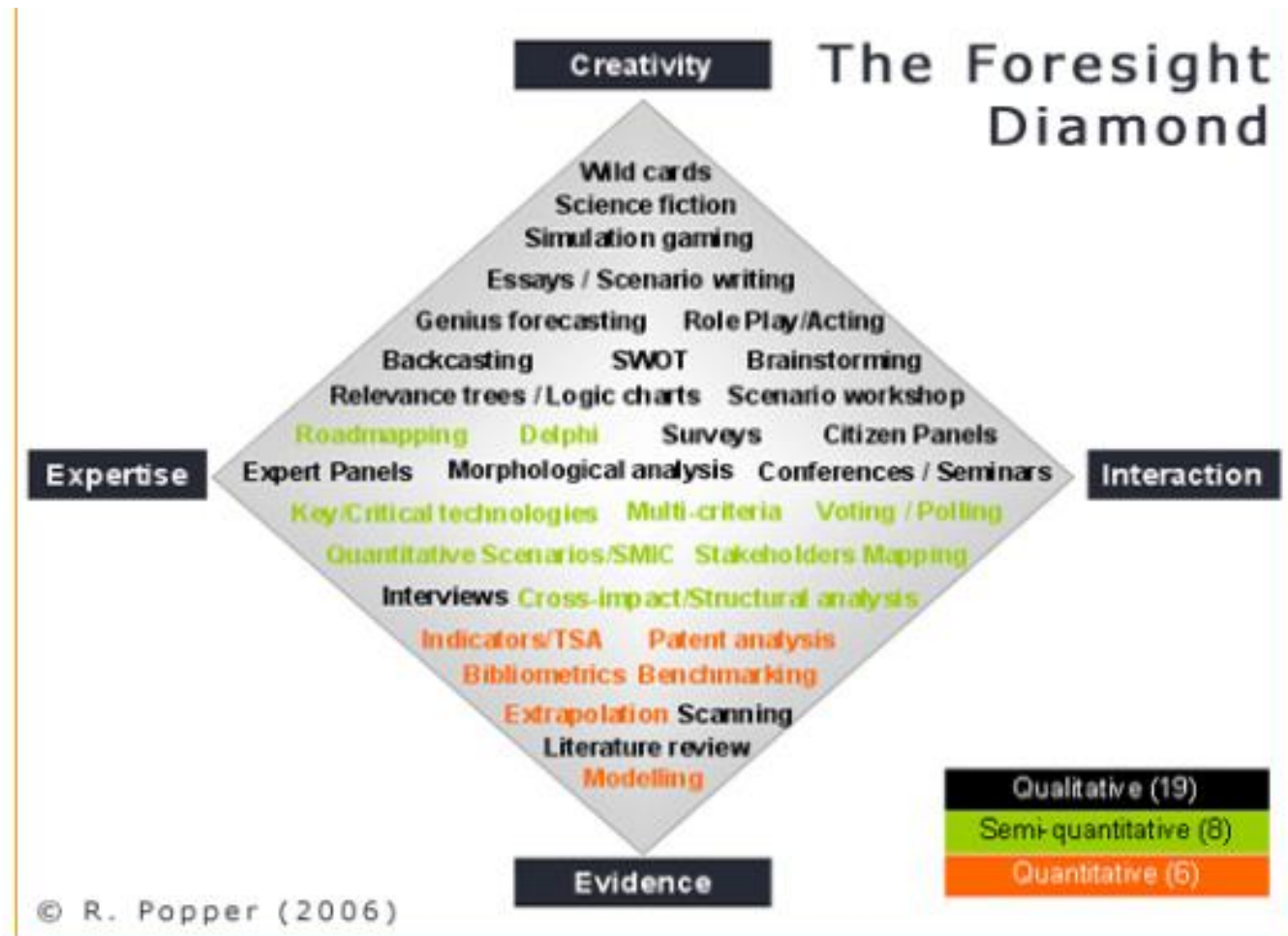
Foresight

Foresight dictionary, NRC FLIS, Platform for forward-looking information

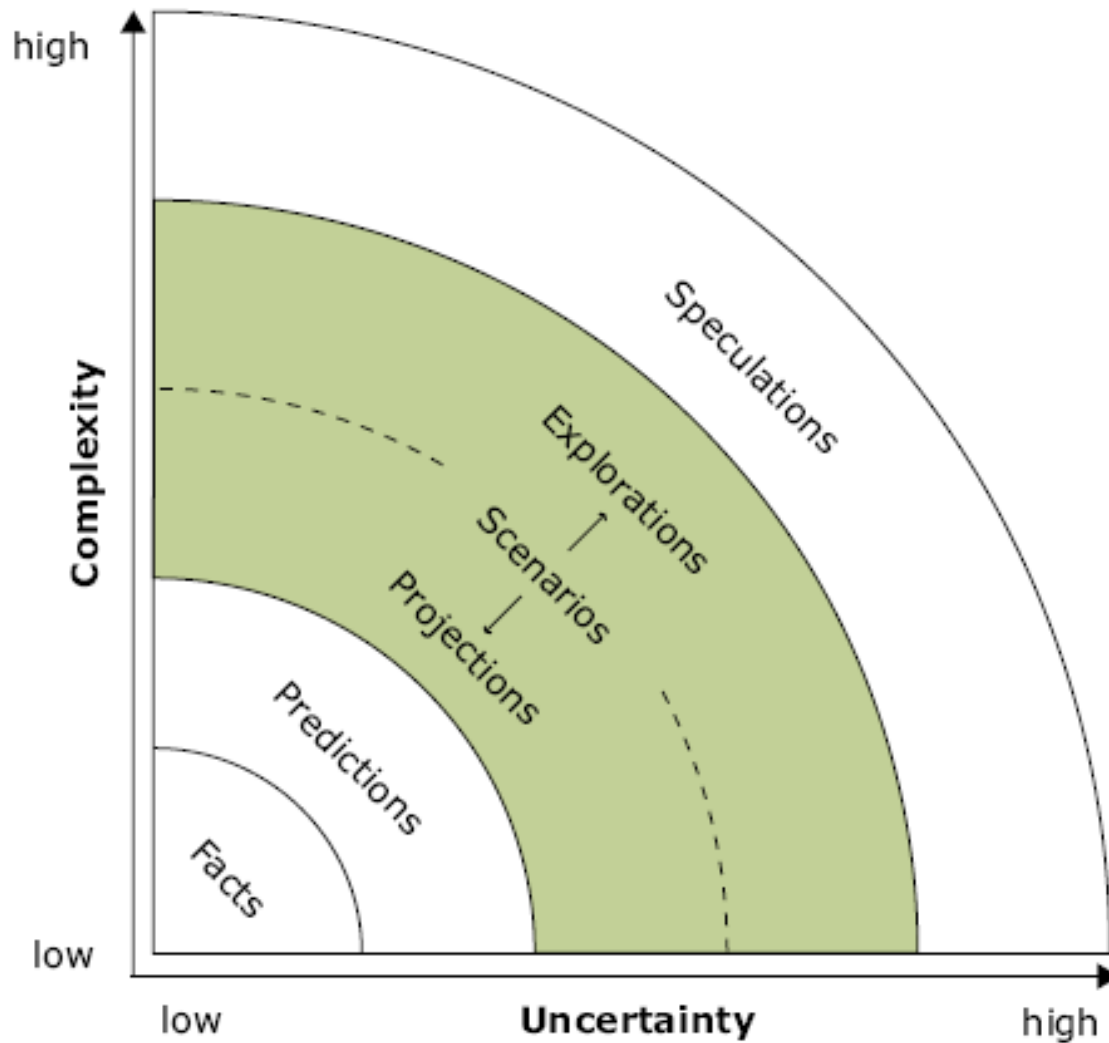
Foresight is a forward-looking approach that aims **to help decision-makers explore and anticipate**, as well as **prepare for a range of possible future** scenarios, influence them and shape the futures.

Instead of predicting the futures (eg. forecasting), foresight typically involves **systematic, participatory, future-intelligence-gathering and medium-to-long-term** vision-building processes to uncover a range of possible alternative future visions.

How to deal with the future?

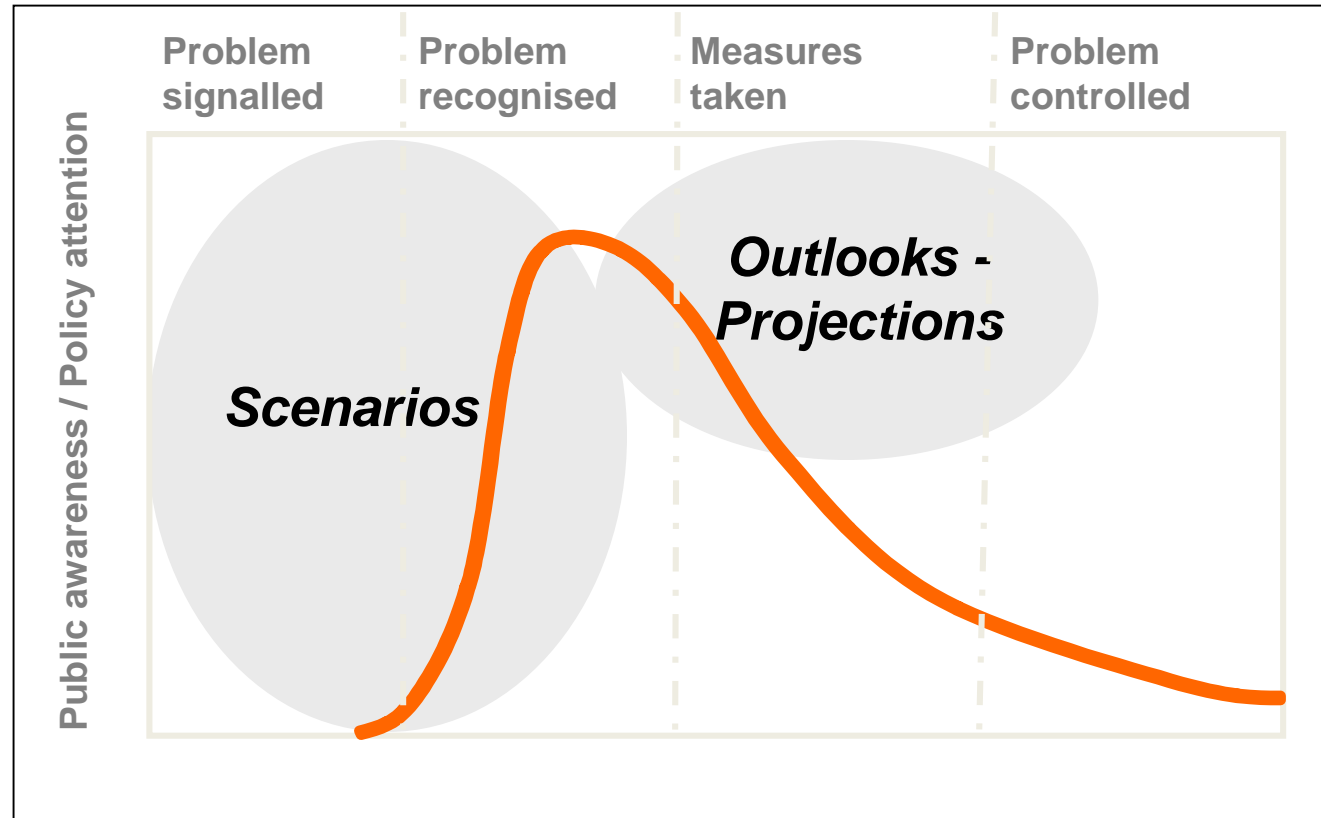


Use: Right tool for the right purpose



Zureck and Henrichs, 2007

Use: Right tool for the right phase of policy cycle



Scenarios

Scenarios are

... a plausible description of how the future may unfold based on a coherent and internally consistent set of assumptions about key relationships and driving forces (STEEP).

...can be qualitative or combined with quantitative

Note that scenarios are neither predictions nor forecasts.

Outlook(s) are

... (a set of) *estimates* of future developments usually based on available data, past trends and/or models.

3 Main 'schools of thought' on “scenarios”

- US military strategy (Cold war/ Rand corporation)
- *French School of La Prospective* (A vision for society)
- Environmental Sciences (mathematical, system analysis modelling)

Scenarios development process and planning can help us to change the perception.

- challenge unstated assumptions about the future – yours, and your institution's,
- challenge the status quo
- think differently/out of the box

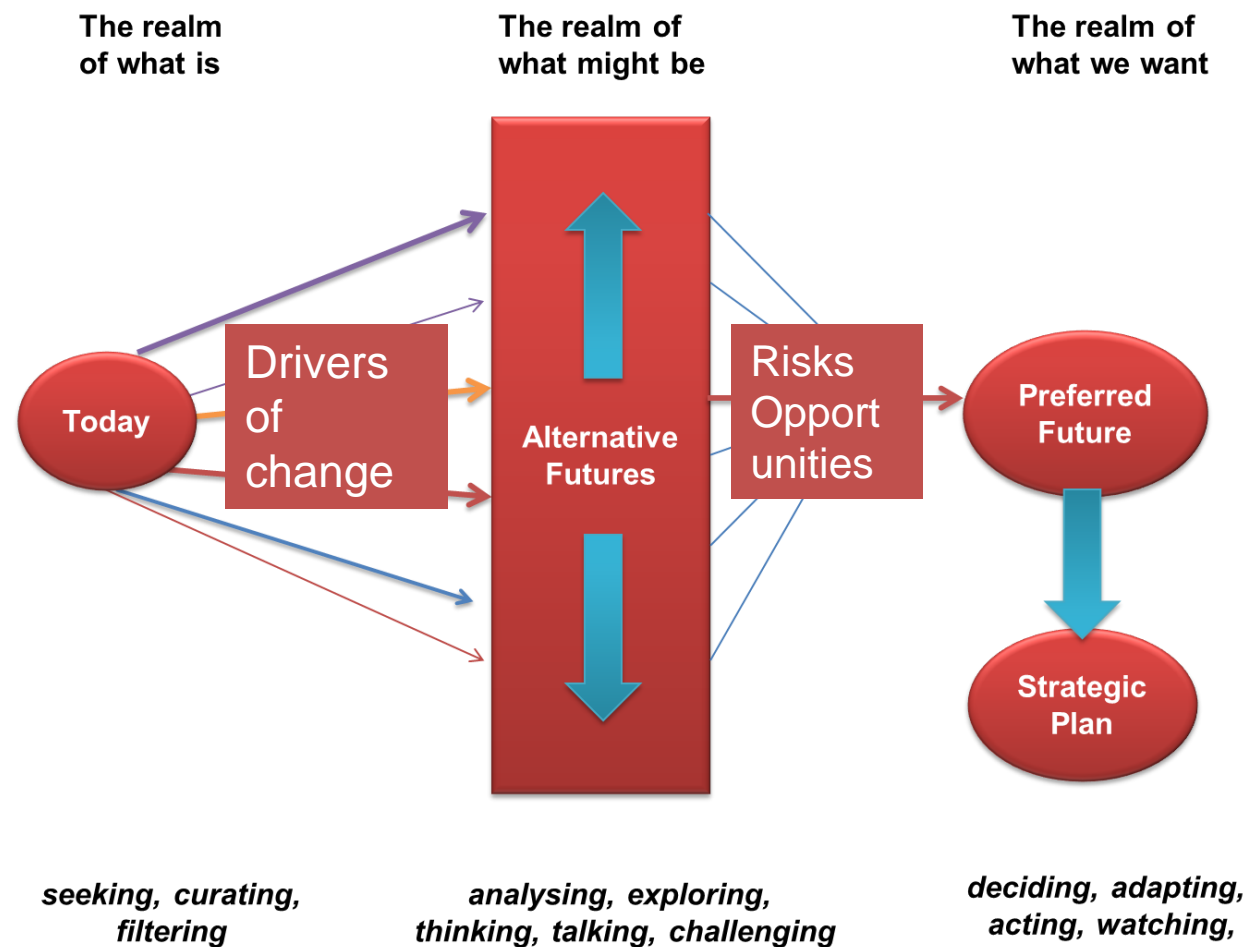
SCENARIOS ≠ VISIONS

Vision: WG3 - COST A22

“Image of desirable futures which inspire people to action. A vision can also include descriptions of the development towards desirable futures. The role of visions is to leverage change by targeting potential change agents and/or mobilising resources.”

(2005)

USE: to explore future, to strategise



2007: Land-use scenarios for Europe (PRELUDE)

GREAT ESCAPES:

- gated societies: increased migration to cover for working force gap: poor in urban areas, rich in rural

EVOLVED SOCIETY

- awareness raising due to flooding and energy crises: increase of urban land use in eastern Europe, high growth

CLUSTERED NETWORK:

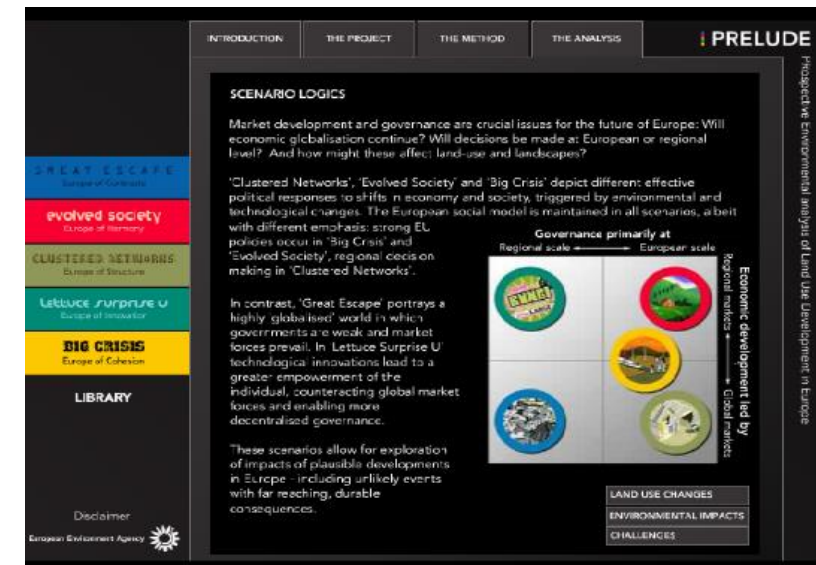
- coping with aging society: service oriented cities in peripheral areas, moderate growth

LETTUCE SURPRISE U:

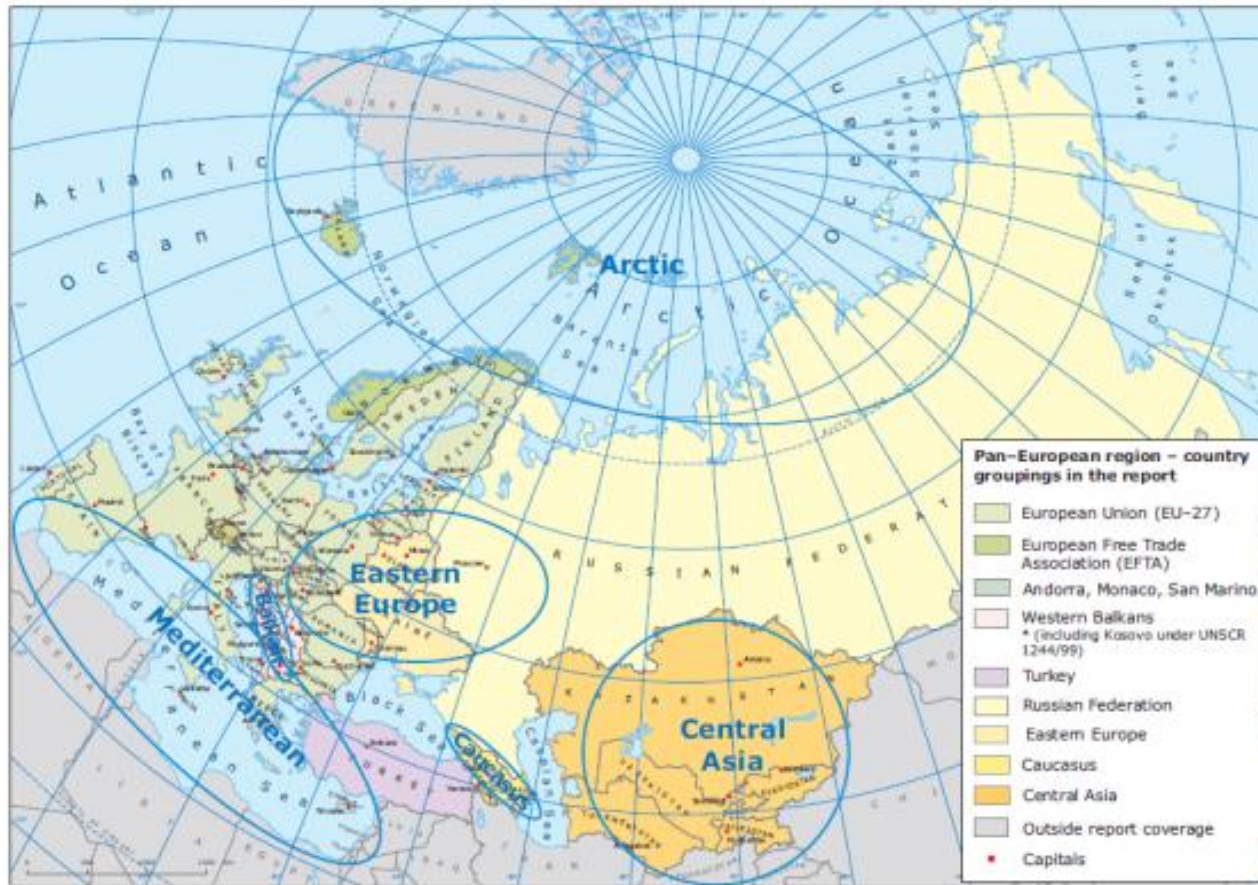
- bad environmental and health conditions, food crises: technological development, self sufficiency, low growth

BIG CRISES- Europe of cohesion

- growing social solidarity and env. awareness, moderate growth



OSCE-EEA project: Climate change security implications (2009-2012)



Source: EEA.

Regional scenarios workshops

Climate change is a driver with **multiple effects** for instability and conflict

But....
in many scenarios a political, economic, environmental or ecological crisis serves as a **starting point for increased action and cooperation**

can help develop climate diplomacy narratives by highlighting the specific foreign policy benefits of climate policies



The Knowledge Gap

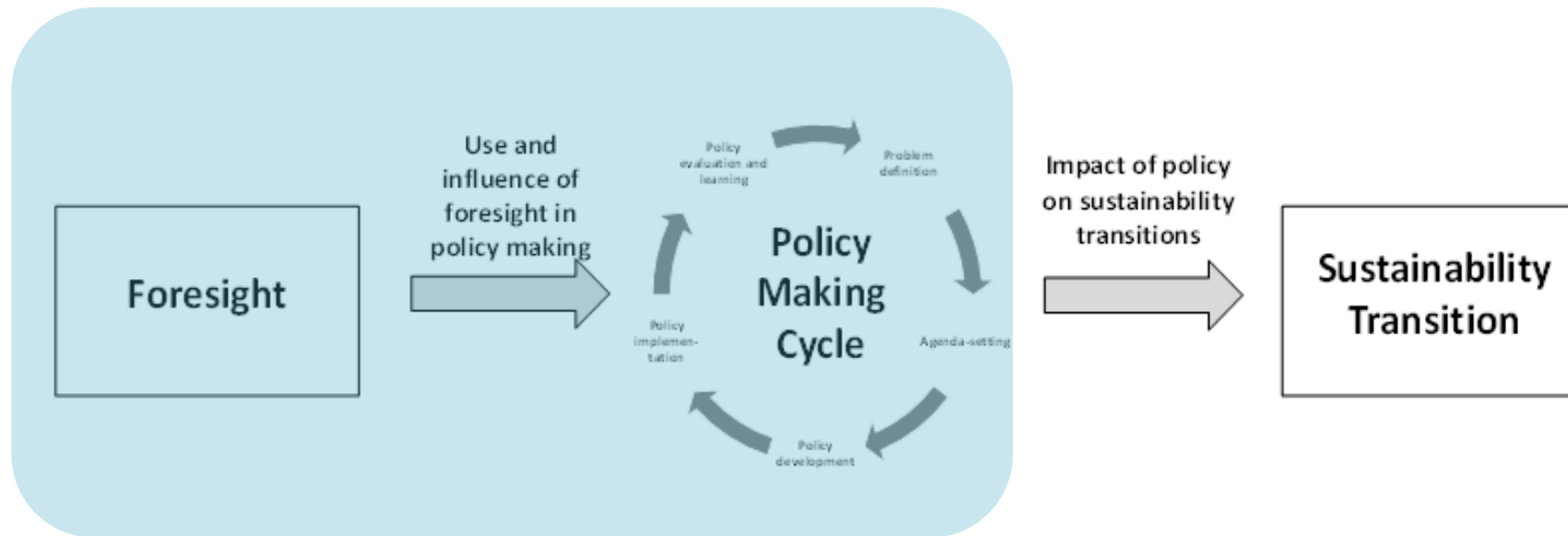
Increased use of foresight
in policymaking
for sustainability transitions in the EU

but:

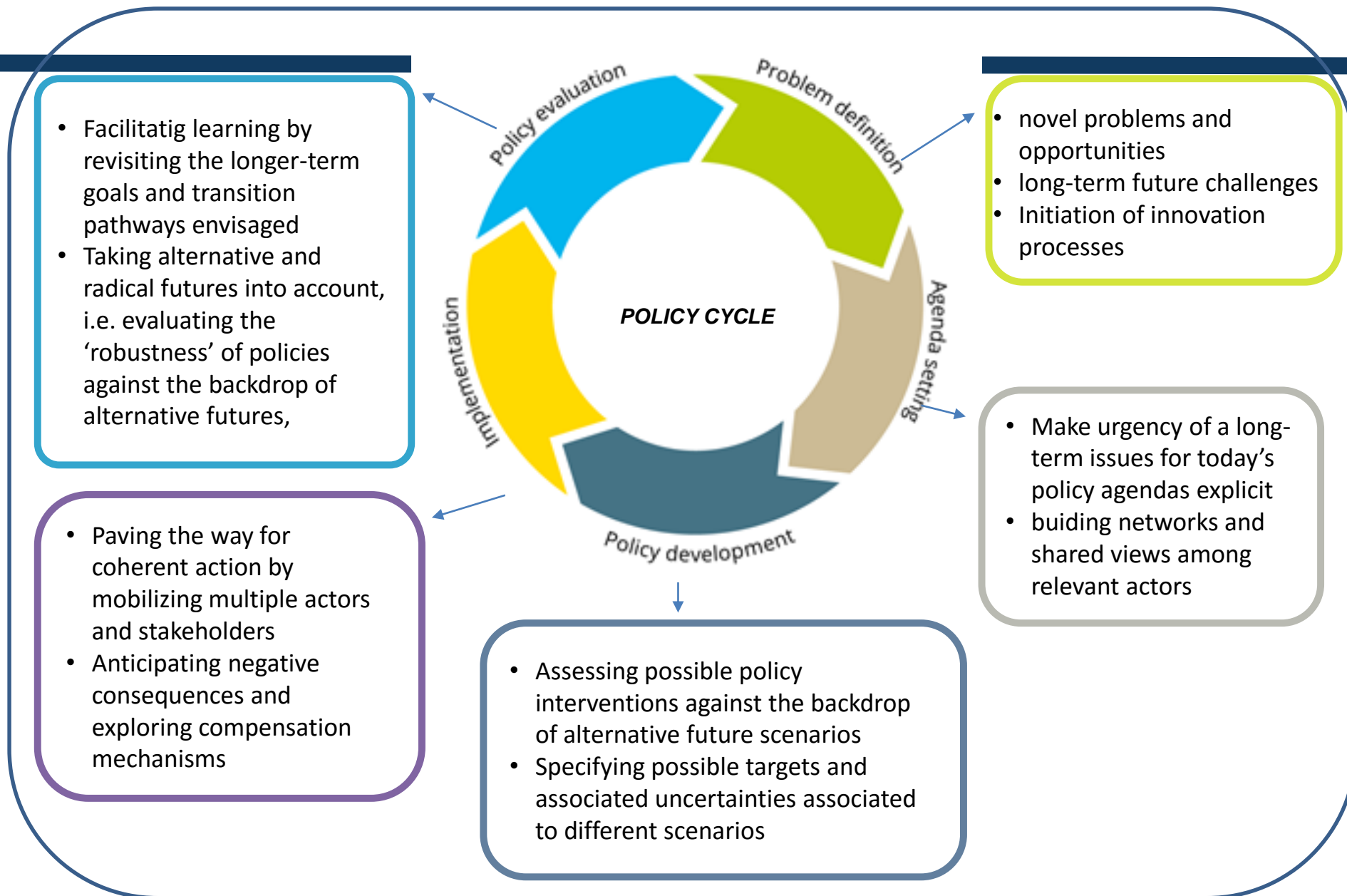
Lacking empirical evidence
about influence of foresight in policymaking
for sustainability transitions

Is Foresight used in policy making?

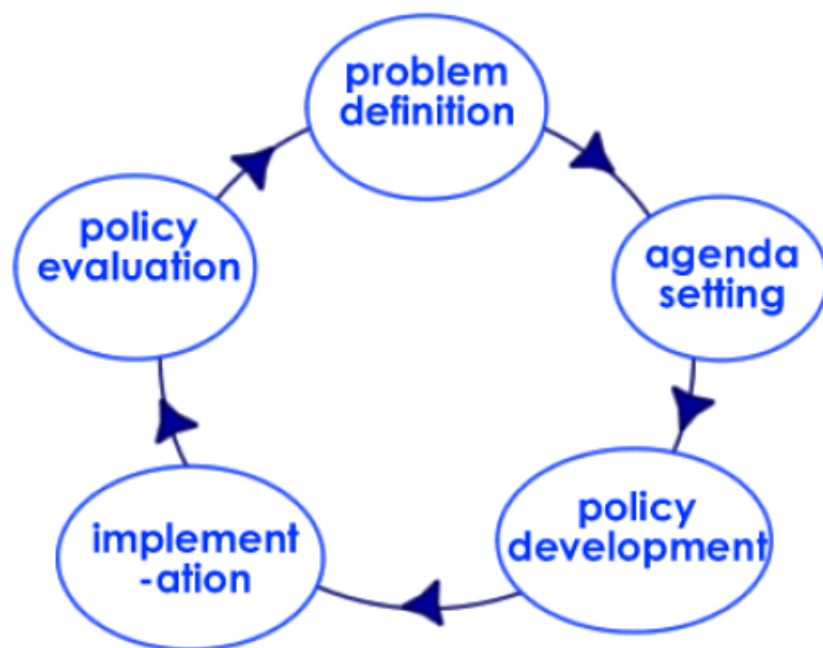
What is the impact?



Success factors?
Factors of failure?



Defining best practices and added value of foresight along the **policy cycle**



7 success stories

Austria
Belgium
Finland
Germany
Netherlands
UK
Switzerland



Key Success factors and factors of failure

Structural

Clear advisory mandate

Strategic focus and separation from day-to-day activities

Access to appropriate **resources**

Relevance for political and planning **agendas**

Openness of and support by high-level decision-makers

Maturity of policy and planning context to **absorb results**

Adaptation of results to the needs of policy and planning

Procedural and competence-related

Ability to select & apply **adequate methods**

Sound scientific foundation

Diversity of mental frameworks and methodological approaches

Processing and **presentation** of findings in accessible form and language

Engagement of relevant and influential actors and stakeholders

Timely delivery of results in tune with the policy cycle

Continuous and iterative learning processes

Cooperation across sectors and policy fields

THANK YOU

The infographic displays the 17 Sustainable Development Goals (SDGs) in a grid format. Each goal is represented by a colored square with a number, title, and icon. The goals are:

- 1 NO POVERTY**: Icon of a family.
- 2 ZERO HUNGER**: Icon of a bowl of food.
- 3 GOOD HEALTH AND WELL-BEING**: Icon of a heart and pulse line.
- 4 QUALITY EDUCATION**: Icon of an open book and pencil.
- 5 GENDER EQUALITY**: Icon of a female symbol with an equals sign.
- 6 CLEAN WATER AND SANITATION**: Icon of a water drop and glass.
- 7 AFFORDABLE AND CLEAN ENERGY**: Icon of a sun with a power button symbol.
- 8 DECENT WORK AND ECONOMIC GROWTH**: Icon of a bar chart with an upward arrow.
- 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**: Icon of three stacked cubes.
- 10 REDUCED INEQUALITIES**: Icon of an equals sign inside a circle.
- 11 SUSTAINABLE CITIES AND COMMUNITIES**: Icon of city buildings.
- 12 RESPONSIBLE CONSUMPTION AND PRODUCTION**: Icon of a circular arrow.
- 13 CLIMATE ACTION**: Icon of an eye with the Earth as the pupil.
- 14 LIFE BELOW WATER**: Icon of a fish and waves.
- 15 LIFE ON LAND**: Icon of a tree and birds.
- 16 PEACE, JUSTICE AND STRONG INSTITUTIONS**: Icon of a dove and a gavel.
- 17 PARTNERSHIPS FOR THE GOALS**: Icon of interlocking circles.

The SDG logo is located at the bottom right of the infographic.

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EEA indicator set

Focus / Type	Driving forces	Pressure	State	Impact	Response	Total
A – Descriptive indicators	17	22	19	34	7	99
B – Performance indicators	1	5	3	0	3	12
C – Efficiency indicators	2	5	0	0	3	10
D – Policy effectiveness ind.	1	2	1	0	4	8
E = Total welfare indicators	0	0	0	0	0	0
Total	21	34	23	34	17	129

SDG process

EC mapping of
policies related to the
SDGs



EC Communication on
SDGs: “Next steps for a
sustainable European
future”, November 2016



EU multi-stakeholder SDG platform on best practises

Mainstreaming SDGs into EU policies...

Developing long term vision for post 2030...

Identifying
indicators for
2016 report

eurostat 



Eurostat 2016 SDG
indicator report: “SD in the
EU: A statistical glance”

Guide for citizens

100 EU SDG
indicators
agreed and
made public

eurostat 



Forthcoming
Eurostat report on
SDG indicators,
Nov 2017

Assessments?

Knowledge?

2016

2017

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