

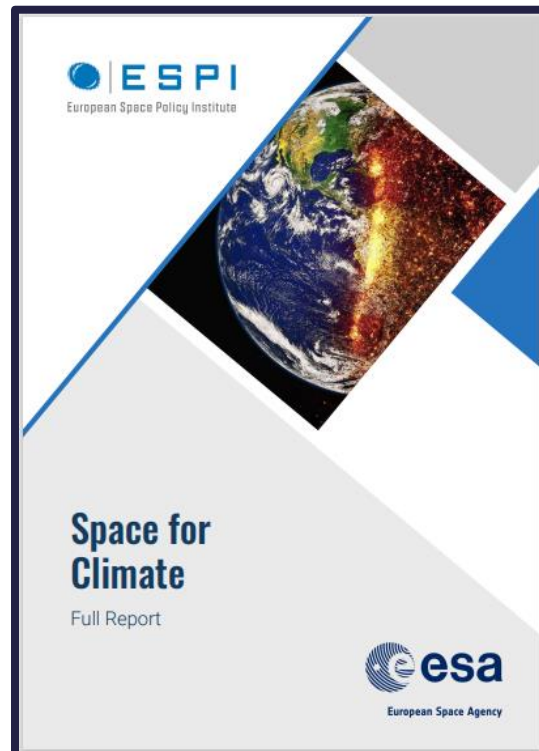


# The use of space in European climate policies

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**Investigation of the role of space in support of climate policies in Europe**



**Policy impact assessment looking at the key chains of connection between space data and policy documents**



**Core study activities conducted in in the timeframe January-December 2021**



**How to increase the use of space in climate policymaking?**



**A jointly designed collaborative research endeavour by ESA and ESPI teams**



**Final Report delivered in December 2021**

# What do we know about the use of space in climate policymaking?

Climate science assessed by the Intergovernmental Panel on Climate Change (IPCC) is the scientific basis for climate policies worldwide

This scientific knowledge is based on Earth Observation data

Awareness about climate change is largely based on reports from the IPCC WG I

Space-based data underpin the scientific and policy process

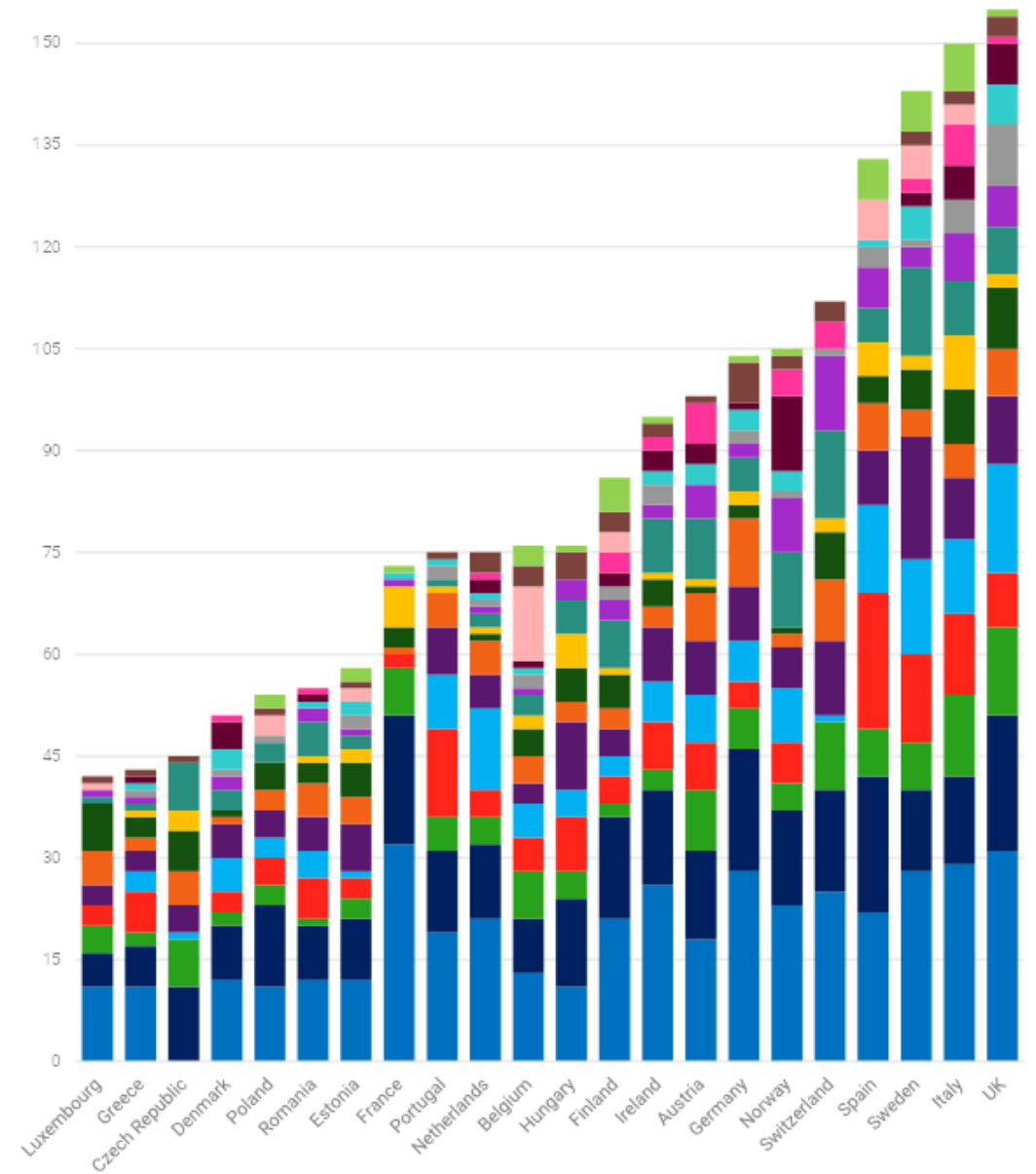
# Climate Policy Mapping



**ESPI**

European Space  
Policy Institute

- Throughout the analysed policies, references to Essential Climate Variables (ECVs) are abundant
- References to ECVs do not focus on the origin of the data or the systems used to generate it
- However, more than half of existing ECVs are only measurable from space. Therefore, space-based data have a high policy impact.



Country	Reference to Space
Austria	✓
Belgium	✓
Czech Republic	✓
Denmark	✓
Estonia	✓
Finland	✓
France	✓
Greece	✓
Germany	✓
Hungary	✓
Ireland	✓
Italy	✓
Luxembourg	✓
Netherlands	✓
Norway	✓
Poland	✓
Portugal	✓
Romania	✓
Spain	✓
Sweden	✓
Switzerland	✓
UK	✓

Despite the high number of references to ECVs in climate policies in Europe, most which are only measure from space, the number explicit references to space is rather low considering the criticality of space systems in monitoring climate change.

**Indeed, out of the 538 European policies identified by ESPI, 186 have references to space, which account for only 34.57% of all policy documents.**

It includes mentions of data sources, meteorological and space agencies, Geographic Information Systems (GIS), explicit recognition of the important role of space for monitoring climate change, participation or cooperation with space agencies, as well as policy measures in which space plays a central role.

1

There is a divide between science and policy

2

Policymakers require actionable information and do not use raw data

3

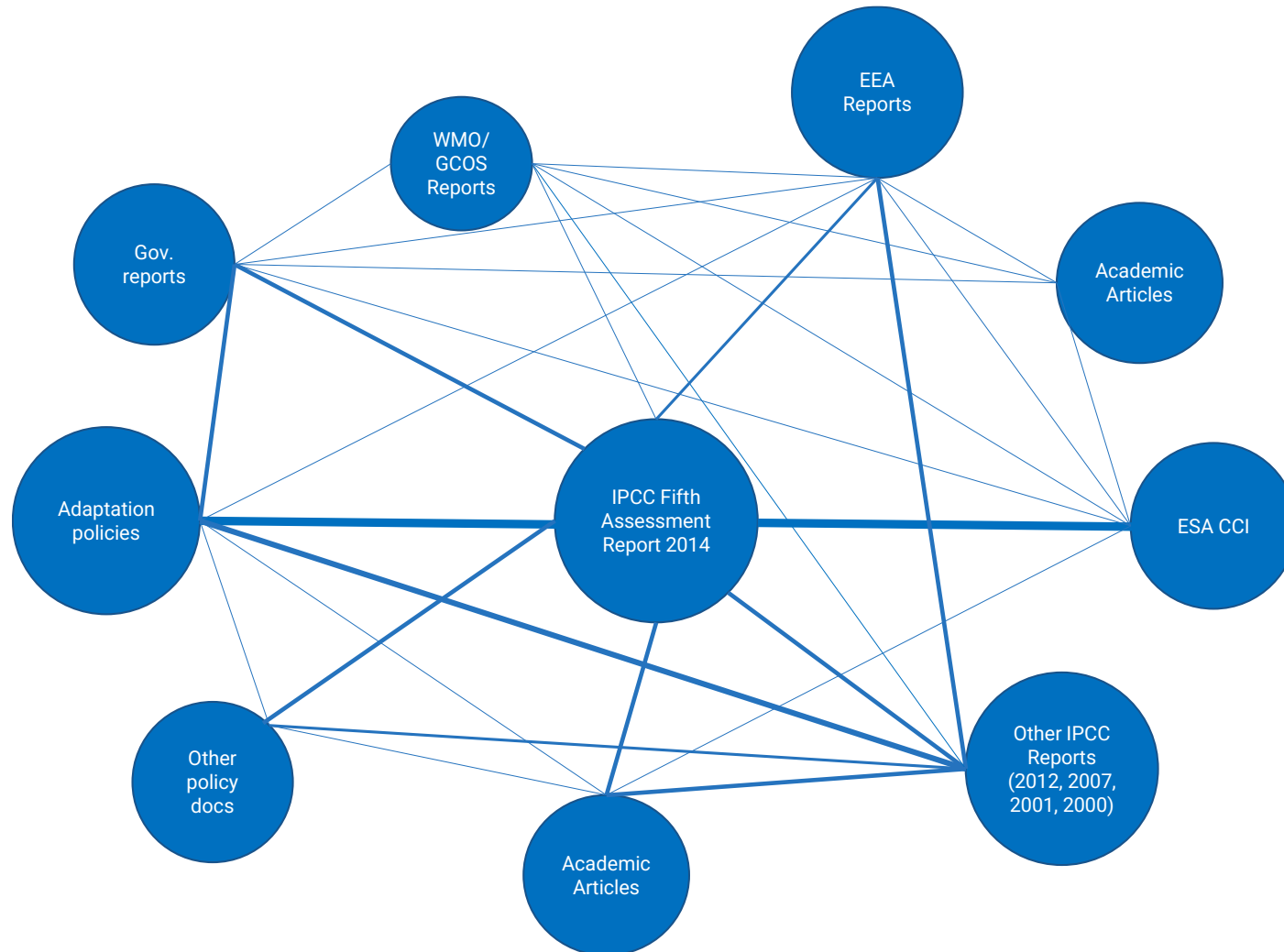
References to space depend on the people involved in the policymaking process and at what point of that process

4

Lack of awareness regarding the availability of space-based data

5

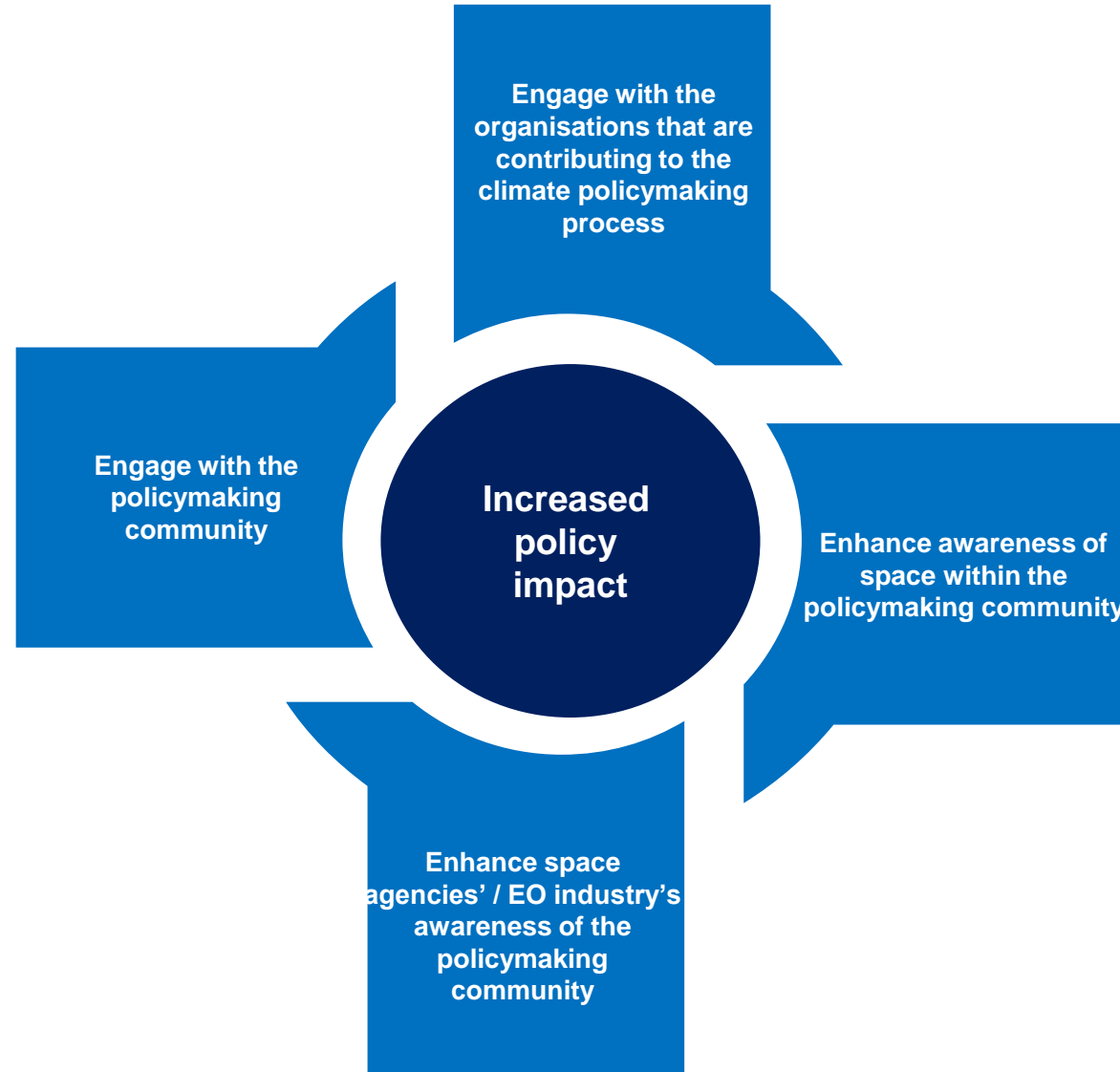
Policy documents have evolved in the past few decades and data sources are harder to trace



*An example of the science to policy links*

- It's not because space data is not directly acknowledged or referenced in policies that it is not used
  - Data derived from satellites are often used in scientific reports (e.g., IPCC, EEA, academic journals), which are then cited in policy documents
- 
- If you are a country looking to integrate space-based data into your policies, using data and analysis from such reports is a first step.
  - If you are producing space-based data and want to increase your policy impact, engaging with these organisations and contributing to their work can be a first step.

# How to increase the use of space in climate policies?





# Thank you!

ESPI is the European think tank for space. We provide decision-makers with an informed view on mid-to-long-term issues relevant to Europe's space activities.



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