

The FP7-4-SD.eu monitoring system – How does the 7th EU Framework Programme contribute to Sustainable Development?

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Purpose of this presentation

- ⇒ present the **methodology, key features, and selected results** of a monitoring system we developed for the 7th EU Framework Programme for RTD.
- ⇒ offer to **collaboratively use** the monitoring system via the interactive platform at www.FP7-4-SD.eu

Challenges in developing this monitoring system

- ⇒ **Size** of the 7th EU Framework Programme
- ⇒ **Vagueness** of the concept
“Sustainable Development”
- ⇒ **Complexity** of impact pathways
- ⇒ no change of programme management procedures,
no additional workload for POs and co-ordinators

Overview

- 1. The FP7-Programme**
2. Methodology
3. How to use the monitoring system
4. Selected results
5. Conclusions and outlook

Research background

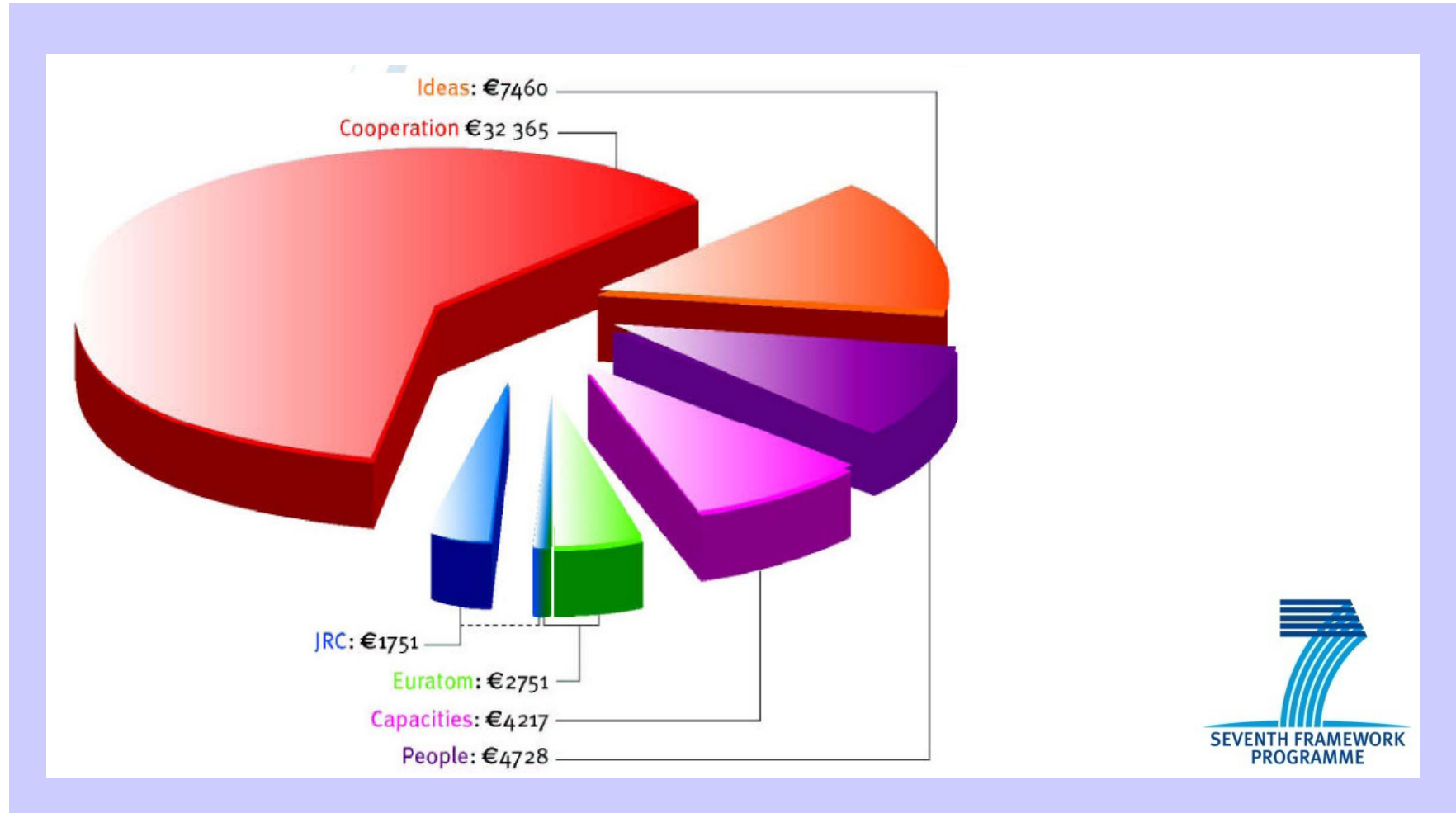
The 7th EU Framework Programme for R&D

- EU's main programme for funding research across Europe
- duration: 2007-2013
- total budget: € 53 billion
- Aim: jobs, competitiveness, knowledge economy
- Projects: technological development and demonstration
- participants from different European (and other) countries

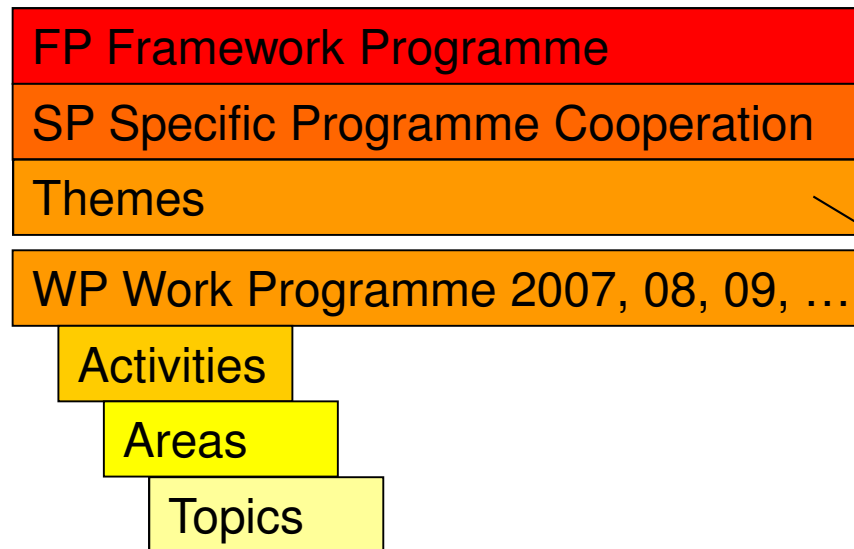




The 7th EU Framework Programme for R&D



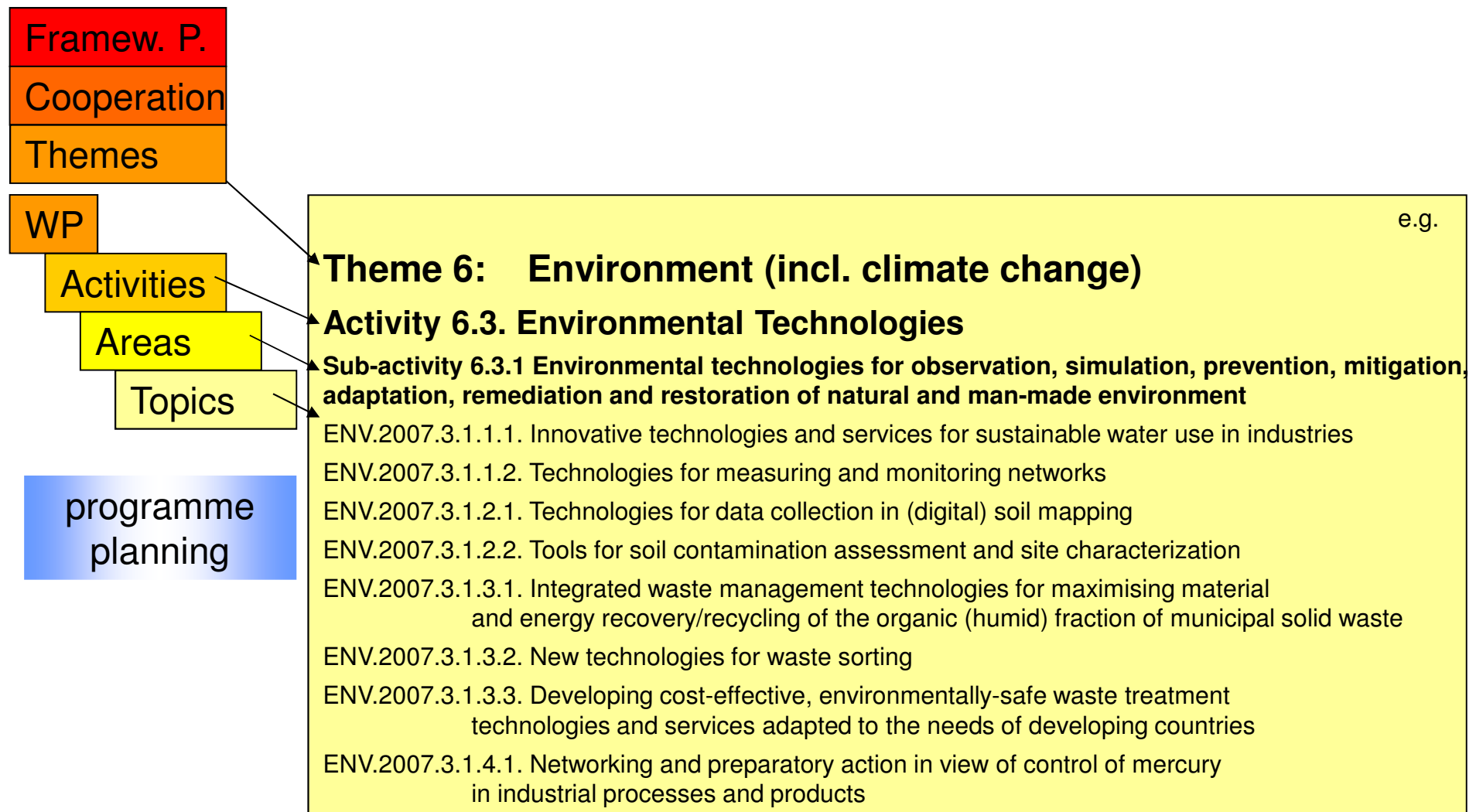
Methodology



- Health
- Food, Agriculture, Fisheries, Biotechnologies
- Information & communication technologies
- Nanosciences & new production technologies
- Energy
- Environment (incl. Climate Change)
- Transport
- Socio-economic Sciences and the Humanities
- Space
- Security

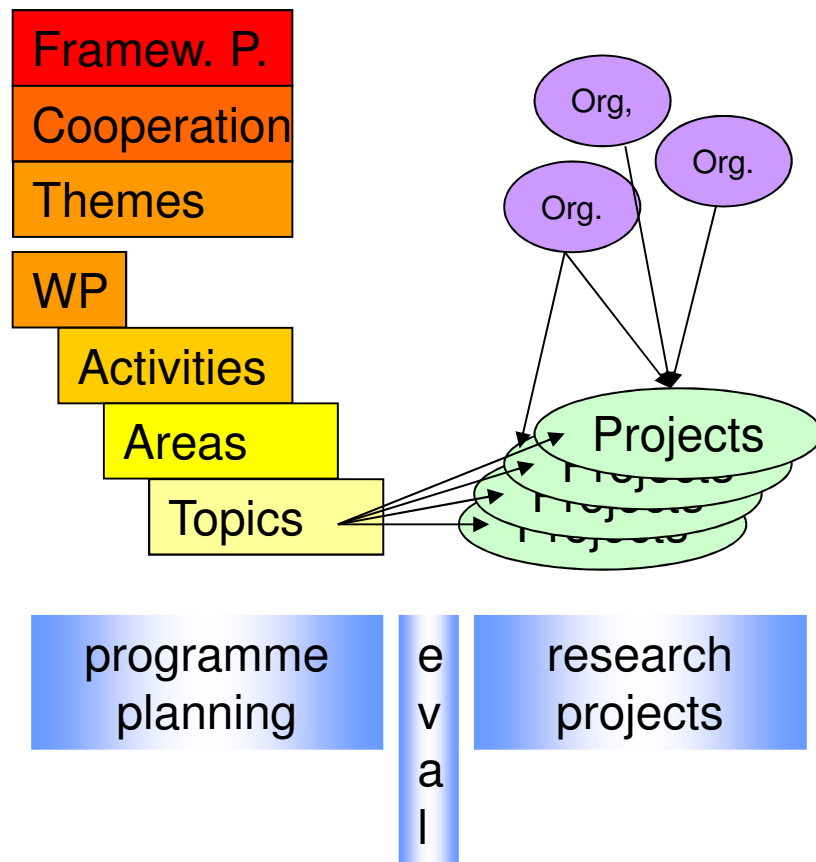


Methodology



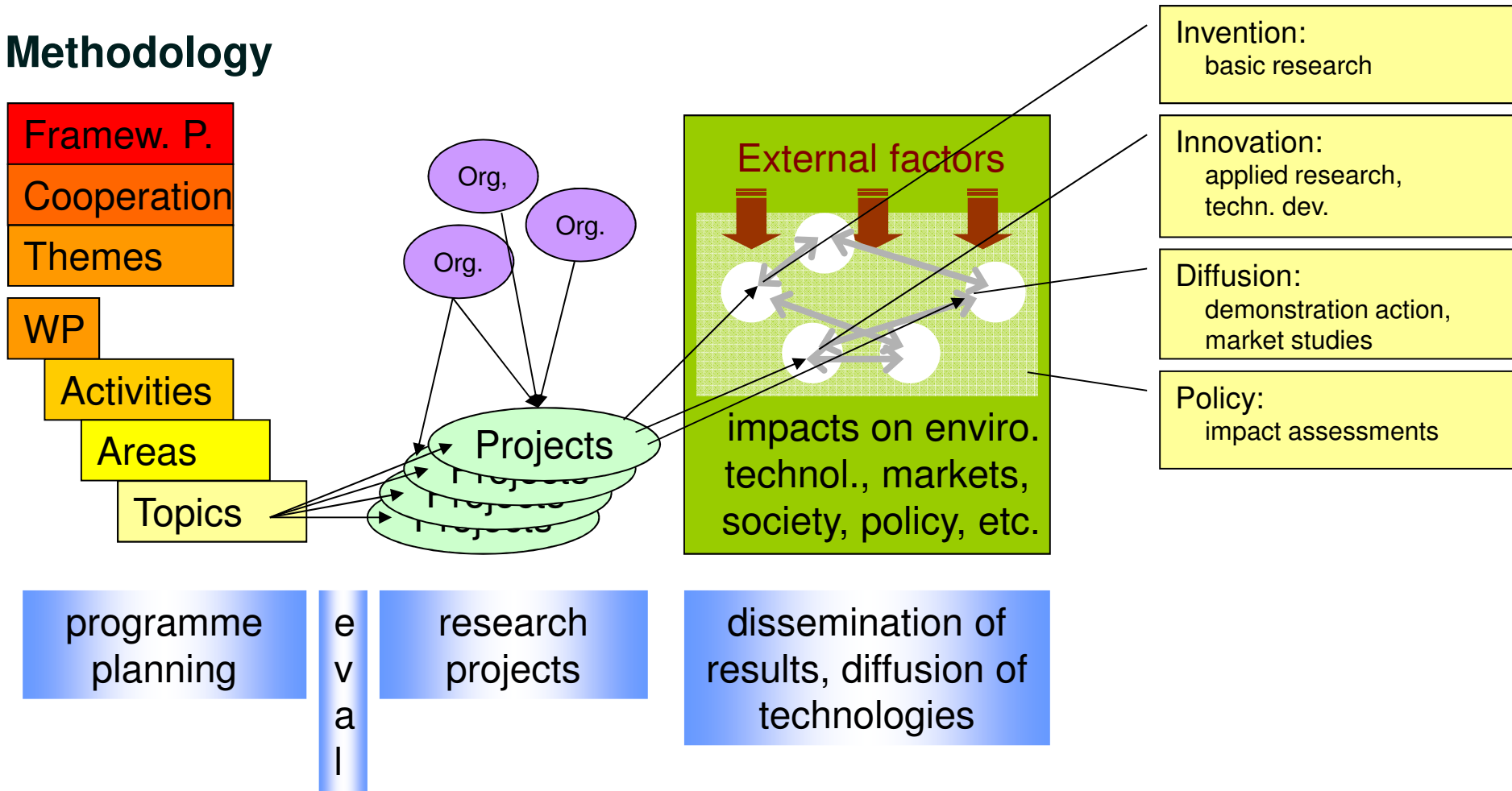


Methodology

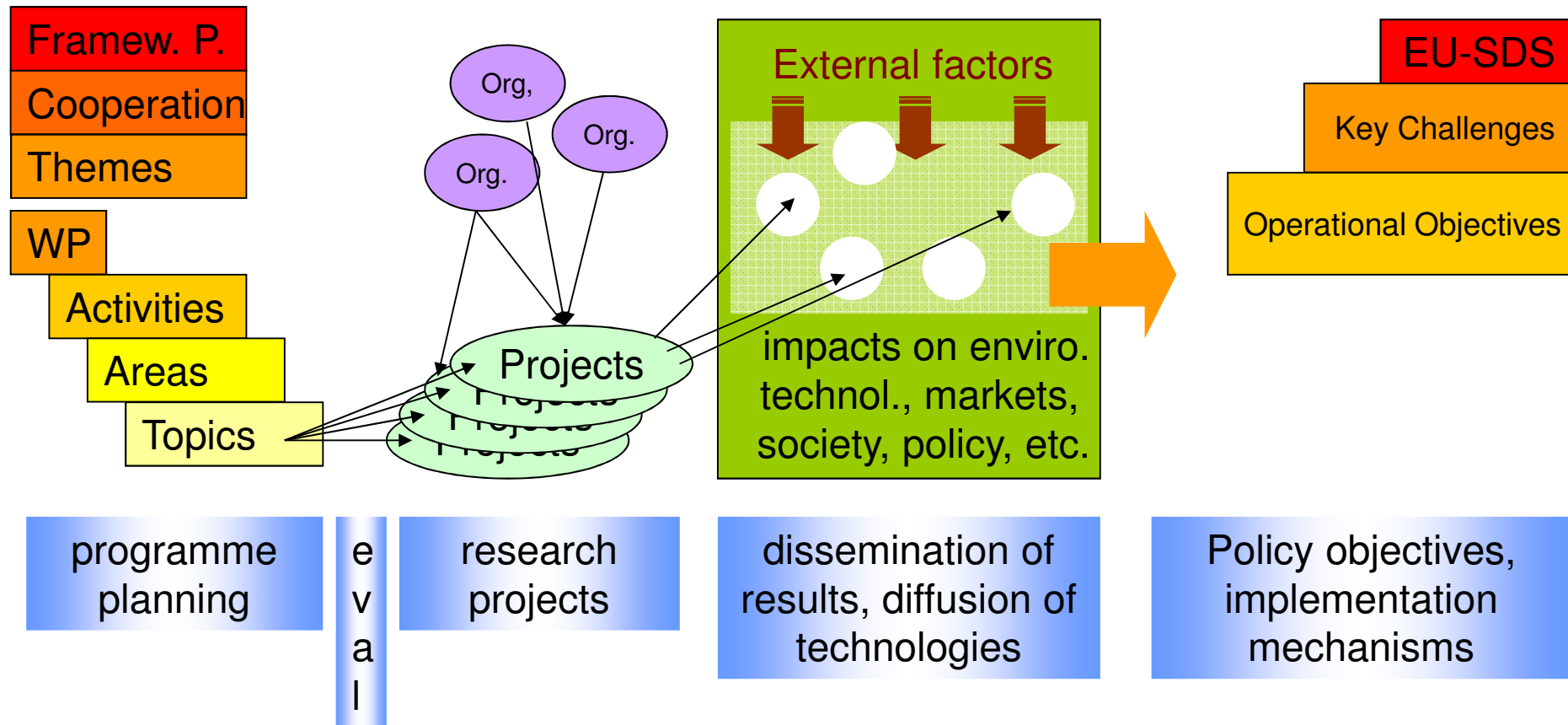




Methodology

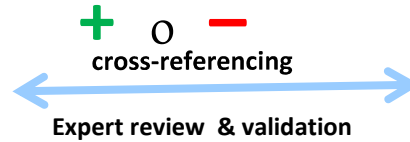


Methodology





Methodology

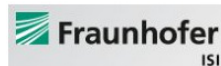


FP7 Topics

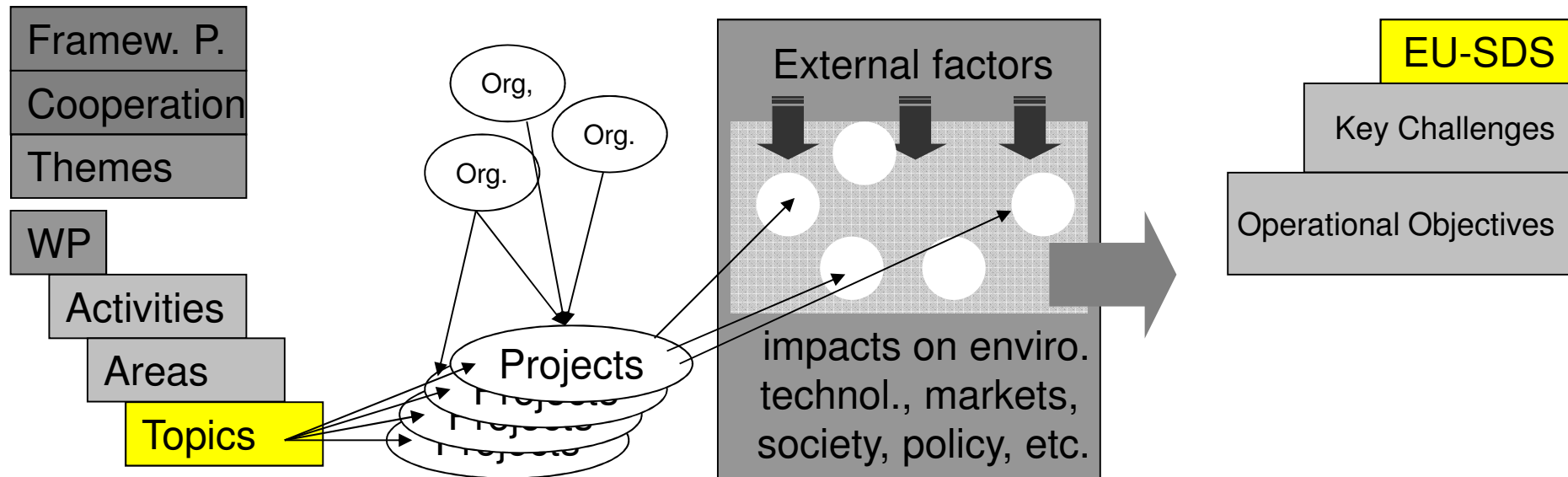
Example from SP Cooperation
ENERGY.2008.8.2.1
High efficiency poly-generation - renewable energies for applications in industry
The objective is to demonstrate and validate poly-generation technologies using renewable energy resources for applications in an industrial environment. Emphasis should be on <u>optimising the use of natural resources and to improve (maximise) the overall efficiency of industrial energy systems</u> . Validation will cover also the economic viability aspects of the proposed technologies. Solid dissemination and exploitation plans are important, aiming at the dissemination and take-up of best practices in relevant targeted industrial sectors.
Collaborative project with predominant demonstration component

EU-SDS Operational Objectives

Climate Change and clean energy
Reduce GHG emissions
Sustainable energy policy
Adaption to and mitigation of CC
Raise share of renewables
Raise share of biofuels
Reduce energy consumption
Sustainable Transport
Decouple economic growth and demand for transport
Sustainable use of energy
Reduce GHG emissions
Reduce pollutant emissions
Sustainable transport and mobility systems
Reduce transport noise
Efficient public passenger transport
Reduce CO2 emissions from car fleet
Reduce road transport deaths
Sustainable consumption and production
Promote SCP
Decouple economic growth from environmental degradation
Improve environmental and social performance of products and processes
Encourage uptake by business and consumers
Raise level of GPP in EU MS
Increase market share of environmental technologies and eco-innovations



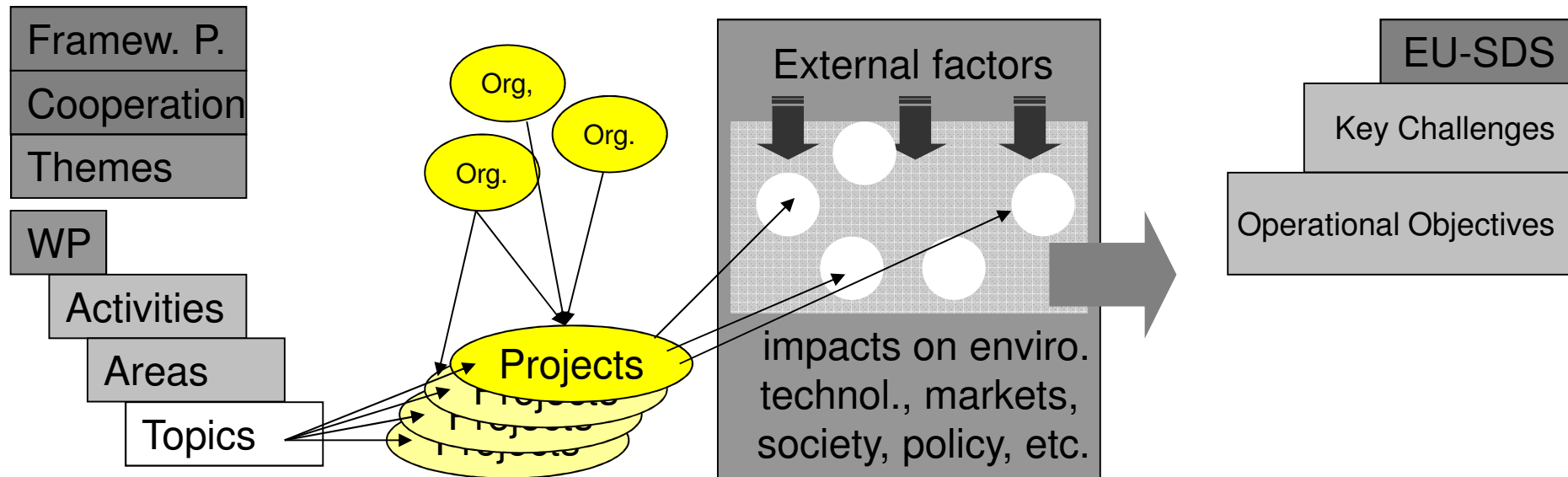
Methodology



1. Identify topics aiming at certain policy objectives **ACROSS** the whole FP7

- ⇒ Identify areas for joint calls as well as implementation gaps
- ⇒ basis for thematic evaluations across FP7 themes

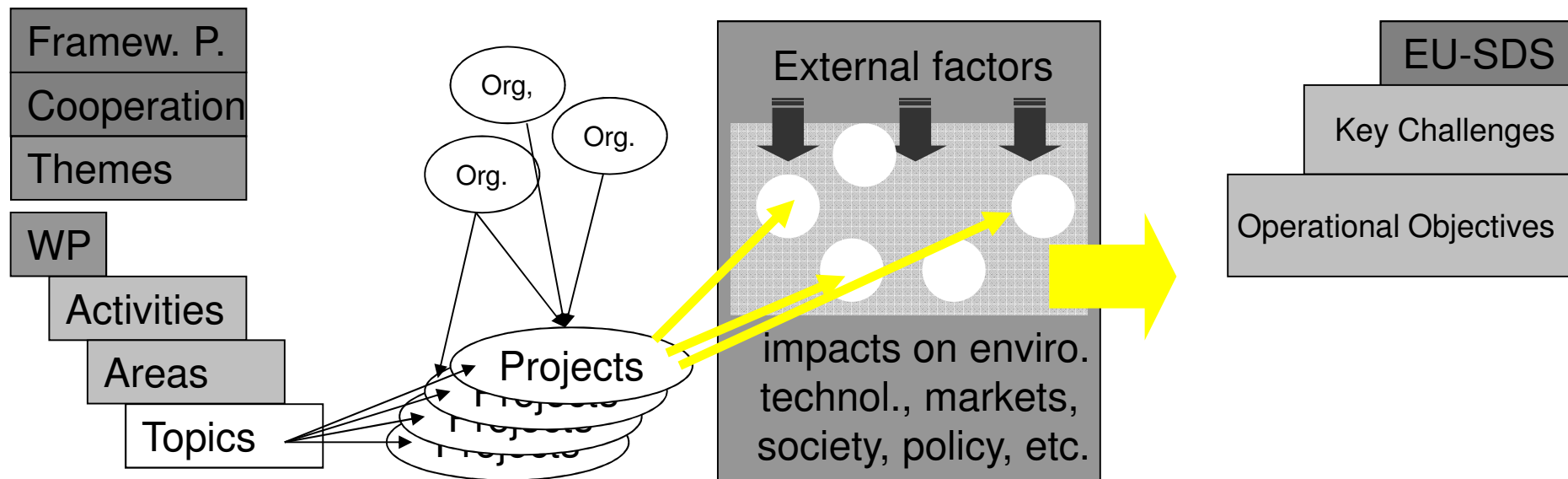
Methodology



2. Analyse project data and research networks

- ⇒ indicators and in-depth analysis (e.g. funding instruments)
- ⇒ regional analysis (by countries and NUTS-2 regions)
- ⇒ social network analysis

Methodology



3. Conduct additional interviews with project coordinators

- ⇒ Identification of diffusion patterns with strong similarities regarding deliverables and actors involved
- ⇒ Identification of future research and support needs

Limitations and advantages

principles

- EU SDS as a referential framework
key challenges and operational objectives of the EU SDS are in the focus of the analysis (and not e.g. environment or society in general)
- constricted approach
expected impacts **directly caused by the projects funded under the respective topic** (not by second round effects, rebound effects or the technology as such)

Limitations and advantages

Screening & validation

- **ex-ante** screening of expected impacts
(not ex-post)
- on FP7 **topic** level
(not on project level)
- compiled by high level **research institutes**
(not by automatic word recognition)
- through **qualitative screening**
(not through extensive impact assessments)

Limitations and advantages

Data sources

- SP 'Cooperation' WP 2007-2013: about 3.600 topics
- EU SDS 2006 as a referential framework about 80 objectives
- 290.000 decisions
- Project data of **CORDA** imported (about 5.000 projects and EC contribution about Euro 18,5 bio by now) and linked to topics

Overview

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European Commission Monitoring the FP7 contribution to the renewed EU SD Strategy

European Commission > Research > FP7-4-SD

Home

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Welcome to FP7-4-SD.eu!

This website features the monitoring system FP7-4-SD.eu which enables to measure the contribution of the Seventh Framework Programme for Research and Technological Development (FP7) to sustainable development.

The monitoring system FP7-4-SD.eu is a web-based tool developed by DG Research and Innovation with a view to monitoring the contribution of FP7 to sustainability goals, in line with the legal basis

which states that "the overarching aim [of the Cooperation Specific Programme] is to contribute to sustainable development".

FP7-4-SD.eu is built upon a cross-referencing between the calls for proposal implementing the Cooperation Specific Programme and the operational objectives outlined in the Renewed EU Sustainable Development Strategy (Renewed EU SDS). It is based on:

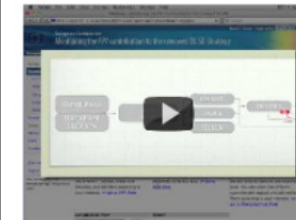
- *ex-ante* evaluations of expected impacts (not *ex-post*),
- on FP7 topic level (not on project level),
- compiled by high level research institutes (not by automatic word recognition),
- through qualitative screening (not through extensive impact assessments).

The database of FP7-4-SD.eu includes:

- data regarding about 2400 topics, drawn from the analysis of all the WPs of the Cooperation SP published between 2007 and 2011, and
- data regarding projects and budgets are drawn from the projects flowing from the WPs published between 2007 and 2010

The monitoring system FP7-4-SD.eu enables to identify the bulk of FP7-relevant topics, projects, project participants and EC budgetary contribution to sustainable development. It also offers an interactive database that allows producing customized analyses, by setting filter options according to your specific interests. Results can be downloaded to your computer. Please also consult our Policy briefs in the [news section](#).

Video: Introduction to the FP7-4-SD.eu monitoring system



This video introduces the FP7-4-SD.eu monitoring system and its interactive database

Video: Tips & tricks



This video explains some tips and tricks concerning how to use the FP7-4-SD.eu interactive database

Video tutorials:

All available video tutorials, including four additional ones for each "View" of the FP7-4-SD.eu interactive database, are

- Home
- Database**
- Users' guide
- Video tutorials
- News
- About
- FAQ
- Contact
- login
- register

Database - the interactive part(s) of FP7-4-SD.eu

Welcome to the interactive part of FP7-4-SD.eu. This section allows you to generate and download your own individual analyses. You can use different "views" that will display the data from various points of view. Please note that only registered users have access to the views described below. In order to use the database, please [register](#) as a user or [login](#) (in case you are already registered).

FP7 View

Challenge View

Geographical View

The FP7 View analyses data according to the structure of FP7. You can zoom into different Themes, Areas and Activities, and set filters according to your interests. >> [go to FP7 View](#)

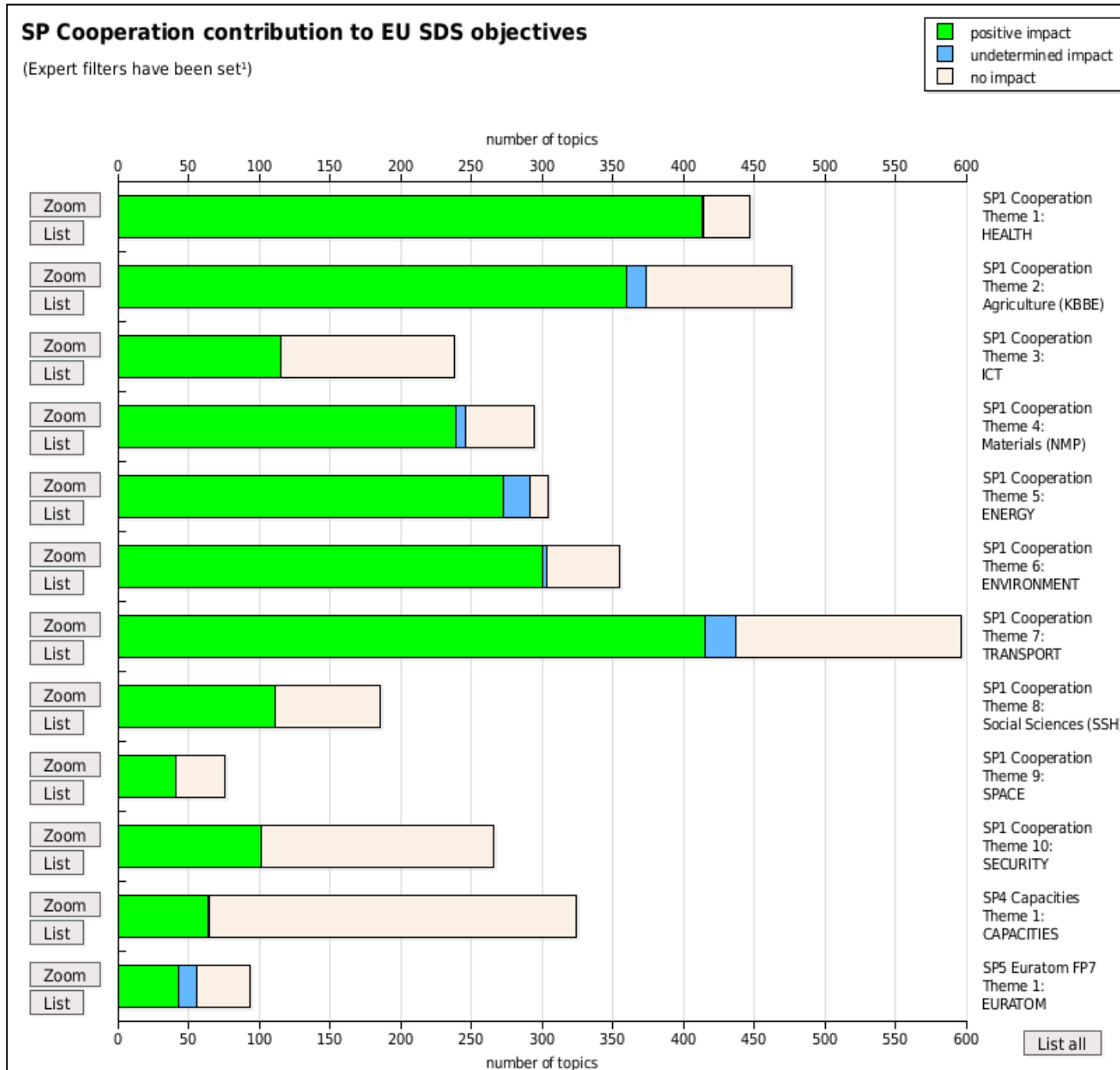
The Challenge View analyses data according to the key challenges and operational objectives of the EU SDS. >> [go to Challenge View](#)

The Geographical View produces maps and tables for analysing the data broken down to national and regional level. You can zoom into different countries and regions and set thematic filters according to your interests. >> [go to Geographical View](#)

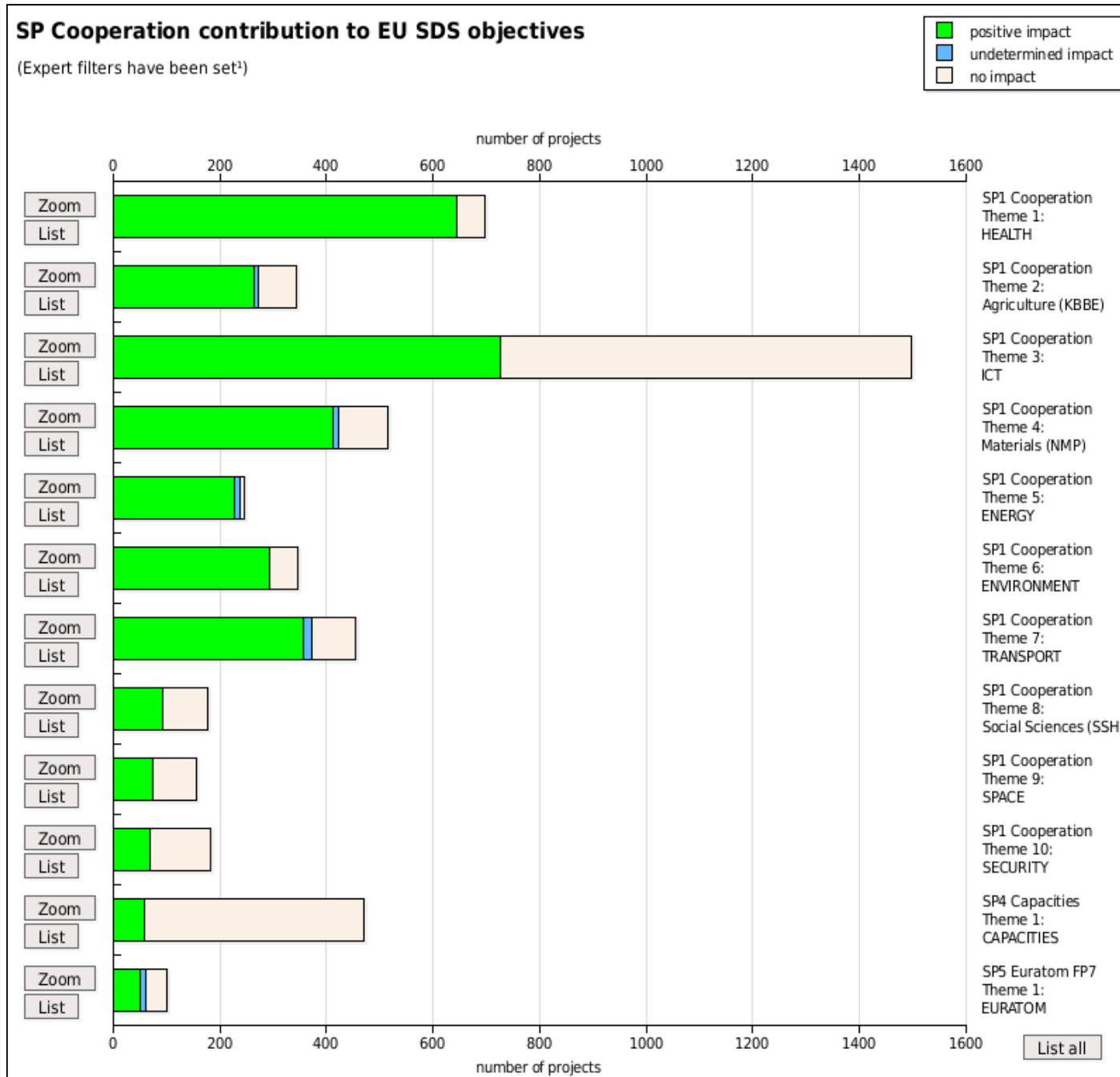
Longitudinal View

Search

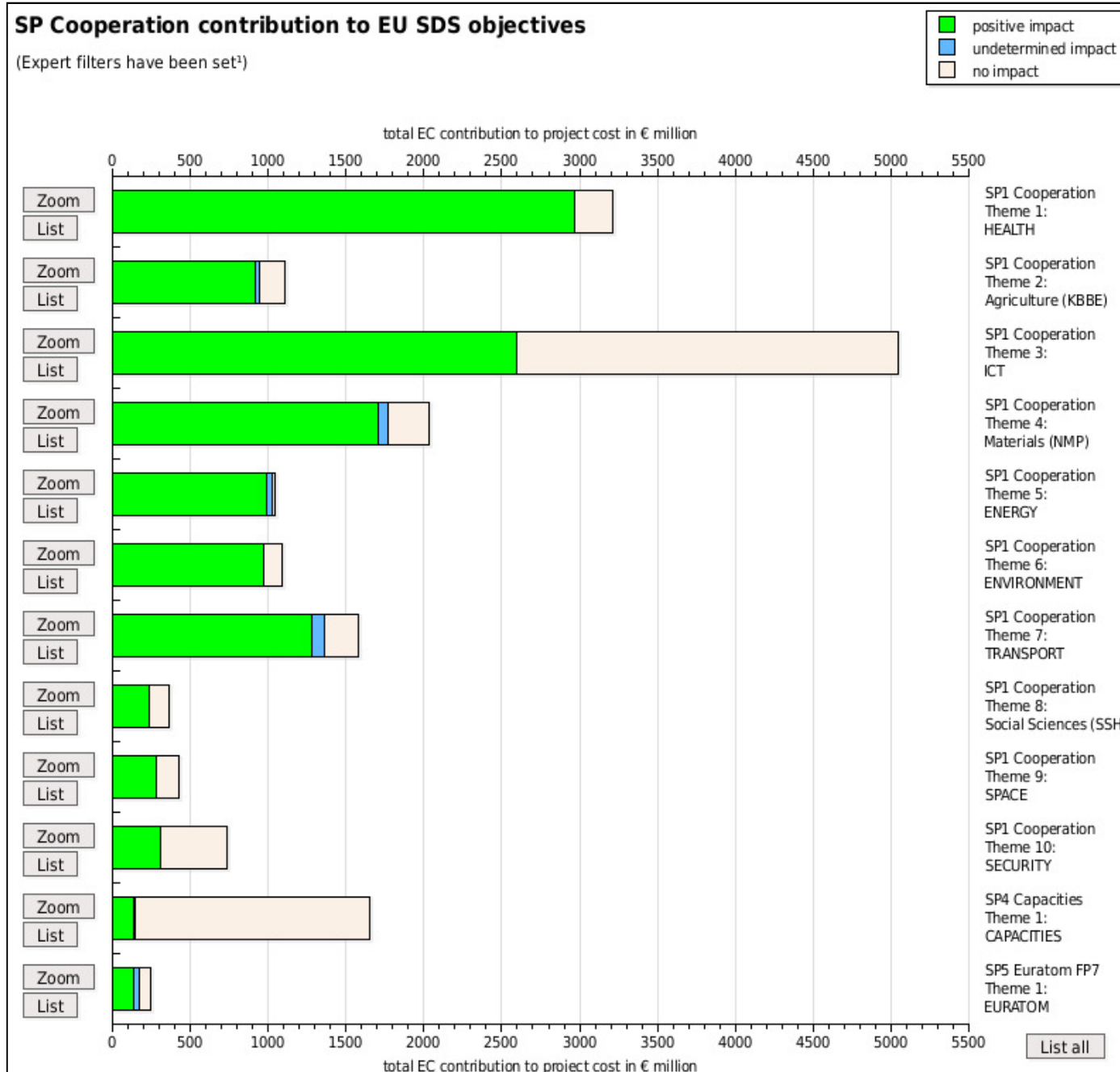
FP7 View – number of topics



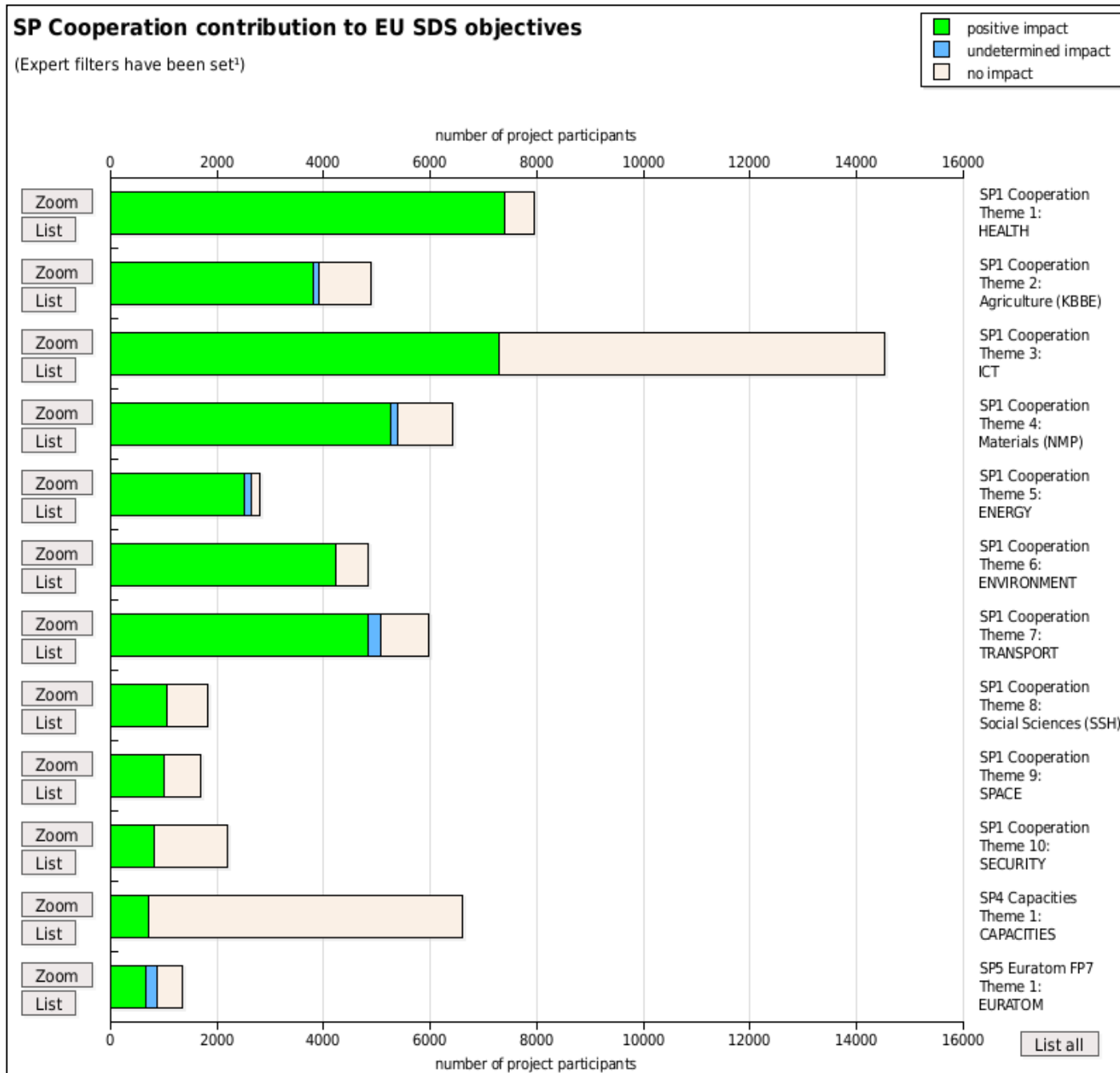
FP7 View – number of projects



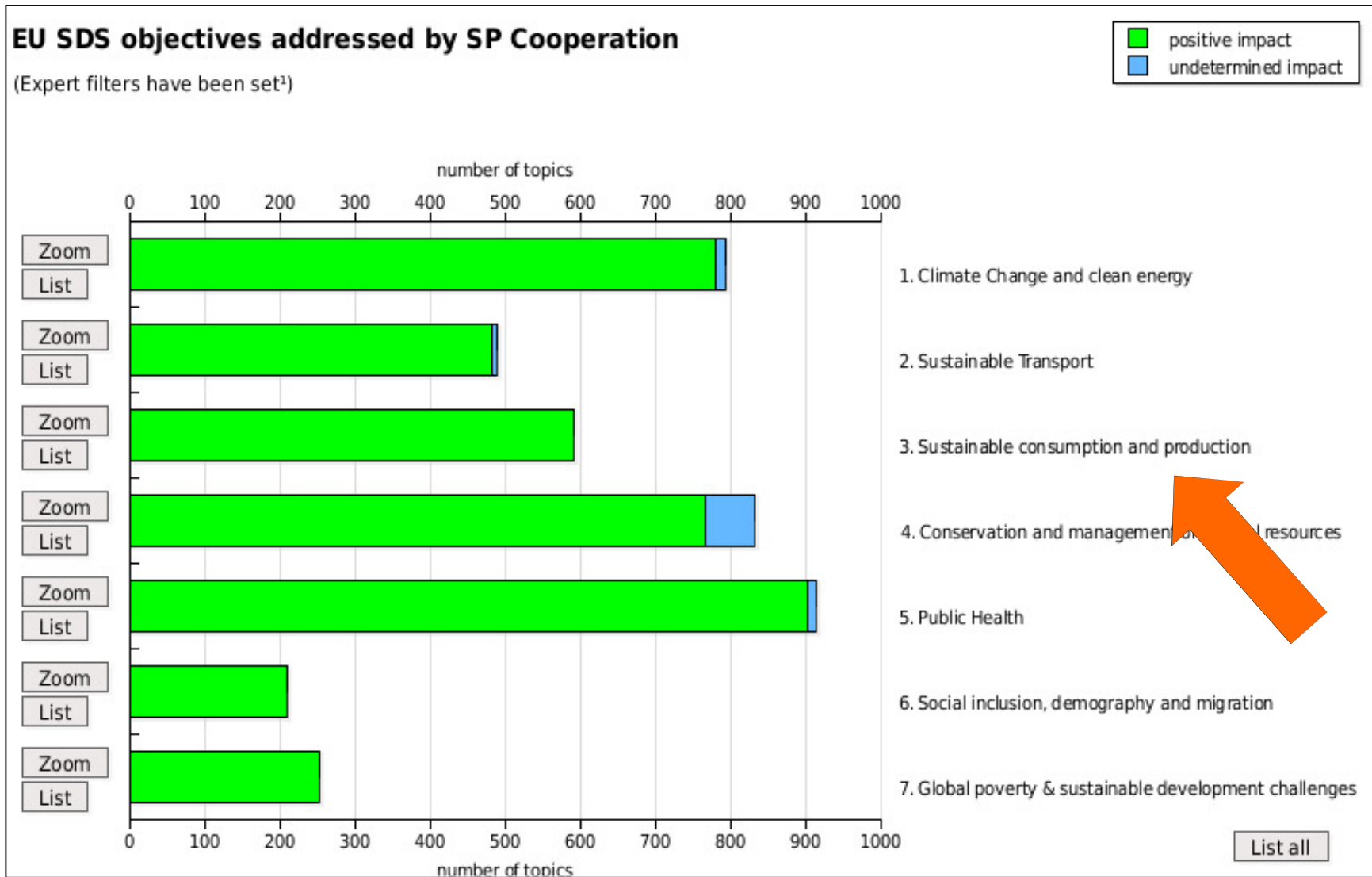
FP7 View – total project costs



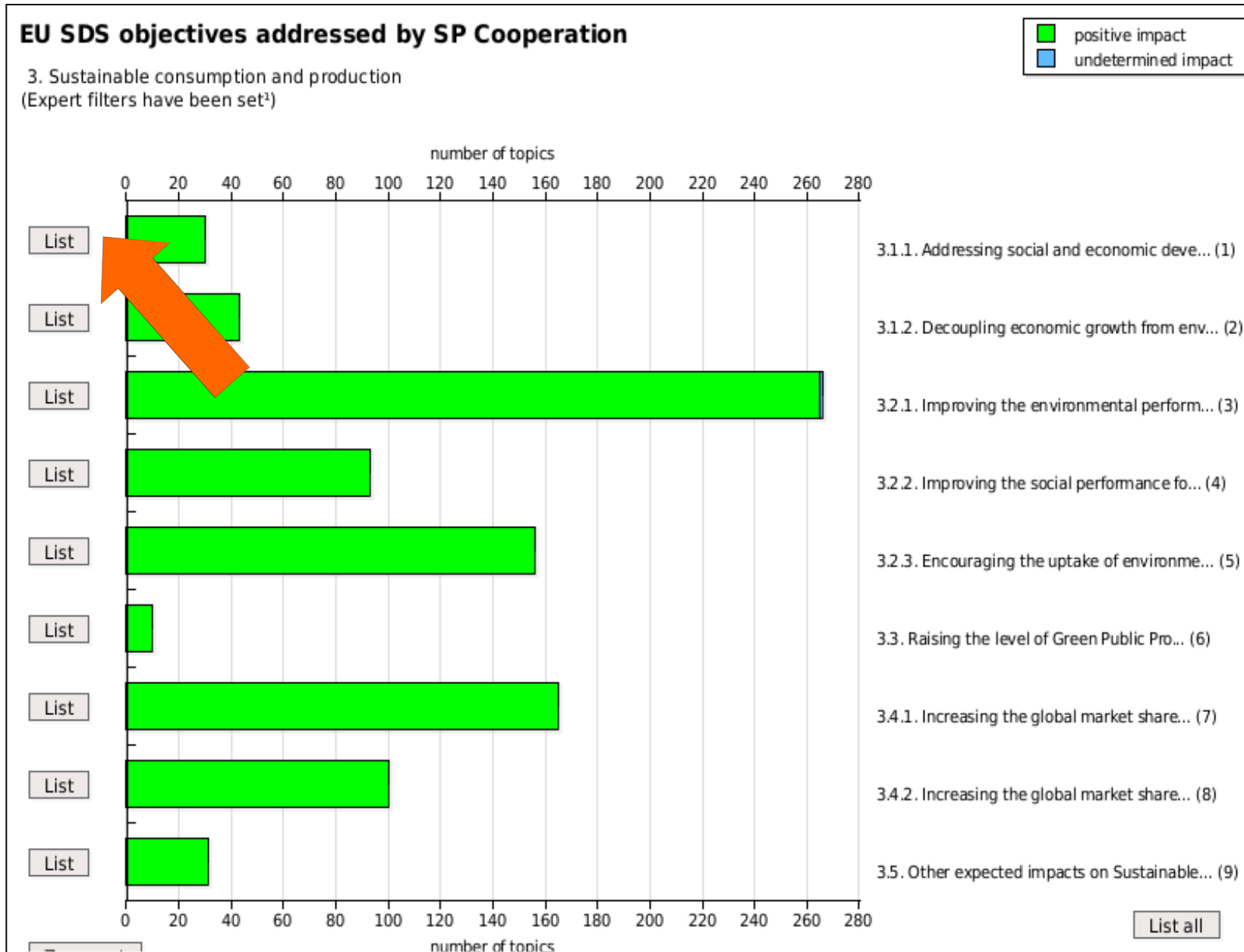
FP7 View – total participants



Challenge View – key challenges



Challenge View – operational obj.



Listing of topics and projects

List of Topics affecting Key challenge "3. Sustainable consumption and production", Operational objective "3.1.1. Addressing social and economic development within the carrying capacity of ecosystems" of the SDS (filtered)



This level displays a list of all FP7 topics that fulfil the criteria you selected in the first level (either by zooming in or by applying expert filters). It is hierarchically structured into Themes, Activities, Areas, Topics and (if available) projects. Each of these levels can be expanded or collapsed by using the "-" and "+" buttons. If more than 50 topics were selected, the list is displayed in several pages and you can switch to the next or previous page by using the buttons on top or the bottom of each page.

Page 1 of 1: topics 1 to 24 of 24

[Back to chart and filter](#)

- SP1 Cooperation Theme 2: Agriculture (KBBE)
 - Activity 2.1: Sustainable production and management of biological resources from land, forest and aquatic environments
 - Area 2.1.2: Increased sustainability of all production systems, plant health and crop protection
 - [Topic: KBBE_2007.1.2.15 - Reducing the utilisation of mineral fertilisers by improving the efficiency of nutrient use in European crops \(WP: 2007\)](#)
 - [Project: Improving nutrient efficiency in major European food, feed and biofuel crops to reduce the negative environmental impact of crop production \(NUE-CROPS\)](#)
 - SP1 Cooperation Theme 4: Materials (NMP)
 - Activity 4.1: Nanosciences and nanotechnologies
 - Area 4.1.2: Nanotechnologies and converging technologies
 - [Topic: NMP_2007.1.2.4 - Coordination in nanometrology \(WP: 2007\)](#)
 - [Project: COOrdination of NANometrology in Europe \(CO-NANOMET\)](#)
 - Area 4.1.6: Cross-cutting and enabling R&D
 - [Topic: NMP_2012.1.4.1 - Pilot lines for precision synthesis of nanomaterials \(WP: 2012\)](#)
- SP1 Cooperation Theme 6: ENVIRONMENT
 - Activity 6.2: Sustainable management of resources
 - Area 6.2.1: Conservation and sustainable management of natural and man-made resources and biodiversity
 - [Topic: ENV_2011.2.1.6.1 - Land-use and European forest ecosystems \(WP: 2011\)](#)
 - Activity 6.3: Environmental technologies
 - Area 6.3.3: Technology assessment, verification and testing
 - [Topic: ENV_2009.3.3.2.1 - Improved Life Cycle Impact Assessment methods \(LCIA\) for better sustainability assessment of technologies \(WP: 2009\)](#)
 - [Project: Development and application of environmental Life Cycle Impact assessment Methods for imProved sustAinability Characterisation of Technologies \(LC-IMPACT\)](#)
 - [Topic: ENV_2010.3.3.2.1 - Boosting Life Cycle Assessment use in SMEs: development of sectoral methods and tools \(WP: 2010\)](#)
 - Activity 6.4: Earth observation and assessment tools for sustainable development
 - Area 6.4.2: Forecasting methods and assessment tools for sustainable development taking into account differing scales of observation
 - [Topic: ENV_2007.4.2.3.1 - Policies to promote sustainable consumption patterns \(WP: 2007\)](#)
 - [Project: Policies to promote sustainable consumption patterns \(POPP\) \(POPP\)](#)
 - [Topic: ENV_2010.4.2.3.3 - Brokerage activities to promote sustainable consumption and production patterns \(WP: 2010\)](#)
 - [Topic: ENV_2011.4.2.3.2 - Sustainable Consumption and Production at the heart of green growth \(WP: 2011\)](#)

Screening results

Key Challenge "3. Sustainable consumption and production"

Overall objective: "To promote sustainable consumption and production patterns."

Expected impacts

+	-	0	U	Operational Objectives
+				3.1.1. Addressing social and economic development within the carrying capacity of ecosystems ⓘ
		0		3.1.2. Decoupling economic growth from environmental degradation ⓘ
		0		3.2.1. Improving the environmental performance ⓘ EU SD strategy: "Promoting sustainable consumption and production by addressing social and economic development within the carrying capacity of ecosystems and decoupling economic growth from environmental degradation."
		0		3.2.2. Improving the social performance for products and processes ⓘ
		0		3.2.3. Encouraging the uptake of environmentally/socially better performing products and processes by businesses and consumers ⓘ
		0		3.3. Raising the level of Green Public Procurement (GPP) ⓘ
		0		3.4.1. Increasing the global market share of the EU in environmental technologies ⓘ
		0		3.4.2. Increasing the global market share of the EU in eco-innovations ⓘ
		0		3.5. Other expected impacts on Sustainable consumption and production ⓘ

Feedback on screening results

Key Challenge "3. Sustainable consumption and production"

Overall objective: "To promote sustainable consumption and production patterns."

Expected impacts				Your assessment				Operational Objectives
+	-	0	U	+	-	0	U	
+				+	-	0	U	3.1.1. Addressing social and economic development within the carrying capacity of ecosystems i
		0		+	-	0	U	3.1.2. Decoupling economic growth from environmental degradation i
		0		+	-	0	U	3.2.1. Improving the environmental performance for products and processes i
		0		+	-	0	U	3.2.2. Improving the social performance for products and processes i
		0		+	-	0	U	3.2.3. Encouraging the uptake of environmentally/socially better performing products and processes by businesses and consumers i
		0		+	-	0	U	3.3. Raising the level of Green Public Procurement (GPP) i
		0		+	-	0	U	3.4.1. Increasing the global market share of the EU in environmental technologies i
		0		+	-	0	U	3.4.2. Increasing the global market share of the EU in eco-innovations i
		0		+	-	0	U	3.5. Other expected impacts on Sustainable consumption and production i

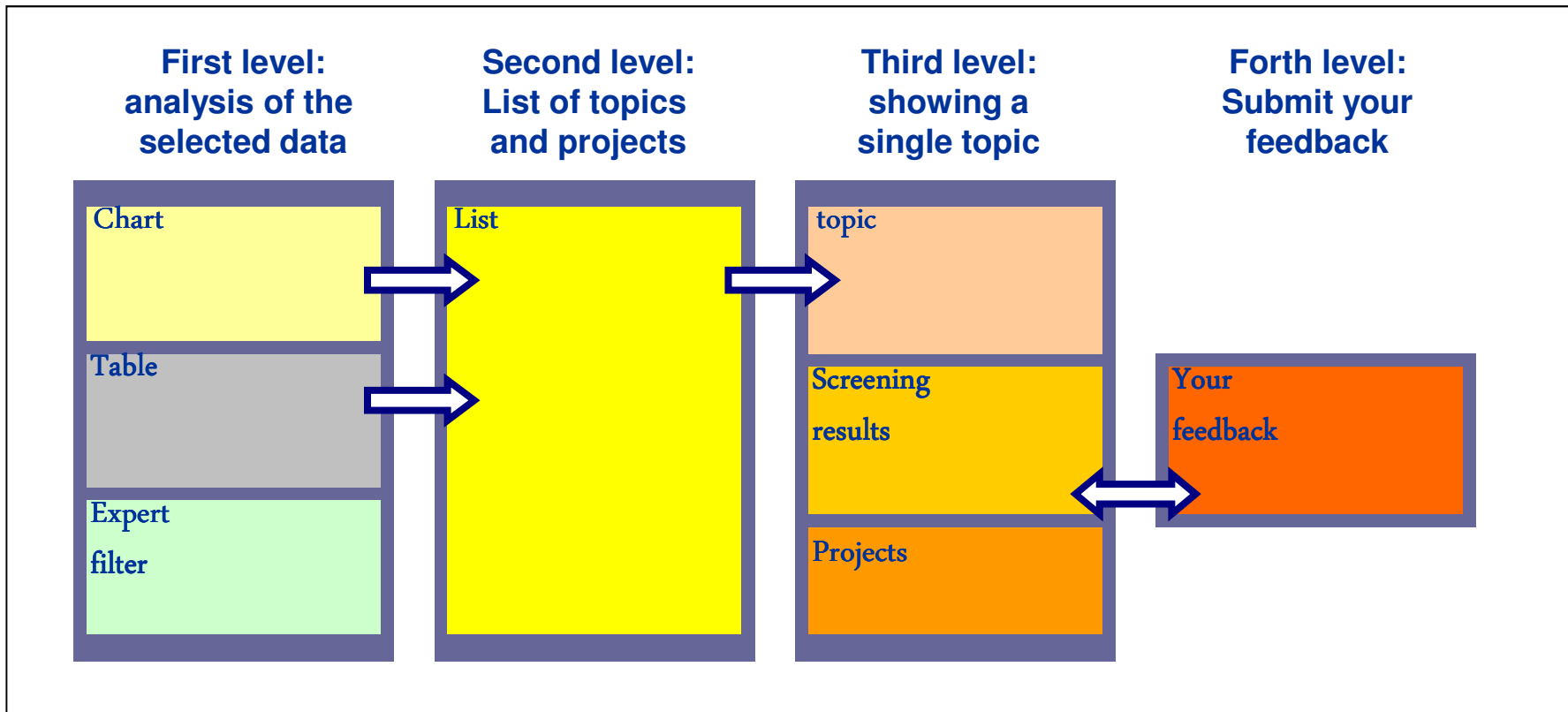
Your opinion

Please explain on which sources or evidence your expectation are based on: [?](#)

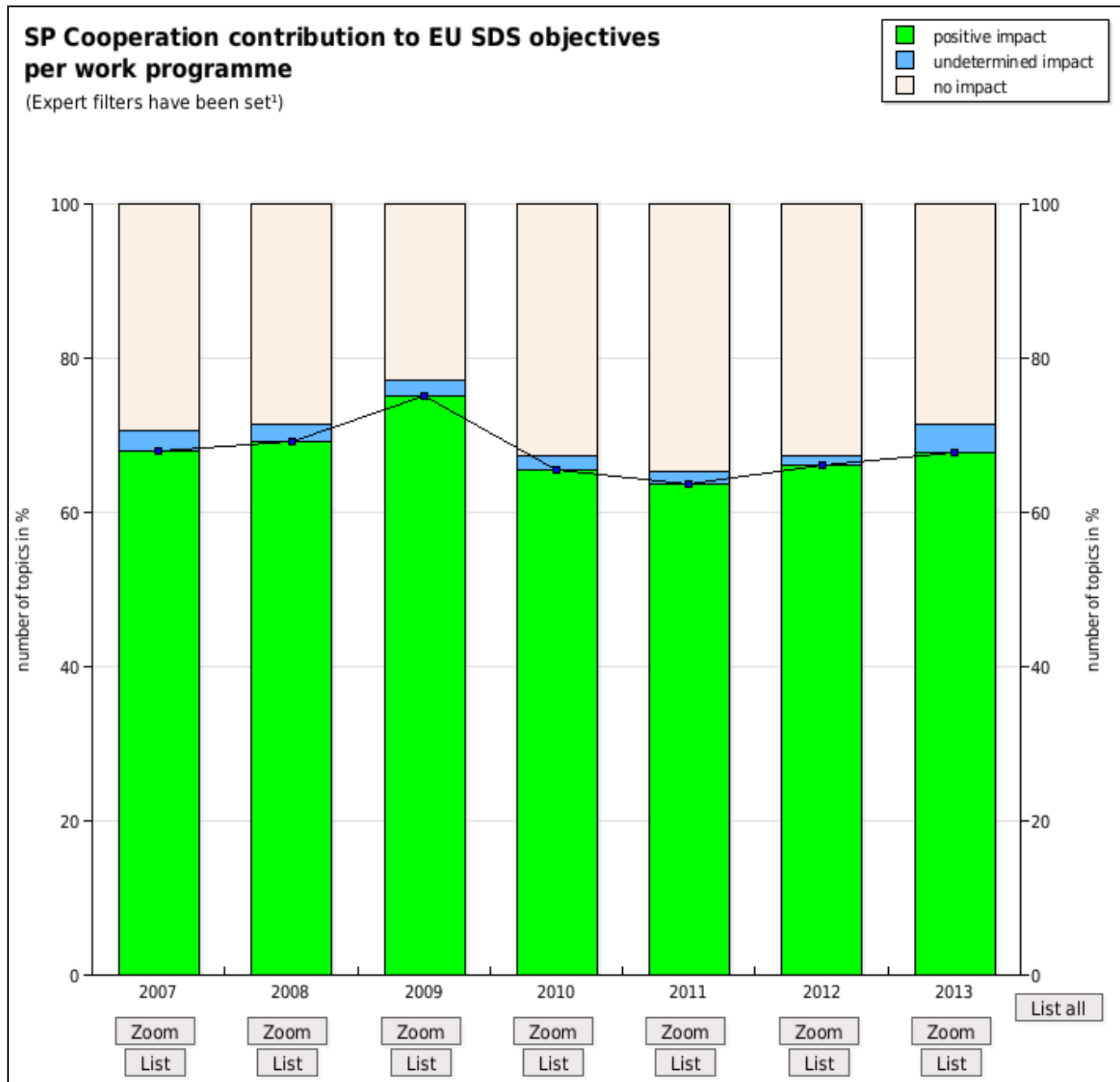
You can submit feedback to a topic's expected impacts on EU SDS only once. Please note that after posting your feedback, you cannot change it any more.

[Submit feedback](#)

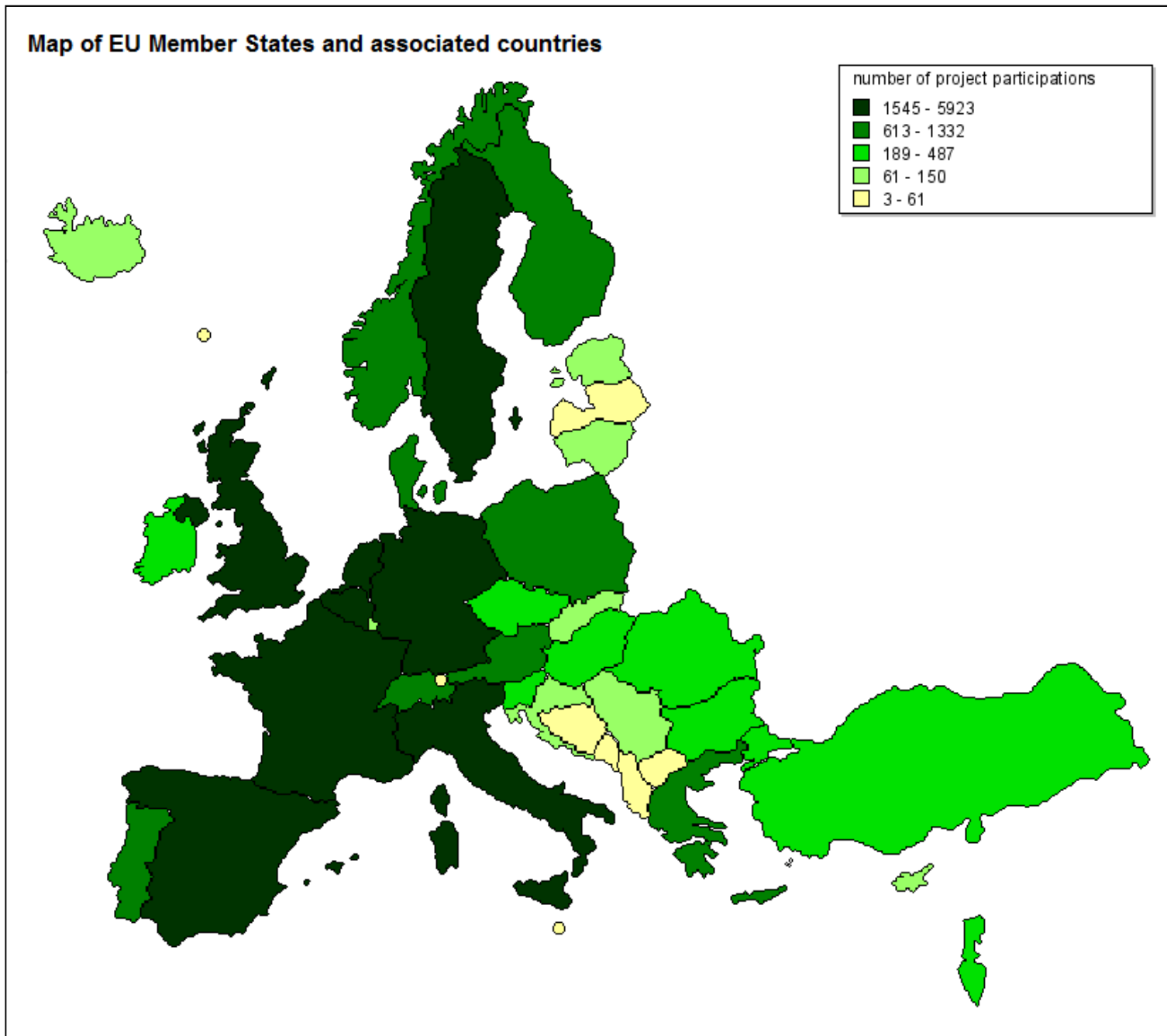
[Cancel and go back to topic](#)



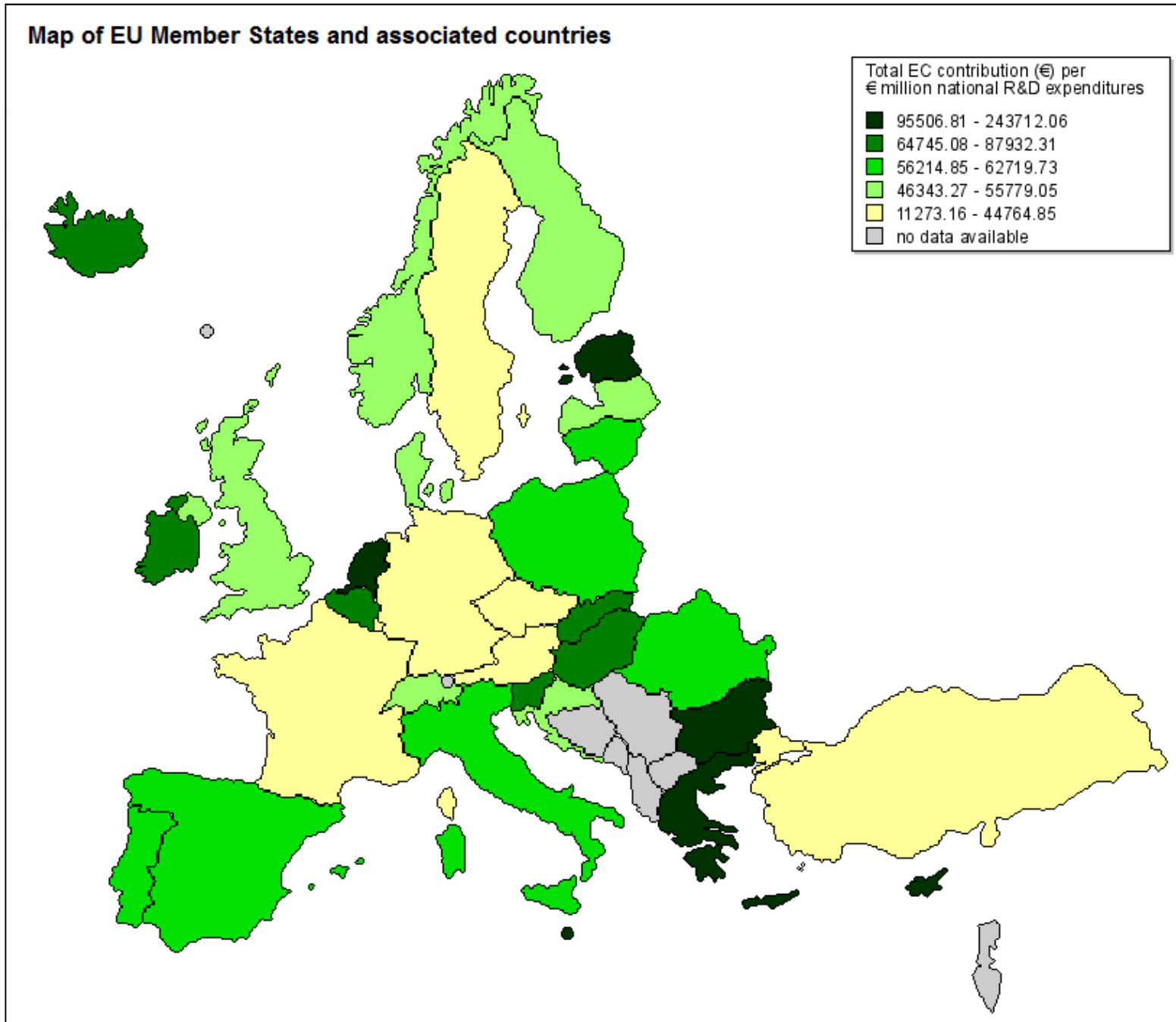
Longitudinal View



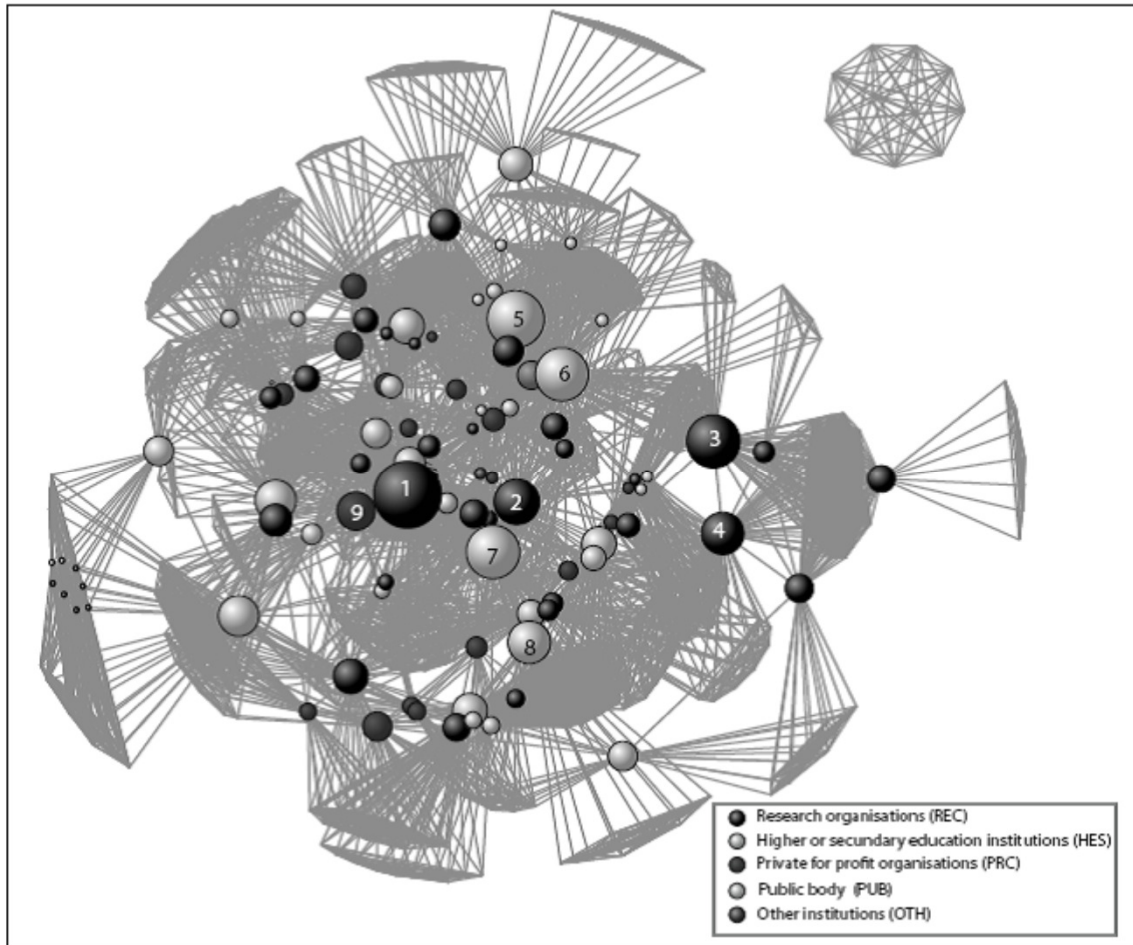
Geogr. View – participations



Geogr. View – EC share



Social Network Analysis



- (1) Valtion Teknillinen Tutkimuskeskus (Research, DK)
- (2) Fraunhofer-Gesellschaft (Research, DE)
- (3) AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE (Research, IT)
- (4) PAPIERTECHNISCHE STIFTUNG (Research, DE)
- (5) Rheinisch-Westfaelische Technische Hochschule Aachen (Research, DE)
- (6) Danmarks Tekniske Universitet (University, DK)
- (7) Universitaet Stuttgart (University, DE)
- (8) UNIVERSITY OF SOUTHAMPTON (University, UK)
- (9) Acciona Infraestructura (private-for-profit organisation, ES)

Not integrated into the public platform, but easy to conduct with downloaded data

Overview

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Selected results



Policy brief No 5: Monitoring the contribution of SP 'Capacities' to the EU's SD objectives (September 2011)

This policy brief presents an analysis of how research carried under the FP7 specific programme 'Capacities' contributes to sustainable development.

Research Institute for Managing
Sustainability
WU / Wirtschaftsuniversität Wien Vienna University of Economics and Business

Research on waste reduction technologies in Europe - an analysis of FP7-funded projects and networks

André Martinuzzi and Francesca Montevercchi

Research Institute for Managing Sustainability
Vienna University of Economics and Business
www.sustainability.eu

3rd International Symposium on Environmental Management "Towards Sustainable Technologies", Oct. 26-28 2011, Zagreb, Croatia

No 4: Monitoring the FP7 contribution SD objectives - facts & figures (April 2011)

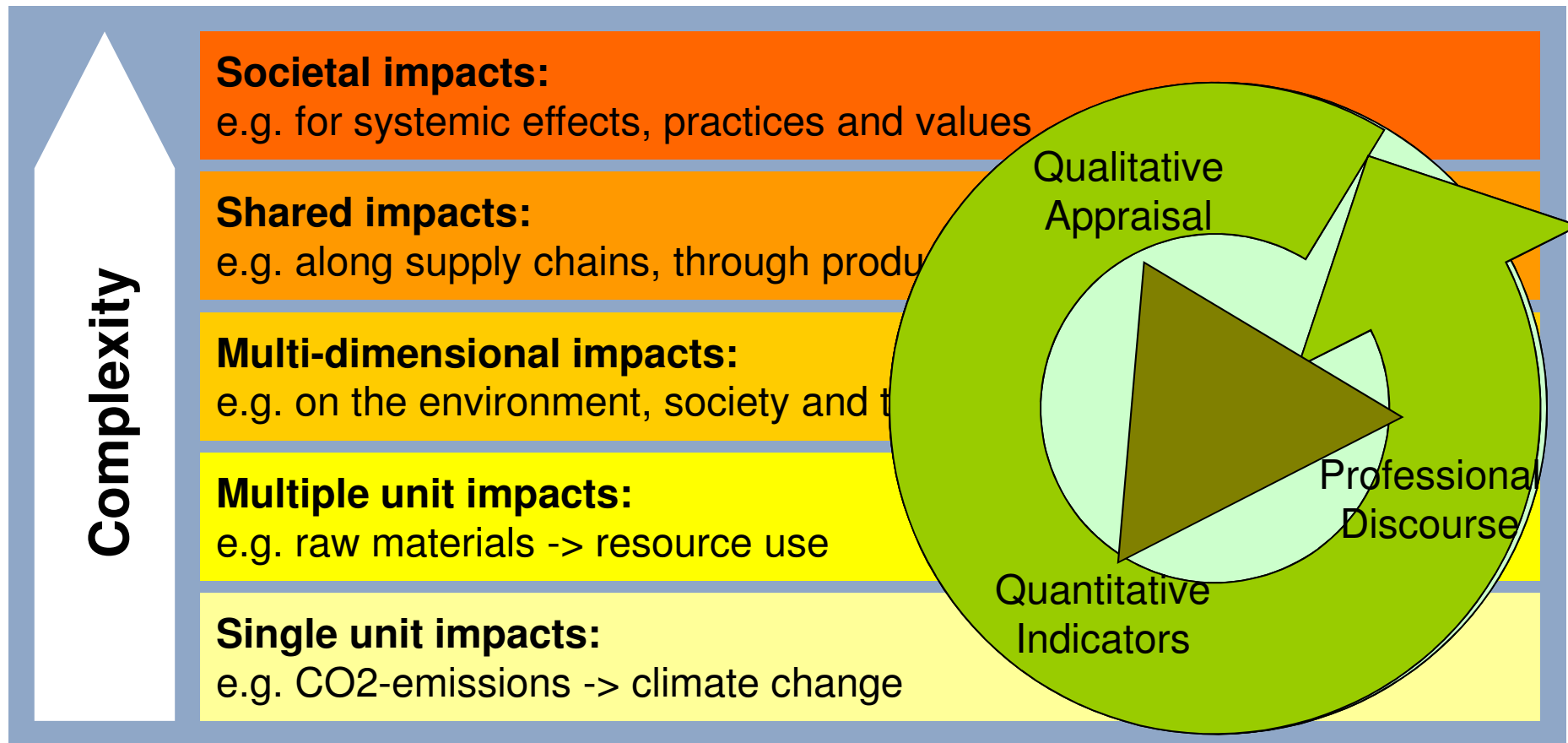
This policy brief presents an update of the first FP7-4-SD.eu monitoring system (October 2010) by analysing how research carried under the FP7 Specific Programme 'Cooperation' (September 2011) contributes to sustainable development.

No 3: Monitoring the FP7 EURATOM contribution to the EU's SD objectives (April 2011)

This policy brief presents an analysis of how research carried out in the framework of the European Atomic Energy Community (EURATOM) and its "FP7 EURATOM" contributes to sustainable development.

[PDF \(897 kB\)](#)

Assessing different pathways of impact



Conclusions and outlook (1)

For the debate on R&D monitoring and evaluation systems, this case study shows **how complex issues like sustainable development can be operationalized** and how a monitoring system can be used as a proxy in order to support – but not replace – thematic evaluations.

For the debate on sustainable development, the monitoring system offers a **baseline to assess the contribution of FP7** to the development of clean technologies, green market, and sustainable solutions. For these kinds of analyses, the FP7-4-SD monitoring system allows an easy way to identify research projects, partners, and networks.

Conclusions and outlook (2)

For the design of the new **Horizon 2020 programme** the FP7-4-SD monitoring system offers not just valuable data, but also a blueprint as to how an impact oriented monitoring could be implemented.

Institute for Managing Sustainability
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www.sustainability.eu

www.FP7-4-SD.eu

Thematic Working Group “Evaluating Sustainable Development” at the European Evaluation Society
Dublin, 1-3 October 2014

www.europeanevaluation.org