

# Monitoring the FP7 contribution to the EU's SD objectives – facts & figures (update 2015)

FP7-4-SD.eu policy brief No. 11 from February 2015

## Summary

**Introduction: what is the monitoring system FP7-4-SD about?**

Overall, research called for and carried out under the Specific Programme (SP) 'Cooperation' between 2007 and 2013 has had a positive impact on the EU's sustainable development (SD) objectives. About 75 % of the topics, 69 % of the projects and 76 % of the funding (i.e. € 19.6 billion out of € 25.7 billion) provided by SP 'Cooperation' live up to the programme's objective of "contributing to sustainable development".

**How does FP7 contribute to sustainable development?**

Among the ten research themes of SP 'Cooperation', TRANSPORT comprises the largest number of topics with expected impacts on the EU's SD objectives, closely followed by Agriculture (KBBE - 'Knowledge based Bio-economy') and HEALTH. In budgetary terms (EC contribution to projects), the themes ICT, HEALTH, Materials (NMP) and TRANSPORT constitute the main sources of funding for SD-relevant research<sup>1</sup>. When comparing the budget of the ten 'Cooperation' themes with their expected impacts on SD, the themes HEALTH, ENERGY and ENVIRONMENT stand out as contributing a disproportionately high share to the EU's SD objectives.

**How big is the EU financial contribution to SD across the FP7 research themes?**

**Which FP7 themes contribute disproportionately high/low shares to EU SD objectives?**

Research funded by SP 'Cooperation' addresses societal challenges well. SD objectives related to public health are addressed most prominently, mainly through research carried out under the theme HEALTH, which constitutes about 23 % of the overall EC contribution to SP 'Cooperation' projects with expected impacts on SD objectives (€ 4.5 billion out of € 19.6 billion). Other key challenges prominently addressed in FP7 research projects are related to climate change and energy as well as to natural resources.

**How are the EU's SD operational objectives addressed by FP7?**

**How is the EC contribution distributed across EU SD objectives?**

The share of SD-relevant research in SP 'Cooperation' increased between 2007 and 2009, reaching a maximum of about 80 % in 2009. The share has however declined since then, mainly driven by changes in the themes Agriculture (KBBE), TRANSPORT and ENVIRONMENT. Regarding the geographical spread of the "centres of excellence" in Europe, most SD-relevant projects are coordinated by organisations from Germany, the United Kingdom, Italy and Spain, whereas Eastern Europe is significantly underrepresented.

**How did the FP7 contribution to SD change over time?**

**Where are the centres of excellence in SD-related research?**

<sup>1</sup> In this policy brief, terms such as "SD-relevant" or "contributing to sustainable development" are used synonymously for "contributing to at least one of the 78 objectives of the renewed EU Sustainable Development Strategy (EU SDS)".

## Introduction: what is the monitoring system FP7-4-SD about?

**Monitoring the FP7 expected impacts on EU SDS objectives in order to support accountability, transparency and governance in research**

The Seventh Framework Programme for Research and Technological Development (FP7) was the EU's main source of funding for research across Europe between 2007 and 2013. An overarching aim of FP7, and in particular of its Specific Programme (SP) 'Cooperation', is to contribute to sustainable development (SD), as called for in the 2006 EU Sustainable Development Strategy (EU SDS)<sup>2</sup>. Against this background, DG Research and Innovation set up a monitoring system to (i) monitor the contribution of FP7-funded research to EU SDS objectives (*accountability*), (ii) convey the value of FP7 to the public (*transparency*), and (iii) foster the governance of FP7 (*steering effect*).

The monitoring system is based on a cross-referencing between topics called for in the annual FP7 Work Programmes of the SP 'Cooperation' and the 78 operational objectives outlined in the EU SDS from 2006. Experts from WU Vienna and TU Delft have been contracted for assessing - based on scientific evidence - the FP7 expected impacts on EU SDS objectives for the whole Programme period 2007-2013. The system enables the identification of the bulk of FP7 topics, projects, project participants and EC budgetary contribution to sustainable development. In addition, the interactive database [www.fp7-4-sd.eu](http://www.fp7-4-sd.eu) allows conducting customised analyses from various points of view, including the setting of filter options according to specific needs and personal interests.

## How does FP7 contribute to sustainable development?

**More than two thirds of FP7-funded research contributes to EU SDS objectives**

Overall, about 69 % of the projects (i.e. 4,825 out of 6,967) that have been funded by FP7 under SP 'Cooperation' since 2007 contribute to one or more of the 78 EU SDS operational objectives. The share is even higher when looking at the number of topics (called for in the annual Work Programmes) and the amount of funding provided by FP7 (total EC contribution), accounting for 75 % (i.e. 2,432 out of 3,234 topics) and 76 % (i.e. € 19.6 billion out of € 25.7 billion) respectively. The variation is due to differences in the number and size of projects funded in the different SP 'Cooperation' themes.

## In a nutshell: The FP7 'Cooperation' programme

**3,234 research topics called for between 2007 and 2013 have resulted in 6,967 research projects with an EU co-financing of**

The Specific Programme (SP) 'Cooperation' was at the core of FP7, representing about two thirds of the overall FP7 budget (i.e. € 32 billion out of € 50 billion) over the period 2007 to 2013. It fostered collaborative research across Europe and other partner countries, through projects by transnational consortia of industry, academia and civil society, in ten thematic areas (see Table 1 below).

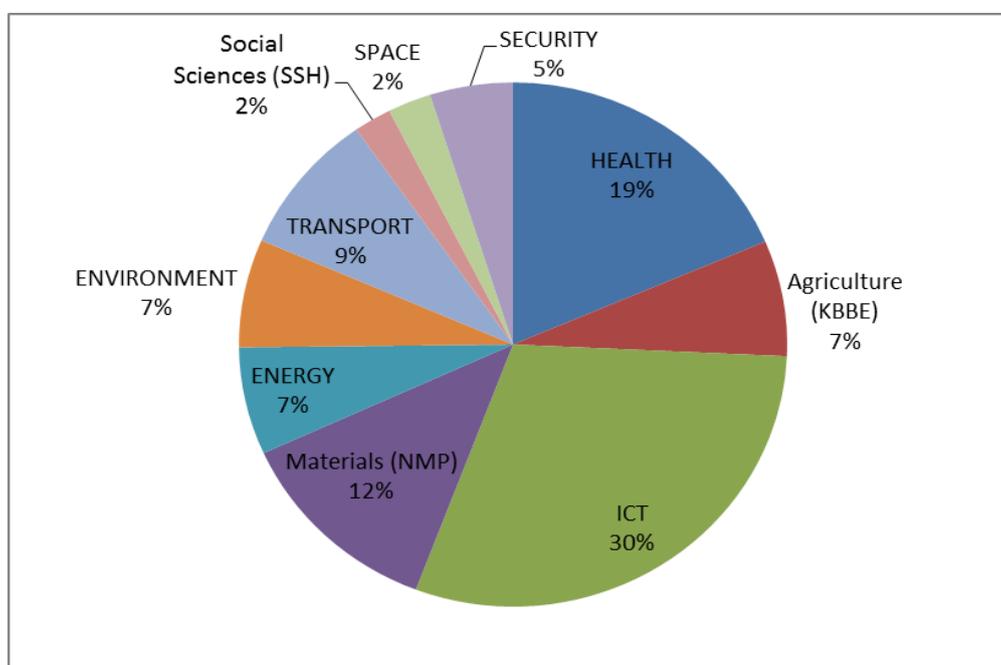
<sup>2</sup> Review of the EU Sustainable Development Strategy (EU SDS) - Renewed Strategy (DOC 10917/06).

**€ 25.7 billion**

Since the start of FP7 in 2007, a total of 3,234 topics have been called for in the annual Work Programmes (WPs). Under these topics, 6,967 projects<sup>3</sup> have been (or are still being) carried out by almost 20,885 institutions from academia, business and civil society organisations, with a total EC contribution (that is, the co-financing provided by FP7) of € 25.7 billion. The EC contribution accounts for 70 % of the total project costs (i.e. the co-financing provided by FP7 plus other funding sources) of € 36.7 billion.

**Table 1:** Overview of 'Cooperation' Work Programmes 2007-2013 by Theme

Theme	Number of topics	Number of projects	Number of project participations	Total project costs (€ million)	Total EC contribution (€ million)
HEALTH	447	1003	11,183	6,446.5	4,782.3
Agriculture (KBBE)	476	508	7,741	2,482.2	1,836.8
ICT	238	2302	21,832	10,992	7,737
Materials (NMP)	294	796	10,008	4,613.8	3,199.5
ENERGY	304	364	4,253	2,922.2	1,706.1
ENVIRONMENT	354	487	6,997	2,297.2	1,717
TRANSPORT	596	697	8,779	3,469.6	2,267.4
Social Sciences (SSH)	185	247	2,700	777.7	575
SPACE	75	260	2,586	935.2	657.3
SECURITY	265	303	3,677	1,785.5	1,262.7
<b>Total</b>	<b>3,234</b>	<b>6,967</b>	<b>79,756</b>	<b>36,721.9</b>	<b>25,741.1</b>

**Figure 1:** Share of total EC contribution (%) allocated to the ten 'Cooperation' themes (WPs 2007-2013)

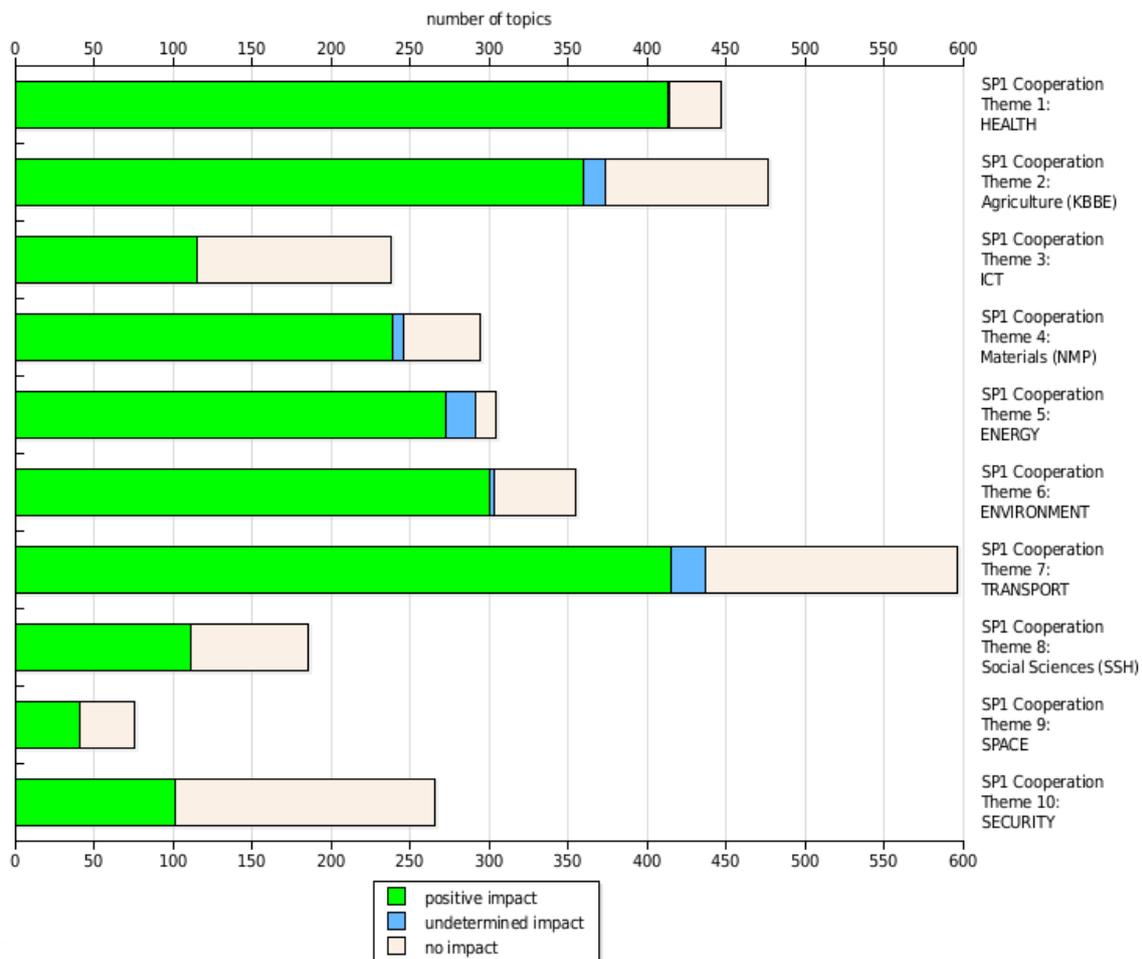
<sup>3</sup> It is important to note that not all topics called for are being translated into action by funding of projects: in the Work Programmes 2007-2013, projects have been funded under some 2,628 topics only (81 % of all topics called for). However, more than one project may have been funded under one topic.

## How do the ten 'Cooperation' themes contribute to SD?

**The themes TRANSPORT, HEALTH and KBBE comprise the largest number of topics with expected impacts on EU SDS objectives**

As shown in Figure 2 below, the theme TRANSPORT comprises the largest number of topics (i.e. research that has been called for in the annual Work Programmes 2007-2013) with expected impacts on EU SDS objectives (415 topics), closely followed by the themes HEALTH (413 topics) and Agriculture (KBBE; 359 topics).

In relative terms, the themes HEALTH (93%), ENERGY (90%) and ENVIRONMENT (85%) have the highest share of topics with expected impacts on EU SDS objectives. Themes with a share of SD-relevant topics below 50% are ICT (48%) and SECURITY (38%).



**Figure 2:** Number of topics with expected impacts in the ten 'Cooperation' themes (WPs 2007-2013)<sup>4</sup>

## How big is the EU financial contribution to SD across the FP7 research themes?

**The themes HEALTH, ICT, NMP and TRANSPORT provide the highest amount of**

The picture presented above changes when looking at the amount of co-financing ("total EC contribution") provided by SP 'Cooperation' (see Figure 3 below). Most striking is the fact that the theme ICT exceeds by far all other 'Cooperation' themes in terms of available budget. However, due to the

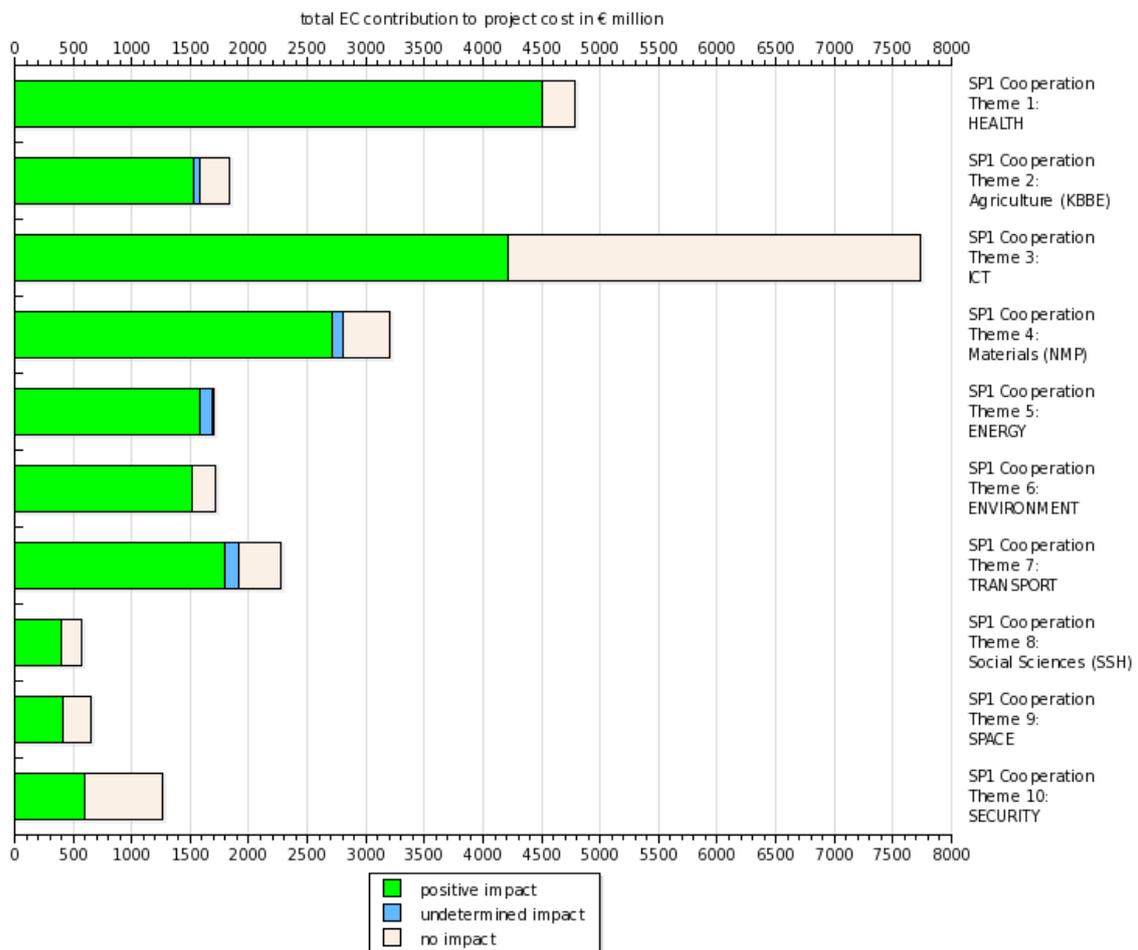
<sup>4</sup> Typology of impacts: "positive": supporting the EU SDS objectives; "undetermined": impacts that due to a lack of scientific evidence cannot yet be categorised as positive, negative or neutral.

**EC contribution (€) to SD-relevant research**

rather moderate share of ICT topics having expected impacts on EU SDS objectives (about 48 %; see above) it is the theme HEALTH that reveals the highest EC contribution to projects with expected impacts on the EU SDS objectives (€ 4.5 billion).

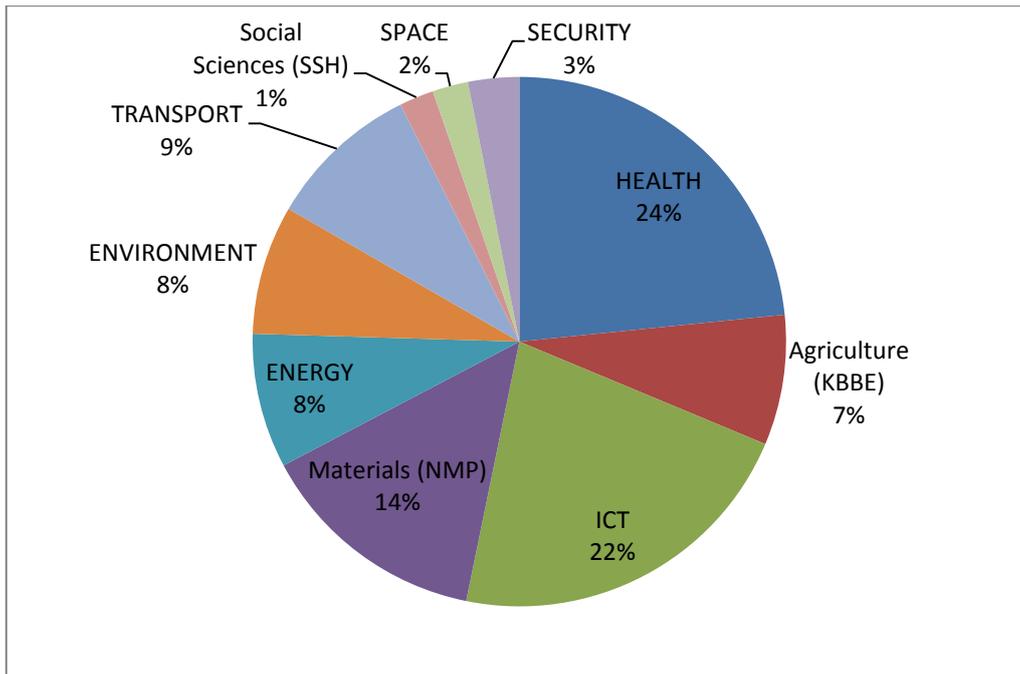
Besides ICT (ranking second with € 4.2 billion), a significant amount of EC contribution goes to projects in the thematic areas of Materials (NMP) and TRANSPORT, with € 2.7 billion and € 1.8 million respectively. At the other end of the scale, the themes Social Sciences (SSH), SPACE and SECURITY are the ones with the lowest available total budgets and consequently the lowest amount of EC contribution to SD-relevant projects.

Similar to above, the highest share of EC contribution dedicated to SD-relevant projects can be found in the themes HEALTH (94 %), ENERGY (93 %) and ENVIRONMENT (88 %).



**Figure 3:** Total EC contribution (€ million) to projects with expected impacts in the ten 'Cooperation' themes (WPs 2007-2013)<sup>5</sup>

<sup>5</sup> It is important to note that not all topics called for are being translated into action by funding of projects: in the Specific Programme 'Cooperation' from 2007-2013, projects are being funded under some 2,628 topics only (81 % of all topics called for). However, more than one project may be funded under one topic.



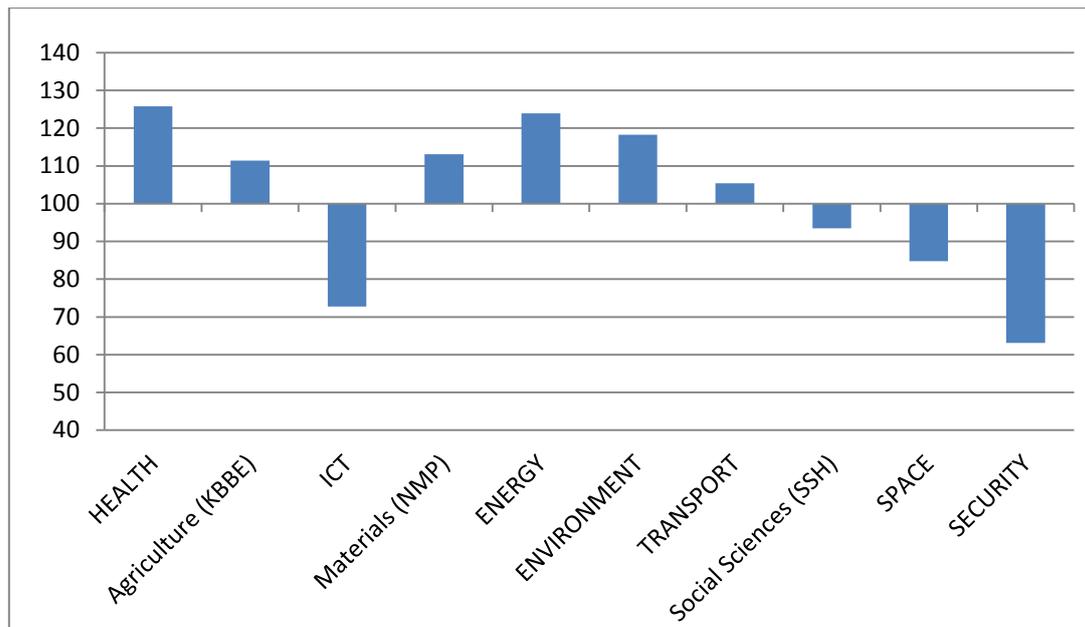
**Figure 4:** Share of total EC contribution (€) to projects with expected impacts on EU SDS objectives across the ten 'Cooperation' themes (WPs 2007-2013)

### Which FP7 themes contribute disproportionately high/low shares to EU SDS objectives?

**The themes HEALTH, ENRGY and ENVIRONMENT contribute a disproportionately high share to EU SDS objectives**

A comparison of the budget (total EC contribution) allocated to the ten 'Cooperation' themes (see Figure 1 above) with the funding provided to projects with expected impacts on one or more of the 78 EU SDS objectives (see Figure 4) reveals that six 'Cooperation' themes, in particular HEALTH, ENERGY and ENVIRONMENT, contribute disproportionately high to EU SDS objectives. This means that their share in the total EC contribution spent on projects with expected impacts on EU SDS objectives is higher than their share in the total EC contribution spent on all projects funded under SP 'Cooperation'.

On the other hand, the themes SECURITY, ICT and SPACE contribute disproportionately low in relation to their share in the 'Cooperation' budget, which can be explained by the rather low share of SD-relevant research projects (around or below 55 %) funded under these three themes.



**Figure 5:** Analysis of total EC contribution to projects with expected impacts on EU SDS objectives in relation to total EC contribution per theme (Index basis = 100) (WPs 2007-2013)<sup>6</sup>

### How are the EU SDS operational objectives addressed by FP7?

#### FP7-funded research mainly contributes to EU SDS objectives related to public health, climate change and natural resources

In order to complement the picture presented above, it is interesting to “switch the view” in order to investigate which of the seven EU SDS key challenges are actually affected by FP7 topics.

Figure 6 below shows that the key challenges “public health”, “conservation and management of natural resources” and “climate change and clean energy”<sup>7</sup> are addressed most prominently by FP7 topics, with “public health” at the top, accounting for 864 topics contributing to the Strategy’s objectives related to health issues. The key challenges “climate change and clean energy” and “conservation and management of natural resources” are addressed by 772 and 794 topics respectively.

#### Research on the social pillar of SD receives lowest attention in terms of budget and topics

At the other end of the scale, the fewest expected impacts can be found in relation to the key challenges “social inclusion, demography and migration” and “global poverty and sustainable development challenges”, which are only addressed by 177 and 247 topics respectively.

<sup>6</sup> An index above 100 means that the share of a theme's budget spent on projects with positive expected impacts in relation to the total SP ‘Cooperation’ budget spent on projects with positive expected impacts is higher than the share of total budget allocated to the theme in general, or, in other words, that in relation to the theme’s budget its contribution to the EU SDS objectives is disproportionately high. Likewise, an index below 100 indicates a disproportionately low contribution to EU SDS objectives in relation to the budget allocated to the theme.

<sup>7</sup> It has to be noted that the EU SDS key challenge “climate change and clean energy” mainly refers to energy-related objectives. The Europe 2020 strategy’s challenge of moving towards a “low carbon economy”, which was dealt with in Policy Brief No. 2, has a broader understanding of climate change, and is thus addressed even more by research under the FP7’s ‘Cooperation’ programme.

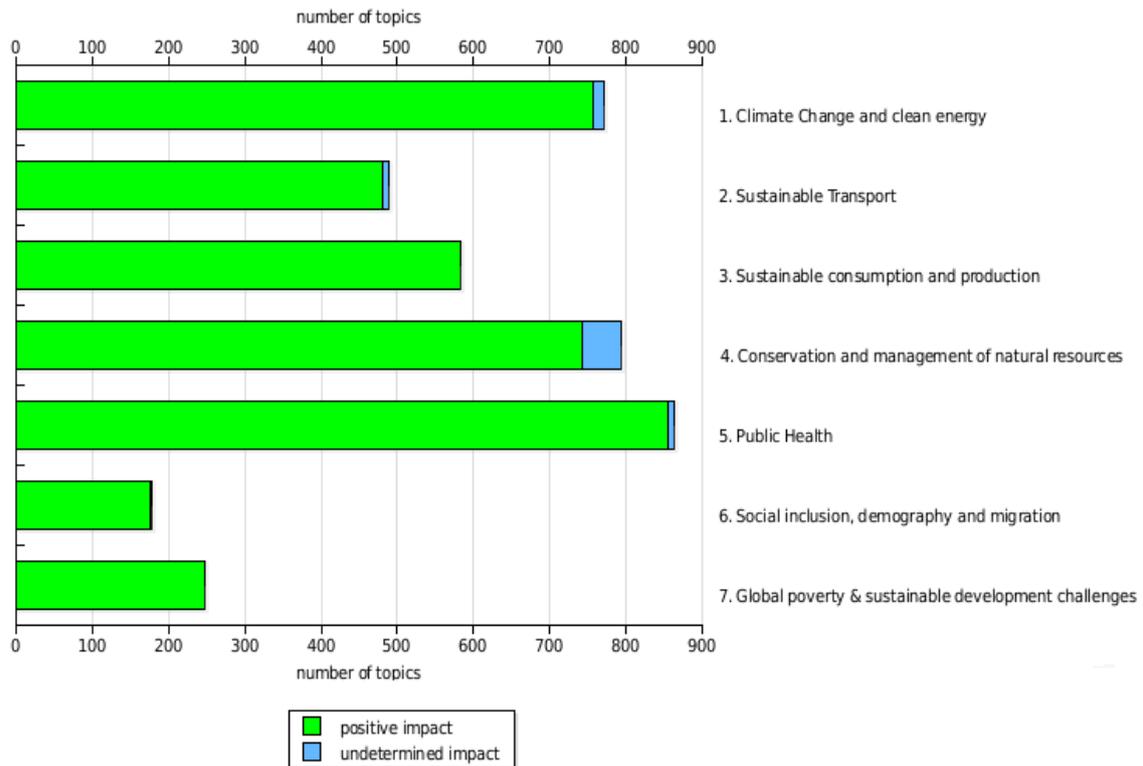


Figure 6: Number of topics contributing to the EU SDS key challenges (WPs 2007-2013)<sup>8</sup>

### How is the EC contribution distributed across the EU SDS key challenges?

**The highest amounts of FP7 funding are allocated to EU SDS objectives related to public health and climate change**

In terms of EC funding provided to the research projects carried out under FP7’s ‘Cooperation’ programme, Figure 7 shows a similar picture as presented above. Projects contributing to the key challenge “public health” receive a funding of € 8.6 billion, followed the key challenge “climate change and energy” with a total EC contribution of € 7.6 billion.

Again, projects contributing to the key challenges “social inclusion, demography and migration” and “global poverty and sustainable development challenges” range at the lower end of the scale, with a total EC contribution of € 1.3 billion and € 1.6 billion respectively.

<sup>8</sup> Since each project may have expected impacts on more than one operational objective and/or key challenge, the sub-totals (number of projects and amount of funding per key challenge) should not be added up as this would result in potentially overestimated figures!

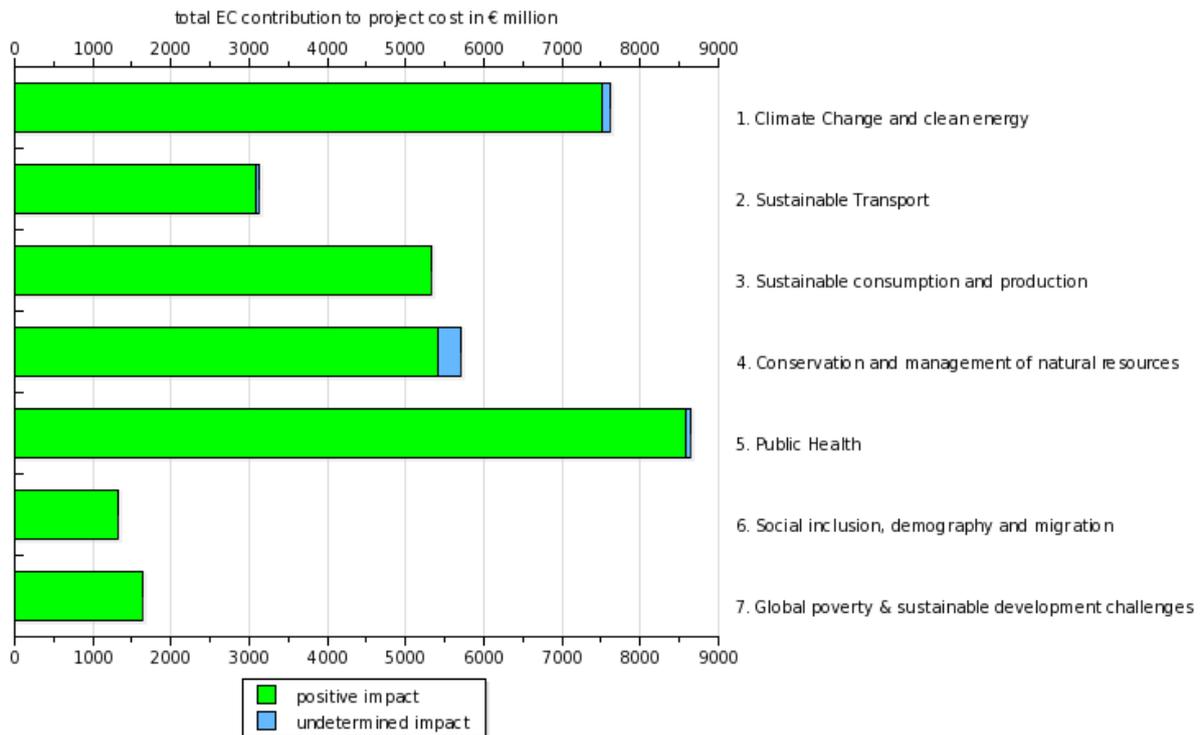


Figure 7: Total EC contribution to projects contributing to the EU SDS key challenges (€ million) (WPs 2007-2013)<sup>9</sup>

### How did the FP7 contribution to SD change over time?

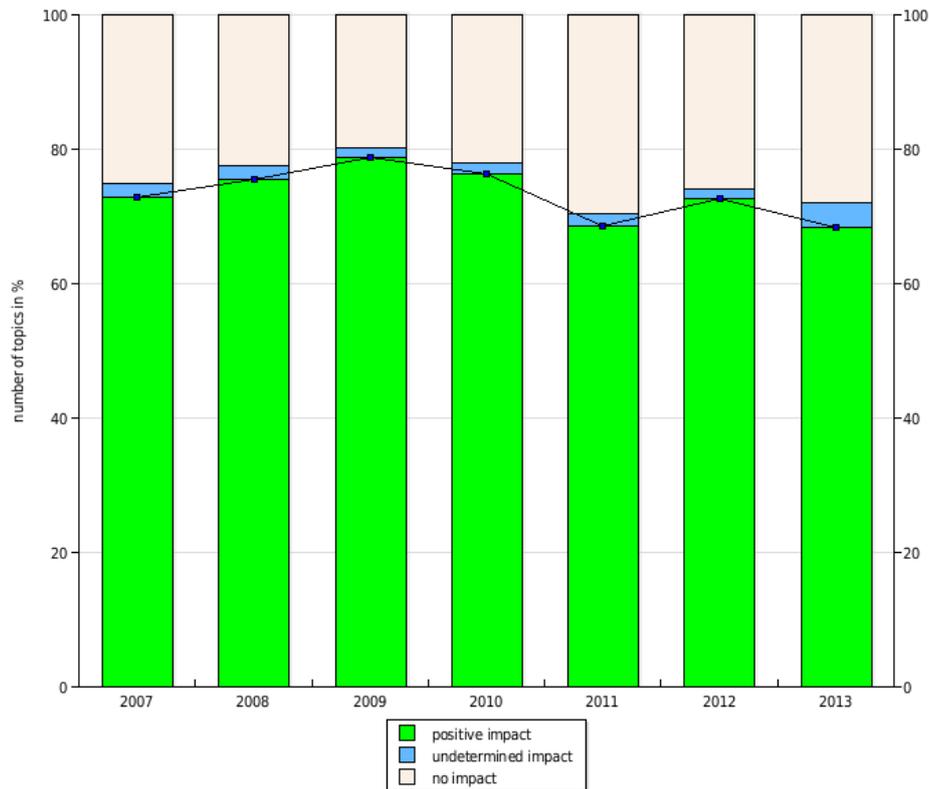
**The share of SD relevant topics in FP7 peaked in 2009, but has generally fallen since then**

As shown in Figure 8 the share of topics with impacts on EU SDS objectives rose from 2007 until 2009 to almost 80 %, but then fell more or less continuously below 70 % by 2013.

The drop since 2009 reflects strong fluctuations in the share of SD-relevant research of about 10 percentage points from one year to another, in particular in the themes Agriculture (KBBE), ENVIRONMENT and TRANSPORT. While these themes have experienced an overall fall in the proportion of SD-relevant research since 2009, the share has remained more or less constant for the themes HEALTH (at around 90 %) and ENERGY (at 87 %), and has increased by 10 percentage points or more for the themes Social Sciences (SSH) and SPACE.

The share of topics with undetermined impacts experienced a decline from 2.1 % in 2007 to 1.4 % in 2009, but increased to 3.8 % by 2013.

<sup>9</sup> It is important to note that not all topics called for are being translated into action by funding of projects: in the Specific Programme 'Cooperation' from 2007-2013, projects are being funded under some 2,628 topics only (81 % of all topics called for). However, more than one project may be funded under one topic. Since each project may have expected impacts on more than one operational objective and/or key challenge, the sub-totals (number of projects and amount of funding per key challenge) should not be added up as this would result in potentially overestimated figures!



**Figure 8:** Share of topics contributing to EU SDS objectives in the Work Programmes 2007 to 2013

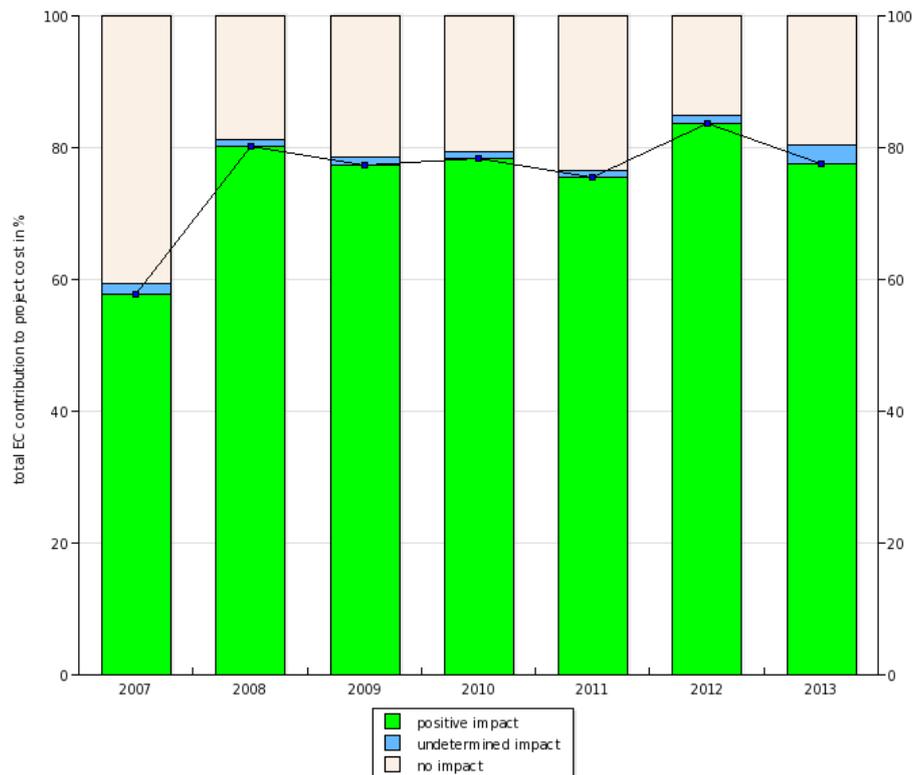
**The share of EU co-financing to projects with expected impacts on EU SDS objectives has grown since 2007 and peaked in 2012**

Figure 9 shows the development of EC contribution allocated to projects with expected impacts on EU SDS objectives over the Work Programmes 2007 to 2013.

In the first two years of FP7 (from 2007 to 2008), the trends in total EC contribution and in the share of funding for projects with expected impacts moved in opposite directions; the total EC contribution dropped from € 4.4 billion in 2007 to € 2.7 billion in 2008, while the share of funding for projects with expected impacts increased significantly, from below 60 % in 2007 to more than 80 % in the following year.

Since then, changes in total EC contribution and in the share of funding for SD-relevant research have been much less pronounced. Total EC contribution increased continuously until 2011, before falling back in 2012 and increasing again to 4.7 billion in 2013. The share of funding contributing to the EU SDS objectives followed the opposite pattern - falling to slightly above 75 % in 2011 and increasing again to above 83 % in 2012.

At the same time, the share of EC contribution allocated to projects with undetermined impacts increased between 2007 and 2013, from 1.7 % to 2.8 % respectively.



**Figure 9:** Share of EC contribution to projects contributing to EU SDS objectives in the Work Programmes 2007 to 2013<sup>10</sup>

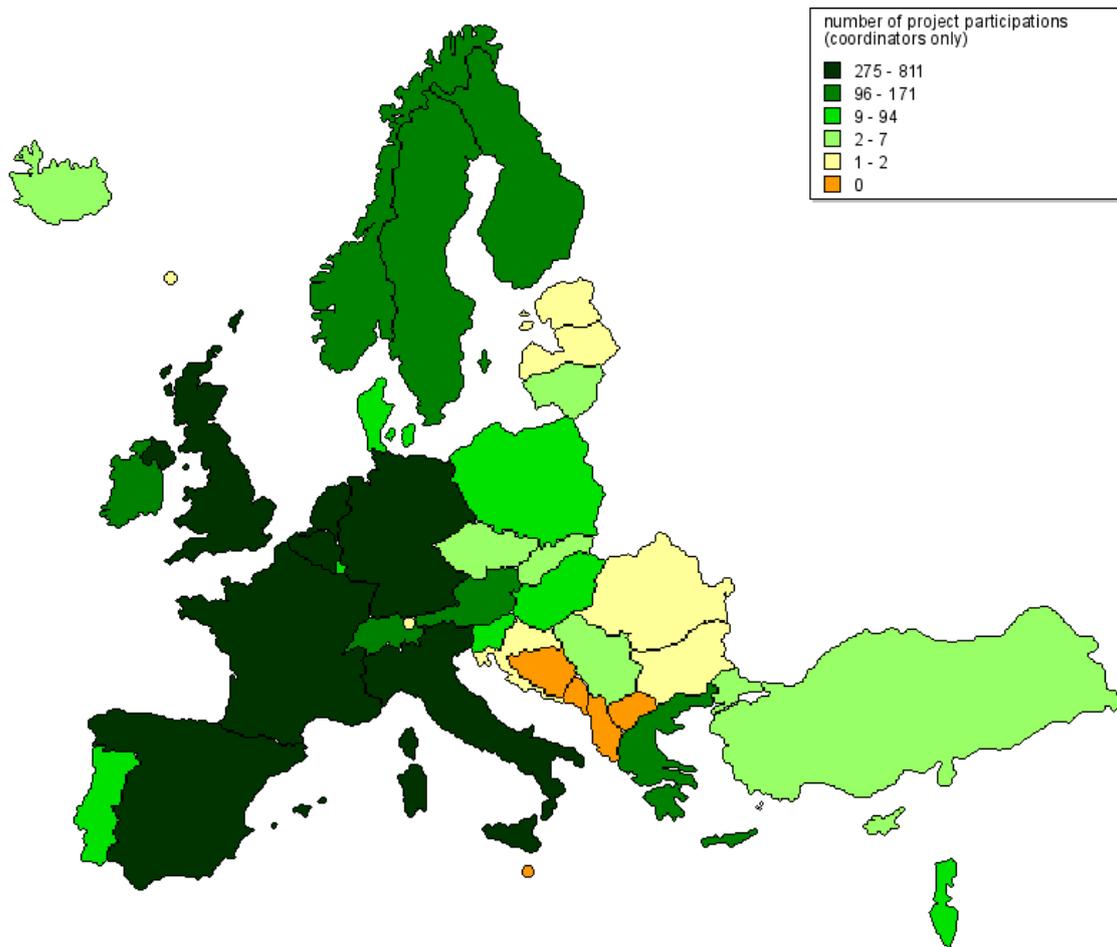
### Where are the centres of excellence in SD-related research?

**Germany, the United Kingdom, Italy and Spain are the centres of excellence in FP7 research contributing to EU SDS objectives**

The map in Figure 10 shows the number of coordinated projects contributing to EU SDS objectives in EU Member States (MS) and Associated Countries. Countries which can be considered as centres of excellence for SD-relevant research<sup>11</sup> in FP7 (due to their large number of coordinated projects) are Germany (811 projects) followed by the United Kingdom (645 projects), Italy (514 projects) and Spain (512 projects). Notably, the share of projects coordinated by organisations from Eastern European countries is rather low.

<sup>10</sup> It is important to note that not all topics called for are being translated into action by funding of projects: in the Specific Programme 'Cooperation' from 2007-2013, projects are being funded under some 2,426 topics only (75 % of all topics called for). However, more than one project may be funded under one topic.

<sup>11</sup> For the purpose of this analysis, it is assumed that institutions from countries which are responsible for the coordination of projects are characterized by an exceptional scientific knowledge base and the essential coordination skills to implement the respective project. Therefore countries with a high number of coordinated projects can be seen as leaders in the respective field of research.

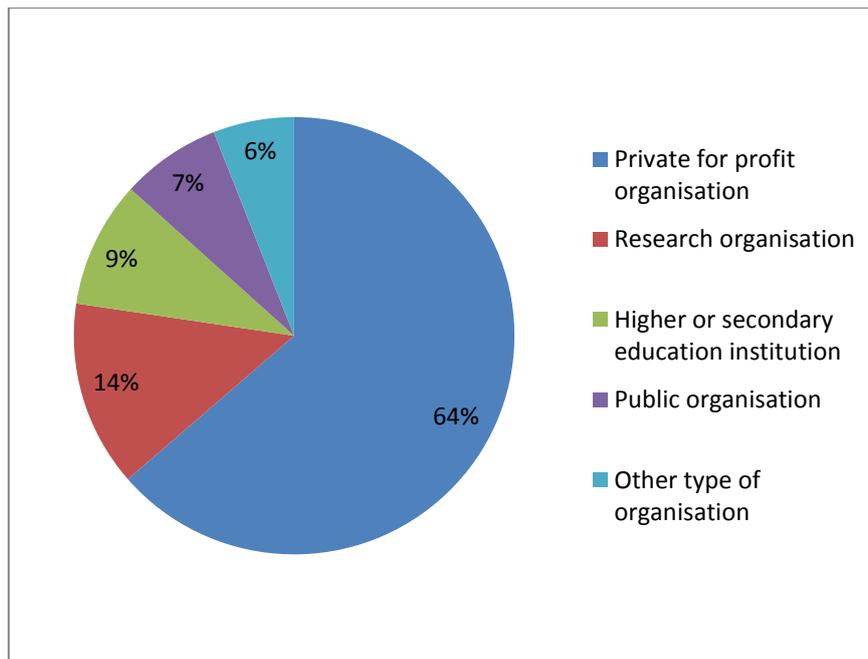


**Figure 10:** Geographical representation of the coordinators of projects that have an impact on the EU SDS objectives in EU Member States and associated countries (WPs 2007-2013)

### Which types of organisations and projects received funding under SP ‘Cooperation’?

**Almost two thirds of organisations participating in SP ‘Cooperation’ are private for profit**

Figure 11 below shows the share of the different organisation types participating in SP ‘Cooperation’ projects. Private for profit organisations exceed by far all other organisation groups, with almost two thirds (64 %) of all organisations coming from this sector. Research organisations constitute the second largest group (14 %), followed by higher or secondary education institutions (9 %). Only 7 % of the participating organisations are public bodies, and the remaining 6 % are of the type “other”, which also includes CSOs (civil society organisations).



**Figure 11:** Share of organisations in SP 'Cooperation' by organisation type (WPs 2007 to 2013)

**70 % of private for profit organisations only participated once in SP 'Cooperation', while more than half of universities and research organisations run at least two projects**

The picture changes quite dramatically when looking at project participations, referring to the number of organisations times the number of the projects they are participating in. Figure 12 below reveals that private for profit organisations still are in the lead, but with a much lower share of 34 % of all participations. They are closely followed by higher or secondary education institutions, with 33 %, and research organisations, accounting for almost a quarter (24 %) of all project participations. The significantly higher share of higher or secondary education institutions and research organisations in terms of project participations is due to the fact that more than half of these organisations participated in at least two projects, whereas almost 70 % of private for profit organisations participated only once in SP 'Cooperation'.

At the other end of the scale, public bodies and other organisations together accounted for less than 10 % of all project participations in SP 'Cooperation'. In addition, fewer than 20 % of all participations were from Small and Medium-sized Enterprises (SMEs).

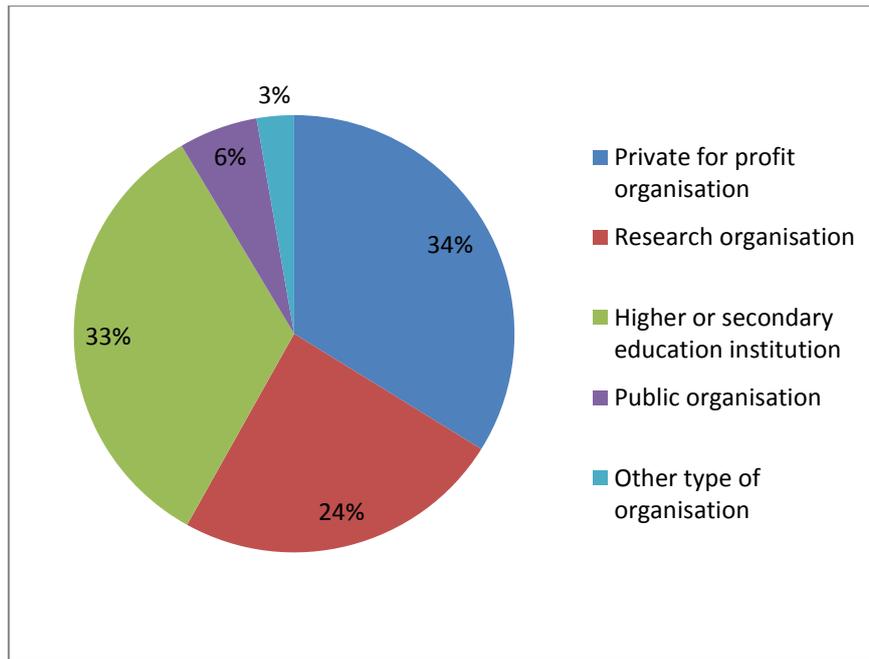


Figure 12: Share of total project participations in SP 'Cooperation' by organisation type (WPs 2007 to 2013)

**Small or medium-scale focused research projects constitute more than half of all SP 'Cooperation' projects**

Figure 13 shows the number of projects in SP 'Cooperation' according to their 'funding scheme', which defines the size and type of a project. More than half of all projects were 'small or medium-scale focused research' projects (3,667 out of 6,967). Some 1,151 projects were 'coordination and support actions' (meaning that no genuinely new research was carried out), followed by some 1,086 'collaborative projects' (this funding scheme does not prescribe the size of the project). 'Large-scale integrating projects' constitute the fourth biggest group (975 projects). Only 12 projects were of the type 'research for the benefit of specific groups'.

**75 % of all EC contribution in SP 'Cooperation' was allocated to small or medium scale focused research and large scale integrating projects.**

Figure 13 additionally provides information on the allocation of EC funds to the different funding schemes in SP 'Cooperation'. 'Small and medium scale research projects' received the highest contribution, with almost € 11 billion, which corresponds to the high number of projects funded under this scheme. 'Large scale integrating projects' are second, with some € 8.3 billion. Despite the small number of projects funded under this scheme, their relatively large size explains the high contribution received from the EC. 'Collaborative projects' were allocated some € 4.6 billion, followed by 'coordination and support action' (€ 1.3 billion). 'Research for the benefit of specific groups' received a much lower contribution of € 18.7 million only, corresponding to the almost negligible number of projects of this scheme.

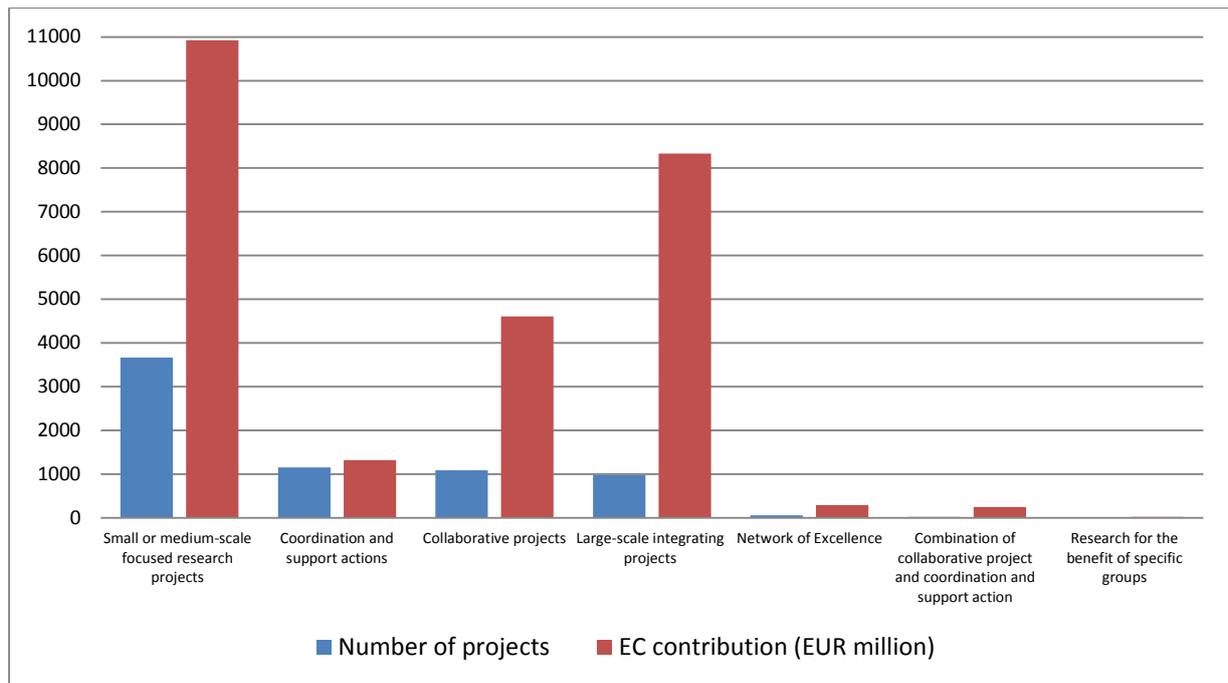


Figure 13: Number of projects and EC contribution in SP 'Cooperation' by funding scheme (WPs 2007 to 2013)

### Concluding overview of FP7 impacts on the EU SDS objectives

**Similar thematic foci of FP7 and EU SDS in the areas of public health, sustainable transport and energy partly predetermine the number of impacts**

To sum up, Table 2 (see below) provides an overview of the impacts each of the ten themes under the Specific Programme 'Cooperation' is expected to have on the 7 key operational objectives of the EU SDS. The data reveals that the distribution of topics contributing to SDS objectives is at least partly predetermined by the thematic structure of SP 'Cooperation'. For example, 13.4 % of all topics in SP 'Cooperation' fall within the theme TRANSPORT and have an expected impact on key challenge 'sustainable transport'. A similar link can be seen between the theme ENERGY and the key challenge 'climate change and clean energy' (6.4 % of all topics) The most prominent link can be observed between the theme HEALTH and the key challenge "public health" (15 % of all topics).

**"Public health" addressed by more than a quarter of all topics**

The key challenge "public health" is addressed by more than a quarter (28.1 %) of all 'Cooperation' topics, mainly from the themes HEALTH and Agriculture (KBBE). Another two key challenges, "climate change and clean energy" and "conservation and management of natural resources", are addressed by a large share of topics as well, 17 % and 16.7 % of all 'Cooperation' topics respectively, mostly from the thematic areas ENERGY and ENVIRONMENT.

**"Conservation and management of natural resources" is addressed in a cross-cutting way**

While the key challenge "sustainable transport" is almost exclusively addressed by topics from the theme TRANSPORT, the key challenge "conservation and management of natural resources" appears to be the most cross-cutting issues since it is addressed by a large share of topics in several 'Cooperation' themes, including ENVIRONMENT, Materials (NMP), ENERGY and, in particular, Agriculture (KBBE).

**Table 2:** Share of topics of the ten 'Cooperation' themes (2, 366 topics) with expected impacts on EU SDS objectives (%) (WPs 2007-2013)<sup>12</sup>

	Climate change and clean energy	Sustainable transport	Sustainable consumption and production	Conservation and management of natural resources	Public Health	Social inclusion, demography and migration	Global poverty & sustainable development challenges
HEALTH	0.0%	0.0%	0.1%	0.0%	15.0%	1.0%	2.1%
Agriculture (KBBE)	1.5%	0.0%	2.2%	4.9%	6.4%	0.1%	0.9%
ICT	1.9%	0.4%	0.5%	0.3%	0.9%	0.5%	0.0%
Materials (NMP)	1.6%	0.2%	3.3%	3.1%	2.0%	0.0%	0.4%
ENERGY	6.4%	0.4%	2.3%	2.4%	0.2%	0.1%	0.2%
ENVIRONMENT	3.2%	0.2%	1.4%	4.2%	1.8%	0.1%	1.2%
TRANSPORT	1.2%	13.4%	1.7%	1.3%	0.5%	0.3%	0.1%
Social Sciences (SSH)	0.3%	0.1%	0.5%	0.2%	0.2%	2.2%	0.7%
SPACE	0.4%	0.1%	0.1%	0.3%	0.2%	0.1%	0.3%
SECURITY	0.6%	0.2%	0.3%	0.0%	1.0%	0.4%	0.1%
Total	17.0%	15.0%	12.3%	16.7%	28.1%	4.8%	6.1%

**“Public health” is addressed by one third of the total EC contribution to SD-relevant projects**

Data in Table 3 below re-emphasise the major role of the key challenge “public health”, accounting for one third (34.7 %) of the total EC contribution provided by the ten ‘Cooperation’ themes to projects contributing to the EU SDS objectives. Table 3 below presents the same analysis as Table 2 above, but from the perspective of funding (total EC contribution) allocated to projects.

**ICT is outperforming ENERGY in terms of EC contribution dedicated to “climate change and clean energy”**

Notably, in terms of number of topics (see Table 2 above) the impact of the ICT theme is relatively low but the picture changes dramatically when looking at the amount of funding provided to ICT projects. Considering the large budget allocated to the ICT theme (see Figure 3 above), its projects prominently contribute to the key challenges “climate change and clean energy” and “public health”. It is interesting to note that the theme ICT – bearing in mind that only about 50 % of its projects actually contribute to EU SDS key challenges<sup>13</sup> – is allocating more project funding than the theme ENERGY in order to address the key challenge “climate change and clean energy”.

Similar to Table 2 above, the project funding allocated to “sustainable transport” is almost exclusively originating from the theme TRANSPORT, accounting for 6.9 % of the total EC contribution to SD-relevant research. Moreover, looking at the other end of the scale, the key challenges “social inclusion, demography and migration” and “global poverty and sustainable

<sup>12</sup> A figure of „0%“ indicates “zero”, i.e. no topics with expected impacts, whereas values of „0.0%“ indicate a share of topics of less than 0.05 %. The figures have been calculated without “weighting”, i.e. they are based on the assumption that a topic, when impacting on more than one key challenge, contributes equally to all affected key challenges. For example, a topic from the theme HEALTH that contributes to the EU SDS key challenges “public health” and “global poverty” has been counted as contributing half (½) to each of them.

<sup>13</sup> Despite the fact that ICT comprises about one third of total EC contribution (30 %, € 7.7 billion) within SP ‘Cooperation’, it only accounts for about 20 % (€ 6.7 billion) of the total EC contribution attributed to EU SDS key challenges.

development challenges” are addressed least prominently, both in terms of number of topics and total EC contribution.

**Table 3:** Share of total EC contribution from the ten ‘Cooperation’ themes (€ 19.6 billion) to projects with expected impacts on EU SDS operational objectives (WPs 2007-2013)<sup>14</sup>

	Climate change and clean energy	Sustainable transport	Sustainable consumption and production	Conservation and management of natural resources	Public Health	Social inclusion, demography and migration	Global poverty & sustainable development challenges
HEALTH	0.0%	0.0%	0.2%	0.0%	20.9%	1.2%	2.2%
Agriculture (KBBE)	0.8%	0.1%	1.7%	2.4%	3.2%	0.0%	0.2%
ICT	8.8%	1.6%	2.2%	1.1%	5.9%	1.8%	0.0%
Materials (NMP)	2.7%	0.2%	4.6%	4.4%	2.6%	0.1%	0.2%
ENERGY	4.2%	0.4%	1.8%	1.7%	0.0%	0.0%	0.1%
ENVIRONMENT	2.0%	0.1%	1.1%	2.4%	0.9%	0.0%	0.8%
TRANSPORT	1.0%	6.9%	0.9%	0.7%	0.1%	0.1%	0.0%
Social Sciences (SSH)	0.1%	0.0%	0.2%	0.1%	0.1%	1.0%	0.3%
SPACE	0.5%	0.2%	0.1%	0.4%	0.3%	0.0%	0.3%
SECURITY	0.4%	0.2%	0.2%	0.0%	0.8%	0.1%	0.1%
Total	20.5%	9.9%	12.9%	13.1%	34.7%	4.5%	4.4%

<sup>14</sup> A figure of „0%“ indicates “zero”, i.e. no projects with expected impacts, whereas values of „0.0%“ indicate a share of total EC contribution to projects of less than 0.05 %. The figures have been calculated without “weighting”, i.e. they are based on the assumption that a topic, when impacting more than one key challenge, contributes equally to all affected key challenges. For example, a topic from the theme HEALTH that contributes to the EU SDS key challenges “public health” and “global poverty” has been counted as contributing half (½) to each of them.

## Background & methodological notes

In order to assess how research funded within FP7 – in particular from the Specific Programme ‘Cooperation’, given its overall aim of “contributing to sustainable development” – contributes to the key challenges and objectives of the EU SDS, a monitoring system was set up by the [Vienna University of Economics and Business \(WU Vienna\)](#) in cooperation with [Delft University of Technology \(TU Delft\)](#) and [maystorm software GmbH](#) on behalf of [DG Research and Innovation](#). Since April 2010, the results of the monitoring of all Work Programmes published so far under FP7 (i.e. the Work Programmes 2007-2013) are available to the public via the public platform [www.fp7-4-sd.eu](http://www.fp7-4-sd.eu).

The monitoring system consists of two main elements: (i) scientific evidence-based screening, and (ii) a public platform allowing users to interactively analyse the results from various points of view. These two main parts and the methodology behind them will be described in detail below.

## Scientific evidence-based screening

The monitoring system combines two main features of European policy: FP7 on the one hand, with its themes and activities (mainly from the ‘Cooperation’ programme), and the key challenges and objectives of the EU SDS on the other. In order to make this combination operational, a **qualitative text analysis of the topic descriptions** (a ‘topic’ is the most precise point of the hierarchy applied within FP7, outlining the needs, aims and expected impacts of the research to be undertaken concerning a specific issue) that are published in the annual FP7 Work Programmes has been undertaken. The key challenges and operational objectives specified in the renewed EU SDS of 2006 have in this regard been used as a [referential framework](#)<sup>15</sup>.

The initial screening was conducted by experts from WU Vienna and TU Delft, with the aim of identifying positive (i.e. supporting the EU SDS objectives), negative (i.e. conflicting with EU SDS objectives) or undetermined (i.e. impacts which due to a lack of scientific evidence cannot yet be categorised as positive or negative) expected impacts. In order to ensure the quality and accuracy of the identified impacts, some 10 % of the topics (including those having negative or undetermined impacts) were additionally validated by thematic experts from [Ecologic Institute](#), [INFRAS Research & Consulting](#), and [ISI Fraunhofer](#).

When interpreting the results of the monitoring system, it is important to keep in mind that the results are based on **ex-ante evaluations of expected impacts** specified in the topic descriptions, and must not be understood as *ex-post* impact assessments of projects that are or have actually been carried out under a particular topic. However, as FP7 comprises a peer review process which ensures that the projects selected for funding actually meet the expected impacts outlined in the topic descriptions, the results provided by the monitoring system can nevertheless be seen as a “proxy” of actual impacts.

For a [more detailed description of the methodology behind the scientific evidence-based screening](#), please consult the monitoring system’s website [www.fp7-4-sd.eu](http://www.fp7-4-sd.eu).

<sup>15</sup> In addition to the seven EU SDS Key Challenges, an additional (eighth) category was introduced (“additional SD objectives”) containing a number of objectives that are not included in the EU SDS, but are stated in national SD strategies (NSDS), such as ‘sustainable regional development’, ‘sustainable tourism’, ‘SD governance’ or ‘public security & protection’. By including these additional objectives, the monitoring system allows to not only monitor the contribution of FP7 to the EU SDS, but also to the most common objectives stated in national SD strategies.

## **Interactive database at [www.fp7-4-sd.eu](http://www.fp7-4-sd.eu)**

In order to make the results of the monitoring system available to the public, to allow customised analyses according to the interests of individual users, and to stimulate a public debate on particular issues, a public platform has been set up at [www.fp7-4-sd.eu](http://www.fp7-4-sd.eu) that – as one of its main features – includes an interactive database which allows analysing the data of the monitoring system from various points of view. To this end, it offers four so-called “Views” producing graphs, maps and tables which can be manipulated by applying several filter options in order to focus the analysis on particular FP7 themes, Work Programmes and EU SDS objectives. The analyses presented in the subsequent section of this quarterly report have been produced by combining the available “Views” and filter options.

In addition to the topics included in the FP7 Work Programmes, information of projects which are or have actually been carried out within FP7 has been integrated into the interactive database in order to allow even more sophisticated analyses, such as analysing the amount of funding (“EC contribution”) dedicated to research on “climate change”, “low carbon economy”, “SD governance”, etc., to name only a few. Moreover, the analyses can be broken down to the national and regional levels, allowing for a comparison across EU Member States or between regions within a particular country.

The monitoring system comprises information on about 3,234 topics (from the ‘Cooperation’ Work Programmes 2007 to 2013) and 6,967 projects (from the years 2007 to 2013) with more than 79,000 project participations and a total EC contribution of € 25.7 billion.

In order to stimulate a public debate, the database allows ‘zooming’ into the detailed screening results, i.e. the impacts a topic is expected to have on the key challenges and operational objectives of the EU SDS (see above), and additionally enables users to provide feedback.

For a [more detailed description of the monitoring system’s interactive database](#), please consult the guideline at [www.fp7-4-sd.eu](http://www.fp7-4-sd.eu).

