



STI Roadmaps for Sustainable Development Goals

SDG Interlinkages in STI outputs



Relationship between Goals: tackling similar challenges together

The Sustainable Development Goals are a cohesive agenda. Goals and targets are interrelated, and development pathways addressing a goal can have positive, as well as negative, consequences on other goals. This final section presents an analysis of the overlap between the STI activities, results and capacities in the different goals.

The following heat map shows the share of STI records which have been classified as thematically related to more than one goal. In particular, the table provides the percentage of STI activities related to the SDGs in rows, which are also related to the SDGs in columns. Cells with a higher percentage reveal pairs of goals, which share a common scientific, technological or innovative ground. Goals 8, 9 and 17 have been excluded due to their transversal nature.

Share of STI records which have been classified as thematically related to more than one goal

	SDG 1	SDG 2	SDG 3	SDG 4	SDG 5	SDG 6	SDG 7	SDG 10	SDG 11	SDG 12	SDG 13	SDG 14	SDG 15	SDG 16
SDG 1		10%	13%	7%	1%	3%	4%	28%	14%	-	11%	1%	4%	14%
SDG 2	2%		4%	1%	1%	8%	5%	3%	6%	8%	9%	2%	17%	1%
SDG 3	1%	2%		1%	2%	4%	2%	3%	10%	2%	6%	-	2%	3%
SDG 4	2%	1%	4%		2%	-	-	9%	4%	2%	3%	-	1%	6%
SDG 5	1%	4%	21%	8%		-	-	18%	4%	-	-	-	-	26%
SDG 6	1%	6%	7%	-	-		7%	1%	14%	17%	16%	3%	10%	-
SDG 7	-	2%	2%	-	-	3%		1%	11%	7%	14%	-	3%	1%
SDG 10	7%	3%	8%	8%	5%	1%	3%		8%	1%	2%	1%	3%	14%
SDG 11	1%	3%	11%	1%	-	8%	14%	3%		15%	18%	1%	6%	4%
SDG 12	-	6%	3%	1%	-	16%	14%	1%	26%		13%	1%	6%	1%
SDG 13	1%	5%	9%	1%	-	12%	23%	1%	23%	9%		2%	14%	1%
SDG 14	1%	8%	1%	-	-	15%	1%	3%	10%	5%	11%		25%	-
SDG 15	1%	10%	2%	1%	-	8%	4%	2%	8%	5%	14%	4%		1%
SDG 16	3%	1%	8%	5%	6%	-	3%	14%	9%	1%	2%	-	1%	

Source: SIRIS Academic for European Commission, Joint Research Centre. Analysis based on Scopus (Elsevier), CORDIS, Innovation Fund and EPO.

The main STI links between goals are described below:

- 28% of STI records thematically related to Goal 1. No poverty are also related to Goal 10. Reduced Inequalities.
- Or, 26% of STI records thematically related to Goal 12. Responsible Consumption and Production are also related to Goal 11. Sustainable Cities and Communities.
- Goal 2. Zero Hunger is linked to Goal 15. Life on Land since the development of sustainable agriculture can have positive impacts on land ecosystems

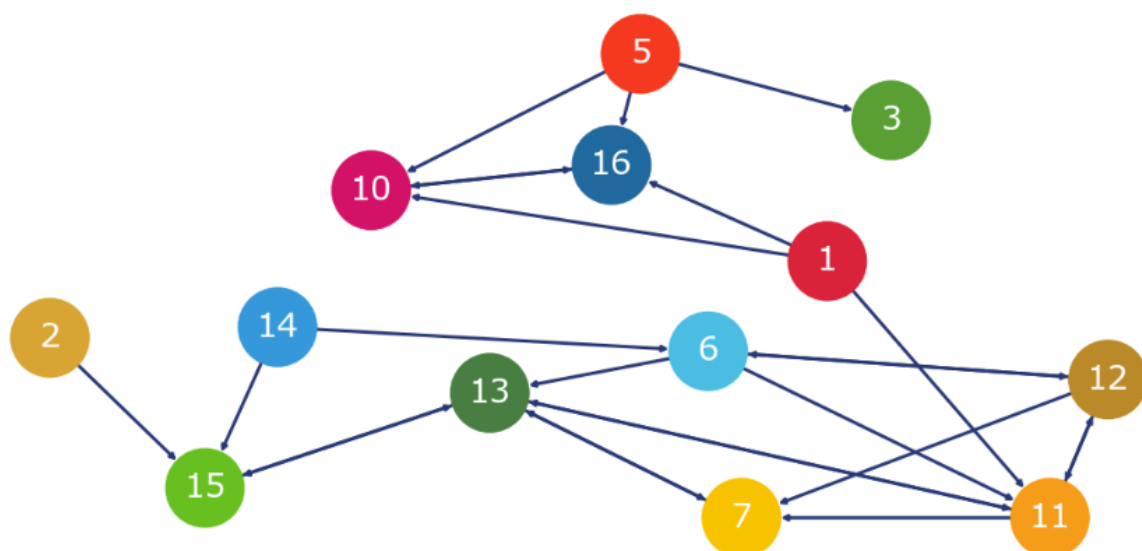
- Goal 5. Gender Equality is closely connected to Goal 3. Good Health and Well-being and Goal 16. Peace, Justice and Strong Institutions, and to a lesser extent to Goal 10. Reduced Inequalities. The first link is due to the area of women health, object of attention in goals 5 and 3. The other relationships are related to increasing inclusiveness and participation and reducing discrimination.
- The goals that link human industry and settlement with environmental impacts cluster together in binomials or trinomials, in concentric circles from the activity to the impact, notably:
 - Goal 6. Clean Water and Sanitation is fairly connected to Goal 12. Responsible Consumption and Production and Goal 13. Climate Action.
 - Goal 11. Sustainable Cities and Communities is fairly connected to Goal 12. Responsible Consumption and Production and Goal 13. Climate Action.
 - Goal 12. Responsible Consumption and Production is reasonably linked to Goal 6. Clean Water and Sanitation and strongly connected to Goal 11. Sustainable Cities and Communities.
 - Goal 13. Climate Action is considerably linked to Goal 7. Affordable and Clean Energy and Goal 11. Sustainable Cities and Communities.
- Goal 14. Life Below Water is closely connected to Goal 15. Life on Land, connecting the ecosystem-minded goals which share scientific disciplines, activities and impacts.

The figure below summarises these relations, for the pairs of goals above a threshold:

Relationship between the goals visualised as a graph

Goal similarity network

Goals which share more than 14% of STI records in common



Source: SIRIS Academic for European Commission, Joint Research Centre. Analysis based on Scopus (Elsevier), CORDIS, Innovation Fund and EPO.

These connections can allow stakeholders to understand the SDG-oriented opportunities up-stream and down-stream from their concrete area of activity or expertise. For policy-makers it allows to identify areas and topics which can tackle more than one challenge, and to characterise and exploit the transversal relationships to increase the impact of policies and actions.