Co-financed by the European Regional Development Fund

Inspire Policy Making with Territorial Evidence

USER GUIDE //

ESPON's SDGs benchmarking tool

Supporting regional governments in achieving the SDGs

User guide // December 2020

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1   Introduction to the SDG benchmarking tool

1.1   What is the SDG benchmarking tool and what can I use it for?

The SDG benchmarking tool is a simple, intuitive and user-friendly web application that helps policy makers turn a large volume of indicators in insights contributing to providing answers to questions such as:

- Is my region making progress towards achieving the SDG targets?
- Is my region lagging behind or leading in achieving SDGs compared to other similar regions?
- From which regions in Europe can I draw inspiration to progress towards the SDGs?
- Which regions would benefit from targeted support to help step up action to improve their progress and thus contribute substantially to the national progress on the SDGs?

1.2   How was the selection of the indicators performed?

For the framework at NUTS 2 level the Eurostat's SDGs reference indicator framework was adopted, which is used to monitor progress towards the SDGs in the EU context and particularly at the national level[1]. This framework and associated indicator set is the result of a consultative process involving Commission services, Member States, Council Committees, users, NGOs, academia and international organisations. The initial set of indicators was adopted in April 2017 by the Working Group on SDG-related reporting of the Commission Services, mandated by the Inter Service Steering Group on SDGs, and received the favourable opinion of the European Statistical System Committee (ESSC) in May 2017. The criteria used for selecting indicators are policy relevance, admissibility requirements and quality grading. The framework limits the maximum number of indicators for each SDG to six, with it also being possible to have "multi-purpose indicators" to monitor progress towards more than one SDG. The Eurostat approach allows for new indicators to replace existing indicators, provided they better meet the criteria.

However, since the Eurostat framework applies at the national level the proposed framework was validated for its relevance at the regional level by consulting the approach of the OECD in its recently published report "A Territorial Approach to the Sustainable Development Goals" (henceforth referred to as the OECD report) and by piloting the proposed framework with three EU regions.

Indicators: To select the indicators for the SDGs benchmarking tool, a three-step approach has been followed.

Firstly, to achieve alignment with the Eurostat approach in terms of the conceptual choices made by goal an examination of the availability of indicators included in Eurostat's SDGs & me tool[2] has been conducted.

Secondly, the indicator framework has been checked for its relevance at the regional level by cross checking the approach and selection of indicators of the OECD report "A Territorial Approach to the Sustainable Development Goals" and by piloting the indicator framework with three regions: 1) Eastern and Midland (IE), 2) Catalonia (ES) and 3) Eastern Slovenia (SI).

Thirdly, in the case of remaining gaps compared to Eurostat's SDGs & me and OECD indicators RACER criteria (Relevant, Acceptable, Credible, Easy and Robust), (DEVCO, 2016[3]) were considered for the selection of alternative indicators.

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[1] https://ec.europa.eu/eurostat/documents/276524/9479054/2019-01-08__EU_SDG_indicator_set_2019_review_final_report.pdf

[2] https://ec.europa.eu/eurostat/cache/digpub/sdgs/

[3] https://europa.eu/capacity4dev/file/29942/download?token=1i6WIATp

1.3   How were targets defined?

To define the targets a three-step approach has been followed:

1. Review of the OECD target setting: Specifically, the targets defined in the report "A Territorial Approach to the Sustainable Development Goals". The majority of them, with a few exceptions, apply a best performer approach to set the boundaries. This is a second-best approach as ideally target setting should correspond to the optimal state described qualitatively within the UN targets. Therefore, the team has suggested the most suitable approach for boundaries setting for each indicator based on associated UN and EU targets.

2. Review of the associated UN targets: a typology based on the language used has been created distinguishing predominantly between reduce by half, ensure e.g., equal access, substantially increase, end e.g., hunger, double, universal/full and sustain. The latter typology allows us to build on the definition of a quantifiable target. While the UN language is the reference the final target needs to be tailored to the EU reality (see step 3).

3. Review of EU targets: a non-exhaustive review of EU targets has been performed by examining EU strategy documents (e.g. Green deal, Europe 2020 targets, the 2030 climate & energy framework etc.). Targets that are quantified are directly used.

Note that in several cases a best performer approach has been used in particular when UN or EU targets were not identified. A best performer approach is based on the OECD approach i.e. based on an unweighted average estimate using the top performing region of each country. This is a second-best approach given the lack of quantitative targets for all the indicators. The value of the target should be interpreted with caution as the best performer value may represent an underestimation or overestimation of the associated target described qualitatively. For each indicator the proposed targets are provided in Annex. The baseline period used is the first period 2011-2013.

1.4   How are indicators normalized?

The composite indicator, radar plot and progress tracker make use of normalized indicator values. The indicators scoring is normalized to a scale from 0 to 100, where 0 means worst performance, 100 best performance. The maximum scaled value (100) is set based on a theoretical perfect performance corresponding to the set target (for example, the best possible school enrolment is 100% of students). Where there is no such theoretical maximum, the maximum scaled value is set based on the best performance of any region in the last 10 years. The following formula has been used:

$x_{normalised} = (x-min(x))/(max(x) - min(x)) * 100$

Where:

x = original indicator value;

$x_{normalised}$ = normalized indicator value at a scale from 0-100;

$min(x)$ = worst performing region over all years available;

$max(x)$ = target value defined.

1.5   How are composite indicators calculated?

The composite indicators are constructed as a simple average of individual normalized indicator scores adjusted to corresponding target settings. The composite indicator for a region is calculated only in case all indicators within the goal are available.

1.6   How can I filter the data?

The user can select from the following filters:

1. Sustainable development goals: Select a goal to view results on the map.
2. Choose indicator: Choose an indicator or the composite for the goal from the drop down list.
3. Select your region: The region selected is indicated by a dark blue colour.
4. Compare regions: Select a benchmarking group of regions with characteristics similar to your region. You may select multiple characteristics:

Typology	Source	Method
Population density	EUROSTAT [TGS00024]	Metric: Persons per square kilometer Bands: 1. ≥ 3.4 to 56.9 2. ≥56.9 to 85.8 3. ≥85.8 to 126.1 4. ≥127 to 212.2 5. ≥213.2 to 410.6 6. ≥413.2 Level: Nuts2
Urban-Rural	EUROSTAT [urt_d3area][4] and own compilation for NUTS2	1. predominantly urban region 2. intermediate region 3. predominantly rural region
Metropolitan regions	EUROSTAT and own compilation for NUTS2	1. metropolitan region 2. non-metropolitan
Income	EUROSTAT [reg_eco10]	1. less developed with less than 75% 2. regions in transition between 75% and 90% 3. developed regions with GDP per capita over 90% of the EU average
Regions in the same country		
Regions with similar results	Based on SDGs dataset	Quartiles based approach[5]

For example, the user can compare a chosen region with other regions by choosing a particular filter/s. If the user wants to compare its region regarding the population density, the tool will visualise only those regions which are in the same category of the population density as a chosen region. Furthermore, the user can add additional layers to filter the data from the list of typologies, which in turn adds additional criteria in visualising the data based on the criteria of a chosen region.

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[4] See: https://ec.europa.eu/eurostat/cache/metadata/en/reg_typ_esms.htm

[5] Quartile is a statistical term which divides the data into quarters or four defined intervals. It basically divides the data points into a data set in 4 quarters on the number line. Quartiles based approach is applied on composite indicators.

2   How can I read the SDG benchmarking tool?

2.1   How can I read the map?

The SDG benchmarking tool includes a map to visualize the indicator values using ten classes of even intervals ranging from green to red, where the green colour means the best performance possible and red is the worst performance possible. The values presented are the values from original data source. Besides a description of the indicator also the measurement unit is indicated.
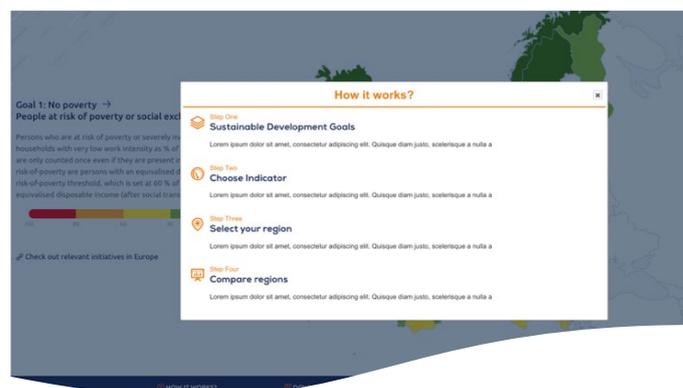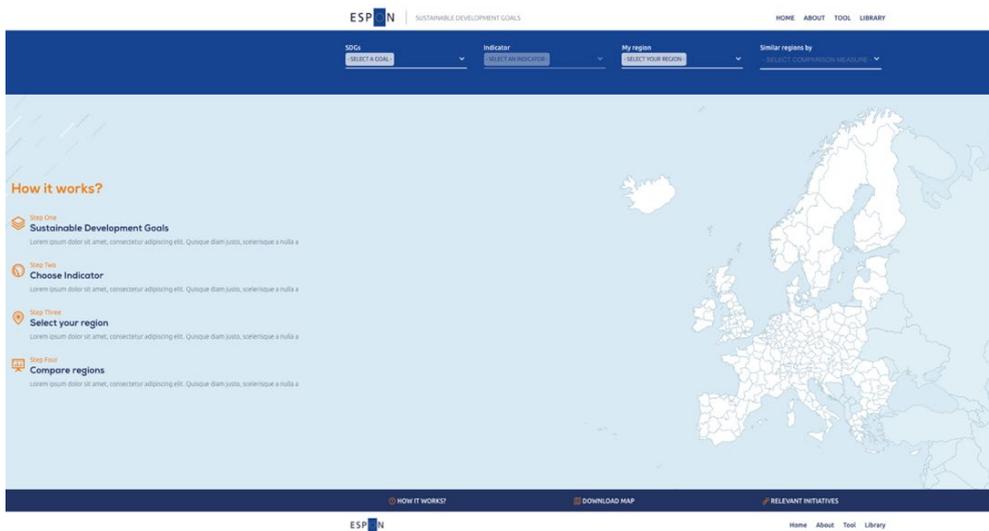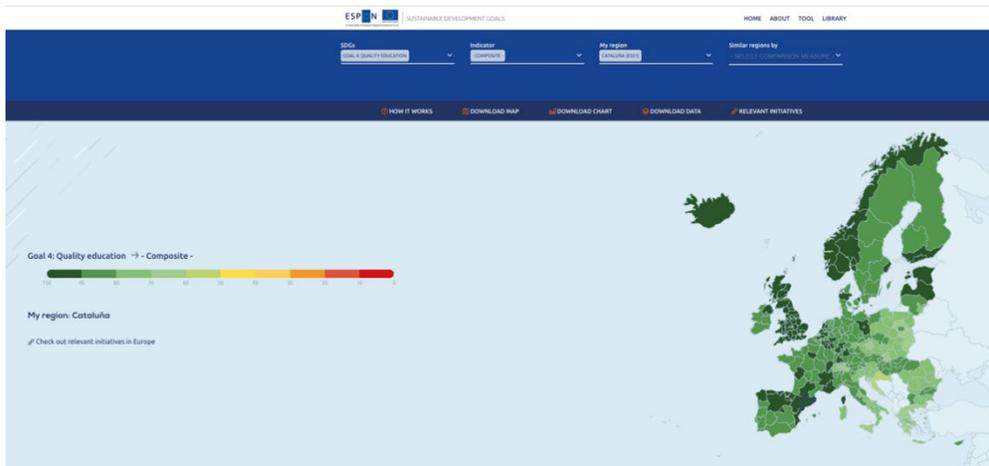
2.2   How can I read the benchmark visual?

The SDG benchmarking tool displays regions' distance to the targets associated to each indicator using a radar plot. The targets, defined per indicator (see Annex), have been used to normalise the indicator values by setting the target to 100 to ease interpretation. The radar plot, besides visualising the distance to the targets, also benchmarks regions between themselves and vis-à-vis the median of the benchmark group[6]. By clicking on the outer circle the indicator is selected for both the radar and progress tracker. If no benchmark criterion is selected, all regions are included in the radar plot.
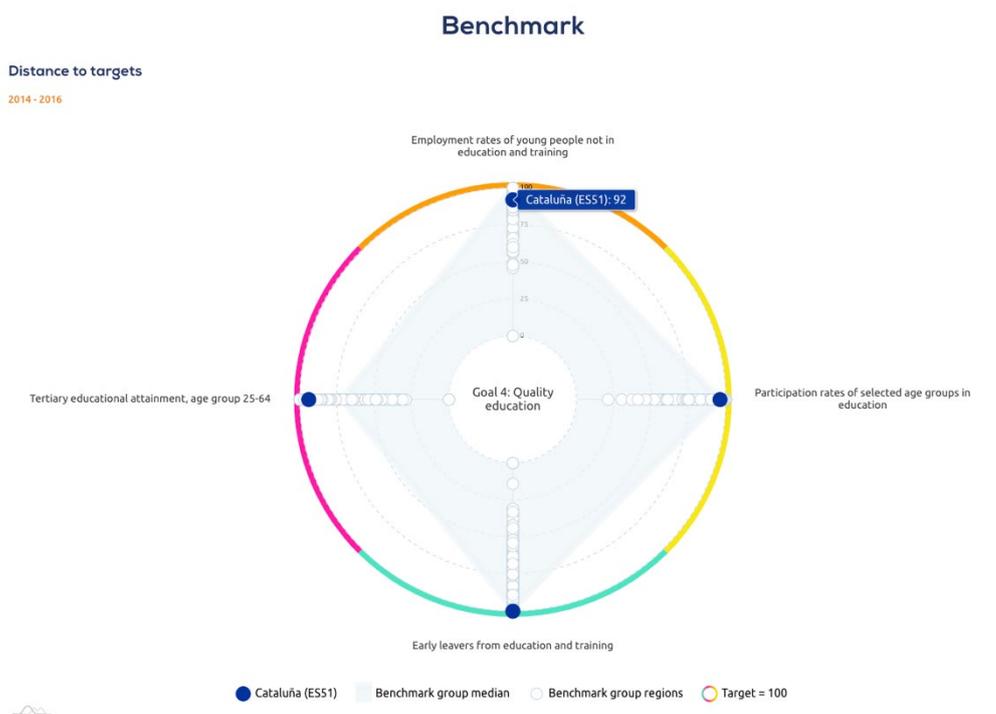
2.3   How can I read the progress tracker?

The SDG benchmakring tool embeds a progress tracker over time for two periods, 2011-2013 and 2014-2016. The progress tracker besides allowing users to easily track positive or negative trends per indicator it also benchmarks regions' progress between them and vis-à-vis the median of the benchmark group. If no benchmark criterion is selected, all regions are included in the progress tracker.

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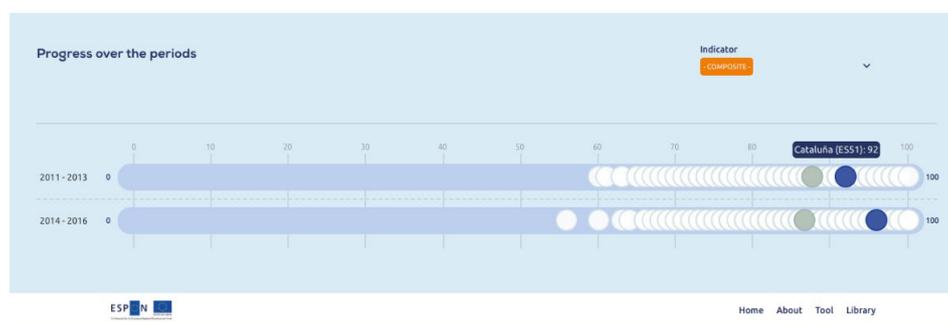
[6] Benchmark group median in statistics is defined as a value separating the top and bottom 50% of the benchmarking group.

2.4   How can I use the map, graphs and data?

The map, the graphs and the data selected can all be downloaded for further use in own reports and analyses. An example including indicative analysis using the data visualization of the SDG benchmarking tool is provided in the guidance sheet (see section "Found out more" within the tool).

2.5   How can I use the library?

The SDG library includes examples of regional initiatives and policies.

Menu option "Initiatives" provides relevant initiatives related to SDGs which are tagged geographically at the regional or country levels. This option allows users to trace initiatives of relevance in their local context.

Initiatives are tagged by all the relevant SDGs, hence, one initiative may be tagged by more than one SDG.

The initiatives can be accessed via an indicator map in which case it redirects the user to the library and the SDG selected. One can also visit the library directly and use the filters to browse the available non exhaustive material.

The collection of initiatives is based on desk research. Each initiative has been recorded including the following components: Region; Country; Initiative; Dates; URL; About; SDG; Status/Progress/Experience. The attribution to the SDGs is based on identifying all possible SDGs within the initiative.

Menu option "Policies" provides relevant studies including namely those of EU institutions and of international organisations on SDGs.

Finally, a **menu option "Tool"** is provided redirecting the user back to the tool.
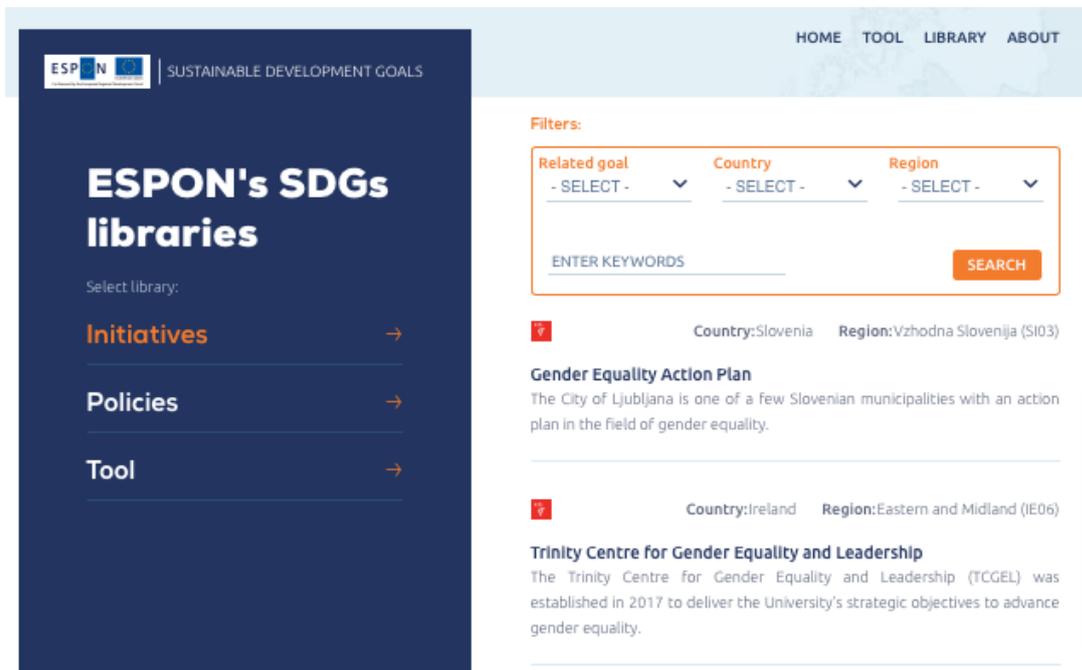
ANNEX

Which indicators are included?

Goal ID	Indicator	Source
1.1	People at risk of poverty or social exclusion	EU SILC
1.2	People in work at-risk-of-poverty	EU SILC
1.3	Lack of adequate heating	EU SILC
1.4	Overcrowded living conditions	MPI/European Quality of Institutions Index and DG Regio own computations
2.1	Insufficient food	EU SILC
2.2	Change to organic farming	ESS
2.3	Organic farming	EUROSTAT
3.1	Life expectancy at birth	ESS
3.2	General good health status	EU SILC
3.3	Death rate due to tuberculosis, HIV and hepatitis	EUROSTAT
3.4	Unmet need for medical examination and care	EU SILC
4.1	Early leavers from education and training	EUROSTAT
4.2	Tertiary educational attainment	EUROSTAT
4.3	Employment rates of young people not in education and training	EUROSTAT
4.4	Participation rates of young people in education	EUROSTAT
5.1	Female students enrolled in tertiary education	EUROSTAT
5.2	Employment rates of young females not in education and training	EUROSTAT
5.3	Female early leavers from education and training	ESS (LFS)
6.1	Drinking water quality	Gallup
6.2	Lack of toilet in dwelling	EU-SILC
6.3	Sewage treatment	European Environment Agency
7.1	Household energy consumption per capita	ESPON LOCATE project
7.2	Share of renewable energy in heating and cooling of buildings	ESPON LOCATE project
7.3	Inability to keep home adequately warm	EU SILC
8.1	Regional gross domestic product	EUROSTAT
8.2	Employment	EUROSTAT
8.3	Long-term unemployment	EUROSTAT
8.4	People in work at-risk-of-poverty	EU SILC
9.1	Intramural R&D expenditure (GERD)	EUROSTAT
9.2	Total R&D personnel	EUROSTAT
9.3	Public transport vehicles	EUROSTAT
10.1	Disposable income of private households per inhabitant	EUROSTAT
10.2	Disposable income of private households relative to national average	EUROSTAT
10.3	People at risk of poverty or social exclusion	EU SILC
11.1	Overcrowded living conditions	EU SILC
11.2	Settlement area per capita	ESPON SUPER project

Goal ID	Indicator	Source
11.3	Victims killed in road accidents	DG MOVE
11.4	Air pollution – pm 2.5	EEA, DG REGIO
12.1	Municipal waste	EUROSTAT
12.2	Energy consumption per capita	ESPON LOCATE project
12.3	Uncollected sewage	European Environment Agency
13.1	Air pollution - pm 10	EEA, DG REGIO
13.2	Air pollution - pm 2.5	EEA, DG REGIO
13.3	Air pollution - ozone	EEA, DG REGIO
13.4	Air pollution - NO2	EEA, DG REGIO
14.1	Marine sites protection	EEA
15.1	Forest area protection	LUCAS
15.2	Land covered by artificial surfaces	EEA
15.3	Nature area protection	EEA
16.1	Crime	EU-SILC (ad-hoc extraction from HS160)
16.2	Trust in the legal system	EU-SILC ad-hoc Quality of Life module
16.3	European Quality of Government	Transparency International
16.4	Trust in the EU	DG COMM
16.5	Trust in the police	EU-SILC ad-hoc Quality of Life module
17.1	Online interaction with public authorities	EUROSTAT
17.2	Innovative SMEs collaborating with others	Regional Innovation Scoreboard
17.3	Broadband at home	EUROSTAT
17.4	Public-private co-publications	Regional Innovation Scoreboard
17.5	International scientific co-publications	Regional Innovation Scoreboard

What do the indicators measure?

Goal ID	Indicator name	Indicator description
1.1	People at risk of poverty or social exclusion	Percentage of people who are at risk of poverty or severely materially deprived or living in households with very low work intensity (Countries covered at NUTS 1 or NUTS0 levels only: BE, FR, EL, LT, PL, PT, UK)
1.2	People in work at-risk-of-poverty	Percentage of people who declared to be at work (employed or self-employed) who are at-risk-of-poverty (Countries covered at NUTS 1 or NUTS0 levels only: BE, DE, EL, FR, LT, PL, PT, UK)
1.3	Lack of adequate heating	Percentage of people who are in the state of enforced inability to keep home adequately warm (Countries covered at NUTS 1 or NUTS0 levels only: BE, NL)
1.4	Overcrowded living conditions	Percentage of people living in an overcrowded dwelling, as defined by the number of rooms available to the household, the household's size, as well as its members' ages and family situation (Countries covered at NUTS 1 or NUTS0 levels only: BE, NL)

Goal ID	Indicator name	Indicator description
2.1	Insufficient food	Percentage of people declaring their inability to afford a meal with meat, chicken, fish, or vegetarian equivalent every second day (Countries covered at NUTS 1 or NUTS0 levels only: BE, NL)
2.2	Change to organic farming	Change in the utilised agricultural area (UAA) occupied by organic farming (among small and medium farms) (Countries covered at NUTS 1 or NUTS0 levels only: FR, IE)
2.3	Organic farming	Share of total organic area in total utilised agricultural area (Countries covered at NUTS 1 or NUTS0 levels only: FR, IE)
3.1	Life expectancy at birth	Mean number of years that a newborn child can expect to live if subjected throughout his life to the current mortality conditions (age specific probabilities of dying)
3.2	General good health status	Proportion of people who assess their health to be very good or good to the question on self-perceived health ('How is your health in general?')(Countries covered at NUTS 1 or NUTS0 levels only: BE, NL)
3.3	Death rate due to tuberculosis, HIV and hepatitis	Death rate due to the following causes of death (COD): tuberculosis, HIV and hepatitis. The rate is calculated by dividing the number of people dying due to selected communicable diseases by the total population.
3.4	Unmet need for medical examination and care	Percentage of people declaring having experienced unmet medical needs because of affordability, efficiency (long waiting lists), accessibility or trust/quality (not knowing a good doctor) (Countries covered at NUTS 1 or NUTS0 levels only: BE, NL)
4.1	Early leavers from education and training	Percentage of the population aged 18 to 24 having attained at most lower secondary education and not being involved in further education or training
4.2	Tertiary educational attainment	Percentage of the population aged 25-64 who have successfully completed tertiary studies (e.g. university, higher technical institution, etc.).
4.3	Employment rates of young people not in education and training	Employment rates of young people aged from 15 to 34 years not in education or training
4.4	Participation rates of young people in education	Entrants and enrolments in education levels from 15 to 34 years (Countries covered at NUTS 1 or NUTS0 levels only: DE, IE, UK)
5.1	Female students enrolled in tertiary education	Female students enrolled in tertiary education, as percent of students (Countries covered at NUTS 1 or NUTS0 levels only: DE, IE, UK)
5.2	Employment rates of young females not in education and training	Employment rates of young females from 15 to 34 years not in education and training measured as percentage of young people
5.3	Female early leavers from education and training	Female early leavers from education and training as percentage of the population aged 18 to 24 having attained at most lower secondary education and not being involved in further education or training. (Countries covered at NUTS 1 or NUTS0 levels only: PL)
6.1	Drinking water quality	Share of people who declared being satisfied with water quality (Countries covered at NUTS 1 or NUTS0 levels only: AT, BE, DE, EL, ES, FR, IT, NL, PL, SE)
6.2	Lack of toilet in dwelling	Share of total population not having indoor flushing toilet for the sole use of their household (Countries covered at NUTS 1 or NUTS0 levels only: BE, NL)
6.3	Sewage treatment	Percentage of uban wastewater with more stringent treatment in collected wastewater (Countries covered at NUTS 1 or NUTS0 levels only: BE, DE, NL, SE)
7.1	Household energy consumption per capita	Final energy consumption in residential buildings for space heating, hot water and cooling divided by population
7.2	Share of renewable energy in heating and cooling of buildings	Share of renewable energy carriers in final energy consumption for space heating, cooling, and water heating in the residential building sector excluding electricity of total energy consumption for space heating, cooling, and water in buildings

Goal ID	Indicator name	Indicator description
7.3	Inability to keep home adequately warm	Share of people who are in the state of enforced inability to keep home adequately warm in total households (Countries covered at NUTS 1 or NUTS0 levels only: BE, NL)
8.1	Regional GDP as PPP per capita	Gross domestic product calculated as EU27 average of Purchasing Power Parity (PPP) per capita
8.2	Employment	Employment rates defined as a measure of the extent to which available labour resources (people available to work) are being used
8.3	Long-term unemployment	Percentage of unemployed people that are in long-term unemployment (12 months and more)
8.4	People in work at-risk-of-poverty	People-in-work at-risk-of-poverty rate refers to the percentage of persons in the total population who declared to be at work (employed or self-employed) who are at-risk-of-poverty. (Countries covered at NUTS 1 or NUTS0 levels only: BE, DE, EL, FR, PL, PT, UK)
9.1	Intramural R&D expenditure (GERD)	Intramural R&D expenditures are all expenditures for R&D performed within a statistical unit or sector of the economy during a specific period as share of GDP
9.2	Total R&D personnel	R&D personnel includes all persons engaged directly in R&D and provide direct services for the R&D activities as a proportion of an active population. (Countries covered at NUTS 1 or NUTS0 levels only: FR, IE, CH)
9.3	Public transport vehicles	Equipment rate for public transport vehicles captures the number of motor coaches, buses and trolleybuses per 1000 inhabitants (Countries covered at NUTS 1 or NUTS0 levels only: PT)
10.1	Disposable income of private households per inhabitant	The balance of primary income and redistribution of income in cash per inhabitant
10.2	Disposable income of private households relative to national average	The balance of primary income and redistribution of income in cash per national average (Countries covered at NUTS 1 or NUTS0 levels only: FR)
10.3	People at risk of poverty or social exclusion	Percentage of people who are at risk of poverty or severely materially deprived or living in households with very low work intensity as a share of the population(Countries covered at NUTS 1 or NUTS0 levels only: BE, EL, FR, PL, PT, UK)
11.1	Overcrowded living conditions	Percentage of people living in an overcrowded dwelling, as defined by the number of rooms available to the household, the household's size, as well as its members' ages and family situation (Countries covered at NUTS 1 or NUTS0 levels only: BE, NL)
11.2	Settlement area per million population	Amount of settlement area due to land take such as for buildings, industrial and commercial areas, infrastructure, sport grounds etc. including both sealed and non-sealed surfaces measured per million population
11.3	Victims killed in road accidents	The number of persons killed each year in transport accidents by mode expressed per million of population. The mode covered by this indicator is road.
11.4	Air pollution – pm 2.5	Population weighted average of a 10 by 10 km of air concentration (µg/m3) of particle matter of size 2.5 micrometers (small particles) interpolated on a grid created by the EEA. Capped to 25 µg/m3 = limit yearly value of the EU Ambient Air Quality Directive
12.1	Municipal waste	Waste collected and treated by or for municipalities. It covers waste from households, including bulky waste, similar waste from commerce and trade, office buildings, institutions and small businesses, as well as yard and garden waste, street sweepings, the contents of litter containers, and market cleansing waste if managed as household waste.
12.2	Energy consumption per capita	Final energy consumption for space heating, cooling, and water heating in the residential building sector and business sector per capita
12.3	Uncollected sewage	Urban wastewater not collected by collecting systems nor treated by individual or other appropriate systems as a percentage of generated load (Countries covered at NUTS 1 or NUTS0 levels only: HU, LT)

Goal ID	Indicator name	Indicator description
13.1	Air pollution - pm 10	Population weighted average of a 10 by 10 km of air concentration (µg/m3) of particle matter of size 10 micrometers (big particles) interpolated on a grid created by the EEA
13.2	Air pollution - pm 2.5	Population weighted average of a 10 by 10 km of air concentration (µg/m3) of particle matter of size 2.5 micrometers (small particles) interpolated on a grid created by the EEA.
13.3	Air pollution - ozone	Population weighted average of a 10 by 10 km of air Ozone O3 concentration (µg/m3) interpolated on a grid created by the EEA. (Countries covered at NUTS 1 or NUTS0 levels only: IT, SI)
13.4	Air pollution - NO2	Population weighted average of annual average concentration of NO2 in µg/m³, interpolated at 1 km² grid cell level and combined with GEOSTAT 1 km² grid population data, set by the EU Ambient Air Quality Directive.
14.1	Marine sites protection	Percentage of surface of marine sites designated under Natura 2000, a European Union wide network of nature protection areas established under the 1992 Habitats Directive
15.1	Forest area protection	Share of land used for forestry (Countries covered at NUTS 1 or NUTS0 levels only: IE)
15.2	Land covered by artificial surfaces	Growth share of land covered by artificial surfaces (artificial non built-up areas e.g. car parking areas etc.,linear features, such as streets, roads, railways, runways and other artificial areas e.g. bridges and viaducts, etc.)
15.3	Nature area protection	Share of area covered by Natura 2000, an European Union wide network of nature protection areas established under the 1992 Habitats Directive. A protected land area is an area designated as important and protected because of its biological diversity and natural or cultural resources.
16.1	Crime	Percentage of people who declared they had faced the problem of crime, violence or vandalism in the local area (Countries covered at NUTS 1 or NUTS0 levels only: BE, NL)
16.2	Trust in the legal system	Percentage of people having low trust in the legal system (Countries covered at NUTS 1 or NUTS0 levels only: AT, BE, DE, EL, ES, FR, IT, NL, PL, SE)
16.3	European Quality of Government	Quality of Government index based on a citizen survey where respondents are asked about perceptions and experiences with public sector corruption, along with the extent to which citizens believe various public sector services are impartially allocated and of good quality. (Countries covered at NUTS 1 or NUTS0 levels only: BE, DE, EL, FR, IE, LT, NL, SE, UK)
16.4	Trust in the EU	Confidence among EU citizens in a selection of EU institutions. It is expressed as the share of positive opinions (people who declare that they tend to trust) about the institutions. (Countries covered at NUTS 1 or NUTS0 levels only: BE, DE, UK)
16.5	Trust in the police	Percentage of people having low trust in the police (Countries covered at NUTS 1 or NUTS0 levels only: AT, BE, DE, EL, ES, FR, IT, NL, PL, SE)
17.1	Online interaction with public authorities	Percentage of individuals who used the Internet for interaction with public authorities (Countries covered at NUTS 1 or NUTS0 levels only: DE, EL, PL)
17.2	Innovative SMEs collaborating with others	Degree to which SMEs are involved in innovation co-operation. Firms with cooperation activities are those that had any co-operation agreements on innovation activities with other enterprises or institutions in the three years of the survey period. (Countries covered at NUTS 1 or NUTS0 levels only: AT, BE, BG, UK)
17.3	Broadband at home	Percentage of households with broadband connection (Countries covered at NUTS 1 or NUTS0 levels only: DE, EL, IE, LT, PL, UK)
17.4	Public-private co-publications	Public-private research linkages and active collaboration activities between business sector researchers and public sector researchers resulting in academic publications. (Countries covered at NUTS 1 or NUTS0 levels only: AT, BE, BG, UK)

Goal ID	Indicator name	Indicator description
17.5	International scientific co-publications	Number of scientific publications with at least one co-author based abroad (where abroad is non-EU for the EU28). International scientific co-publications are a proxy for the quality of scientific research as collaboration increases scientific productivity. (Countries covered at NUTS 1 or NUTS0 levels only: AT, BE, BG, UK)

For which years are indicators available?

Goal ID	Indicator	Period 2011-2013 used	Period 2014 - 2016 used
1.1	People at risk of poverty or social exclusion	2011-2013	2014-2016
1.2	People in work at-risk-of-poverty	2011-2013	2014-2016
1.3	Lack of adequate heating	2011-2013	2017-2018
1.4	Overcrowded living conditions	2011-2013	2017-2018
2.1	Insufficient food	2011-2013	2017-2018
2.2	Change to organic farming	missing	2016
2.3	Organic farming	2013	2016
3.1	Life expectancy at birth	2011-2013	2014-2016
3.2	General good health status	2011-2013	2017-2018
3.3	Death rate due to tuberculosis, HIV and hepatitis	2011-2013	2014-2016
3.4	Unmet need for medical examination and care	2011-2013	2017-2018
4.1	Early leavers from education and training	2011-2013	2014-2016
4.2	Tertiary educational attainment	2011-2013	2014-2016
4.3	Employment rates of young people not in education and training	2011-2013	2014-2016
4.4	Participation rates of young people in education	only 2013	2014-2016
5.1	Female students enrolled in tertiary education	only 2013	2014-2016
5.2	Employment rates of young females not in education and training	2011-2013	2014-2016
5.3	Female early leavers from education and training	2011-2013	2014-2016
6.1	Drinking water quality	missing (requested from Gallup)	2020
6.2	Lack of toilet in dwelling	2011-2013	2018-2019
6.3	Sewage treatment	2010	2016, 2014 for IT
7.1	Household energy consumption per capita	2002	2012
7.2	Share of renewable energy in heating and cooling of buildings	2002	2012
7.3	Inability to keep home adequately warm	2011-2013	2017-2018
8.1	Regional gross domestic product	2011-2013	2014-2016
8.2	Employment	2011-2013	2014-2016
8.3	Long-term unemployment	2011-2013	2014-2016
8.4	People in work at-risk-of-poverty	2011-2013	2014-2016
9.1	Intramural R&D expenditure (GERD)	2011-2013	2014-2016
9.2	Total R&D personnel	2011-2013	2014-2016
9.3	Public transport vehicles	2011-2013	2014-2016
10.1	Disposable income of private households per inhabitant	2011-2013	2014-2016
10.2	Disposable income of private households relative to national average	2011-2013	2014-2016
10.3	People at risk of poverty or social exclusion	2011-2013	2014-2016
11.1	Overcrowded living conditions	2011-2013	2017-2018
11.2	Settlement area per capita	2012	2018
11.3	Victims killed in road accidents	2011-2013	2014-2016

Goal ID	Indicator	Period 2011-2013 used	Period 2014 - 2016 used
11.4	Air pollution – pm 2.5	2011-2013	2017
12.1	Municipal waste	2012	2014,2016
12.2	Energy consumption per capita	2002	2012
12.3	Uncollected sewage	2010	2016
13.1	Air pollution - pm 10	2011-2013	2016
13.2	Air pollution - pm 2.5	2011-2013	2016
13.3	Air pollution - ozone	2011-2013	2017
13.4	Air pollution - NO2	missing (this is a new indicator from EU SPi)	2017
14.1	Marine sites protection	2012	2018
15.1	Forest area protection	2012	2015
15.2	Land covered by artificial surfaces	2012	2015
15.3	Nature area protection	2012	2018
16.1	Crime	It was tested for the 2016 edition but discarded after statistical assessment	2017-2018
16.2	Trust in the legal system	2013	2020
16.3	European Quality of Government	2013	2017
16.4	Trust in the EU	missing	2015
16.5	Trust in the police	2013	2020
17.1	Online interaction with public authorities	2013	2019
17.2	Innovative SMEs collaborating with others	2011-2013	2014-2016
17.3	Broadband at home	2011-2013	2014-2016
17.4	Public-private co-publications	2011,2013	2015,2016
17.5	International scientific co-publications	2011,2013	2015,2016

Which targets have been used?

Goal ID	Indicator	Measurement Unit	Target proposed
1.1	People at risk of poverty or social exclusion	%	Reduce number of Europeans living below national poverty lines by 25% (following: Europe 2020) baseline period= period A 2011-2013
1.2	People in work at-risk-of-poverty	%	Reduce at least by half
1.3	Lack of adequate heating	%	All (following: UN)
1.4	Overcrowded living conditions	%	Reduce by half baseline period= period A 2011-2013
2.1	Insufficient food	%	Zero (following: UN)
2.2	Change to organic farming	Growth rate	Zero change
2.3	Organic farming	%	25% of European agricultural land under organic farming by 2030
3.1	Life expectancy at birth	%	UN predictions for Europe (ESPON 32 countries average)
3.2	General good health status	%	Best performer(s)
3.3	Death rate due to tuberculosis, HIV and hepatitis	Rate	Zero (following UN)
3.4	Unmet need for medical examination and care	%	Zero (following: UN)
4.1	Early leavers from education and training	%	10% (following: Europe 2020)
4.2	Tertiary educational attainment	%	At least 40% having completed tertiary education (following: Europe 2020)
4.3	Employment rates of young people not in education and training	Rate	At least 75% employment rate (following: Europe 2020 represents the wider EU employment target)
4.4	Participation rates of young people in education	Rate	Completion (100%) (following: UN)
5.1	Female students enrolled in tertiary education	%	50% (following: UN)
5.2	Employment rates of young females not in education and training	%	At least 75% employment rate (following: Europe 2020)
5.3	Female early leavers from education and training	%	Less than 10% (following: Europe 2020)

Goal ID	Indicator	Measure- ment Unit	Target proposed
6.1	Drinking water quality	%	All (following: UN)
6.2	Lack of toilet in dwelling	%	All (following: UN)
6.3	Sewage treatment	%	All (following: EU Urban Wastewater Treatment Directive)
7.1	Household energy consumption per capita	Energy consumption (GWh) per capita	Best performer
7.2	Share of renewable energy in heating and cooling of buildings	%	Increase share of renewable energy in final energy consumption to 32% (following: 2030 climate & energy framework)
7.3	Inability to keep home adequately warm	%	All (following: UN)
8.1	Regional gross domestic product	%	Sustain ESPON 32 countries average
8.2	Employment	Rate	At least 75% employment rate (following: Europe 2020)
8.3	Long-term unemployment	%	At least 75% employment rate (following: Europe 2020)
8.4	People in work at-risk-of-poverty	Rate	Reduce at least by half
9.1	Intramural R&D expenditure (GERD)	%	3% of GDP in R&D (Europe 2020)
9.2	Total R&D personnel	%	Increase/best performer
9.3	Public transport vehicles	Number per 1000 inhabitants	Best performer
10.1	Disposable income of private households per inhabitant	PPS per inhabitant	60% of national median equivalised disposable income (ESPON 34 countries) (following eurostat at-risk-of-poverty rate)
10.2	Disposable income of private households relative to national average	PPS per inhabitant	
10.3	People at risk of poverty or social exclusion	%	Reduce at least by half
11.1	Overcrowded living conditions	%	All (following: UN)
11.2	Settlement area per capita	Area per capita	Maintain zero % change relative to 2011-2013 level.
11.3	Victims killed in road accidents	Number of persons killed per million inhabitants	Use all ESPON 32 countries average reduced by half
11.4	Air pollution – pm 2.5	µg/m3	Reduce to current target of 25 µg/m3 (EU Air Quality Directive)
12.1	Municipal waste	Waste measured by cubic metres per capita	Use all ESPON 32 countries average reduced by half
12.2	Energy consumption per capita	GWh	National average
12.3	Uncollected sewage	%	zero (Urban Waste Water Treatment Directive)
13.1	Air pollution - pm 10	µg/m3	pm10: Reduce number of days with level exceeding 50 µg/m3 to 35
13.2	Air pollution - pm 2.5	µg/m3	pm2.5: Reduce to current target of 25 µg/m3
13.3	Air pollution - ozone	µg/m3	ozone: Reduce number of days with level exceeding 120 µg/m3 to 25 (Air Quality Directive)
13.4	Air pollution - NO2	µg/m3	Reduce to 40 µg/m3 (Air Quality Directive)
14.1	Marine sites protection	%	Increase/best performer
15.1	Forest area protection	%	Increase/best performer
15.2	Land covered by artificial surfaces	Growth share	zero change with 2011-2013 period
15.3	Nature area protection	%	increase/best performer
16.1	Crime	%	EU average reduction by 2/3
16.2	Trust in the legal system	%	Increase/best performer
16.3	European Quality of Government	%	Increase/best performer
16.4	Trust in the EU	%	Increase/best performer
16.5	Trust in the police	%	Increase/best performer
17.1	Online interaction with public authorities	%	Increase/best performer

Goal ID	Indicator	Measure-ment Unit	Target proposed
17.2	Innovative SMEs collaborating with others	Normalised scores	Increase/best performer
17.3	Broadband at home	%	Increase/best performer
17.4	Public-private co-publications	Share in to-tal publica-tions	Increase/ best performer
17.5	International scientific co-publica-tions	Share in to-tal publica-tions	Increase/best performer

How can I read the map?

The table below describes which indicators are positively correlated to the goal which are labelled as default and those negatively correlated to the goal which are labelled as reversed. The min and max scale of the map is also provided.

Goal ID	Indicator	Default/ Reversed	min	max
1.1	People at risk of poverty or social exclusion	default	0	100
1.2	People in work at-risk-of-poverty	default	0	100
1.3	Lack of adequate heating	default	0	100
1.4	Overcrowded living conditions	default	0	100
2.1	Insufficient food	default	0	100
2.2	Change to organic farming	reversed	0	100
2.3	Organic farming	reversed	0	100
3.1	Life expectancy at birth	reversed	0	100
3.2	General good health status	reversed	0	100
3.3	Death rate due to tuberculosis, HIV and hepatitis	default	0	100
3.4	Unmet need for medical examination and care	default	0	100
4.1	Early leavers from education and training	default	0	100
4.2	Tertiary educational attainment	reversed	0	100
4.3	Employment rates of young people not in education and training	reversed	0	100
4.4	Participation rates of young people in education	reversed	0	100
5.1	Female students enrolled in tertiary education	reversed	0	100
5.2	Employment rates of young females not in education and training	reversed	0	100
5.3	Female early leavers from education and training	default	0	35
6.1	Drinking water quality	reversed	0	1
6.2	Lack of toilet in dwelling	default	0	100
6.3	Sewage treatment	reversed	0	100
7.1	Household energy consumption per capita	default	33	21939
7.2	Share of renewable energy in heating and cooling of buildings	reversed	0	100
7.3	Inability to keep home adequately warm	default	0	100
8.1	Regional gross domestic product	reversed	29	272
8.2	Employment	reversed	0	100
8.3	Long-term unemployment	default	0	100
8.4	People in work at-risk-of-poverty	default	0	100
9.1	Intramural R&D expenditure (GERD)	reversed	0	10

Goal ID	Indicator	Default/ Reversed	min	max
9.2	Total R&D personnel	reversed	0	6
9.3	Public transport vehicles	reversed	0	6
10.1	Disposable income of private households per inhabitant	reversed	5750	44833
10.2	Disposable income of private households relative to national average	reversed	5750	44666
10.3	People at risk of poverty or social exclusion	default	0	100
11.1	Overcrowded living conditions	default	0	100
11.2	Settlement area per capita	default	8738	1E+05
11.3	Victims killed in road accidents	default	9	163
11.4	Air pollution – pm 2.5	default	0	100
12.1	Municipal waste	default	0	40
12.2	Energy consumption per capita	default	168	29398
12.3	Uncollected sewage	default	0	100
13.1	Air pollution - pm 10	default	0	100
13.2	Air pollution - pm 2.5	default	0	100
13.3	Air pollution - ozone	default	0	120
13.4	Air pollution - NO2	default	0	100
14.1	Marine sites protection	reversed	0	14
15.1	Forest area protection	reversed	0	100
15.2	Land covered by artificial surfaces	default	0	80
15.3	Nature area protection	reversed	0	50
16.1	Crime	default	0	100
16.2	Trust in the legal system	reversed	0	100
16.3	European Quality of Government	reversed	0	100
16.4	Trust in the EU	reversed	0	100
16.5	Trust in the police	reversed	0	100
17.1	Online interaction with public authorities	reversed	0	100
17.2	Innovative SMEs collaborating with others	reversed	0	1
17.3	Broadband at home	reversed	0	100
17.4	Public-private co-publications	reversed	0	1
17.5	International scientific co-publications	reversed	0	1