

# SDG localising tool:

## Interim Report



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This applied research activity is conducted within the framework of the ESPON 2020 Cooperation Programme.

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## Interim Report

# SDG localising tool: Localising and measuring Sustainable Development Goals in cities and regions

Version 03/04/2020

**Disclaimer:**

This document is an interim report.

The information contained herein is subject to change and does not commit the ESPON EGTC and the countries participating in the ESPON 2020 Cooperation Programme.

The final version of the report will be published as soon as approved.

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## Abbreviations

EC	European Commission
ESPON	European Territorial Observatory Network
ESPON EGTC	ESPON European Grouping of Territorial Cooperation
EU	European Union
NUTS	Nomenclature of Territorial Units for Statistics
SDGs	Sustainable Development Goals

# 1 Introduction

The interim report provides an overview of the progress made since the 10<sup>th</sup> of January. It is split in three sections. The data collection (section 2), the targets (section3) and the SDG localising tool (section 4).

## 2 Data collection

### 2.1 Data collected and shortcomings

The process of data collection is ongoing with main tasks:

- 1) assessment of the data coverage by region
- 2) assessment of the availability of time series: As one of the objectives of the tool is to show progress in time we are relying on time series of the selected indicators. Two periods are constructed 2011-2013 and 2014-2016. As we are relying on data from the EU SPI we need to follow the same approach in defining the periods.
- 3) imputation approach based on the typology of gaps.

The 17 goals are described below in more detail, showing data availability per period and coverage in terms of data gaps.

Table 1 Data availability time series and gaps

Goal/id	indicator	Availability of data	Period A used	Period B used	Comment
1.1	People at risk of poverty or social exclusion		2011-2013	2014-2016	data gaps at NUTS 2 level
1.2	In work at-risk-of-poverty rate		2011-2013	2014-2016	data gaps at NUTS 2 level
1.3	Satisfaction with housing: Percentage of people who feel satisfied with the dwelling they live in	awaited from EU SPI period B	2012		
1.4	Lack of adequate heating: Percentage of people who are in the state of enforced inability to keep home adequately warm	awaited from EU SPI period B	2011-2013		
1.5	Overcrowding: 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	awaited from EU SPI period B	2011-2013		
2.4	Insufficient food (EU SILC)	awaited from EU SPI period B	2011-2013		
2.1	Structural funds Thematic Objective 1: Research & Innovation: Farm performance & New Farmers	Internal request			
2.2	Organic farming: selected variables by size of farm (UAA) and NUTS 2 regions	No update is expected	2000, 2003, 2005	last available 2007	2005 and 2007 best covered years
2.3	Manure storage facilities by NUTS 3 regions	No update is expected	last available 2010	last available 2010	only this year is well covered

Goal/id	indicator	Availability of data	Period A used	Period B used	Comment
3.1	Life expectancy at birth		2011-2013	2014-2016	relatively well covered
3.2	General health status: Proportion of persons who assess their health to be very good or good to the question on self-perceived health ('How is your health in general?')	awaited from EU SPI period B	2011-2013		
3.3	Death rate due to tuberculosis, HIV and hepatitis by sex		2011-2013	2014-2016	major gaps observed for 2011-2013 period
3.4	Self-reported unmet need for medical examination and care by sex	awaited from EU SPI period B	2011-2013		
4.1	Early leavers from education and training by sex		2011-2013	2014-2016	relatively well covered
4.2	Tertiary educational attainment, age group 25-64 by sex and NUTS 2 regions		2011-2013	2014-2016	well covered
4.3	Employment rates of young people not in education and training by sex, educational attainment level, years since completion of highest level of education and NUTS 2 regions		2011-2013	2014-2016	well covered
4.4	Participation rates of selected age groups in education at regional level		only 2013	2014-2016	2014-2016 relatively well covered; 2013- major gaps observed
5.1	Difference between female and male employment rates	awaited from EU SPI period A and B	2011-2013		
5.2	Students enrolled in tertiary education by education level, programme orientation, sex and NUTS2 regions (measured as percent of women)		only 2013	2014-2016	well covered
5.3	Employment rates of young people not in education and training by sex, educational attainment level, years since completion of highest level of education and NUTS 2 regions (measured as percent of women)		2011-2013	2014-2016	well covered
5.4	Early leavers from education and training by sex (measured as percent of women)		2011-2013	2014-2016	relatively well covered
6.2	Bathing sites with excellent water quality	Internal request			
6.3	Population connected to wastewater collection and treatment systems by river basin district (RBD)	No update is expected	2008-2010	2011-2013	major data gaps at NUTS 2 level, data at RBD level not NUTS2
6.4	Satisfaction with water quality	awaited from EU SPI period A and B	multiple latest years		
6.5	Lack of toilet in dwelling	awaited from EU SPI period B	2011-2013		
6.6	Sewage treatment	awaited from EU SPI period B	2010		
7.1	Household energy consumption per capita	request from Espon			

Goal/id	indicator	Availability of data	Period A used	Period B used	Comment
7.2	Share of renewable energy in heating and cooling of buildings	request from Espon			
7.4	Carbon footprint of household consumption	Internal request			
7.5	Inability to keep home adequately warm (percent of households)	request EU SILC			
8.1	Regional gross domestic product (PPS per inhabitant) by NUTS 2 regions		2011-2013	2014-2016	major gaps observed for 2011-2013 period
8.2	Employment rates by sex, age, educational attainment level, citizenship and NUTS 2 regions		2011-2013	2014-2016	well covered
8.3	Long-term unemployment (12 months and more) by NUTS 2 regions		2011-2013	2014-2016	well covered
8.4	In work at-risk-of-poverty rate				
9.1	Intramural R&D expenditure (GERD)		2011-2013	2014-2016	major data gaps at NUTS 2 level
9.2	Total R&D personnel		2011-2013	2014-2016	data gaps at NUTS 2 level
9.3	Equipment rate for public transport vehicles (number of motor coaches, buses and trolleybuses per 1000 inhabitants)	Internal request			
10.1	Disposable income of private households by NUTS 2 regions per inhabitant		2011-2013	2014-2016	data gaps observed for 2011-2013 period
10.2	Disposable income of private households by NUTS2 regions relative to national average (based on tgs00026)				
10.3	People at risk of poverty or social exclusion by NUTS 2 regions				
11.1	Overcrowding rate	awaited from EU SPI period B	2011-2013		
11.2	Settlement area per capita	Internal request			
11.3	Victims killed in road accidents by NUTS2 regions	update expected in May 2020	last available 2010	last available 2010	2005-2010 period is well covered
11.4	Air pollution – pm 2.5	awaited from EU SPI period B	2017		
12.1	Municipal waste by NUTS 2 regions (pilot project data)	No update is expected	last available 2013	last available 2013	2008-2013 period is well covered
12.3	Final energy consumption by households and business	request from Espon			
12.4	Uncollected sewage	awaited from EU SPI period B	2010		
13.1	Air pollution-pm10 Air pollution - pm2.5 Air pollution - ozone	awaited from EU SPI period B	2017		
13.4	Carbon footprint of household consumption	Internal request			
14.1	Surface of marine sites designated under NATURA 2000	Internal request			
14.2	Bathing sites with excellent water quality (sdg_14_40)				
15.1	Share of forest area	Internal request			
15.2	Land covered by artificial surfaces		2012	2015	well covered



Goal/id	indicator	Availability of data	Period A used	Period B used	Comment
15.3	Protected land (Natura 2000)	Internal request			
16.1	Crimes recorded by the police by NUTS 3 regions	No update is expected	2008-2010	2008-2010	data gaps at NUTS 2 level
16.2	Trust in the legal system	awaited from EU SPI period B	2013		
16.3	European Quality of Government Index (EQI)				
16.4	Trust in the EU	Internal request			
16.5	Trust in the police	awaited from EU SPI period B	2013		
17.1	Online interaction with public authorities	awaited from EU SPI period B	2013		
17.2	Innovative SMEs collaborating with others				
17.3	Broadband at home		2011-2013	2014-2016	data gaps at NUTS 2 level
17.4	Public-private co-publications				
17.5	International scientific co-publications				

The following shortcomings with indicators are noted:

1. Gallup indicators will be provided by DG REGIO since Gallup does not sell individual indicators. The indicators will be shared around March.
2. EU SILC indicators will be partly provided by DG REGIO: DG REGIO has obtained a tailor-made extraction from EU-SILC, following an ESTAT consultation of the National Statistical Institutes. Under the agreement with EUROSTAT, the indicators included in the next SPI will be disseminated once the EU SPI Index is published. The date of publication is still to be confirmed by DG REGIO. In the table above the indicators provided by EU SILC are mentioned as "awaited from EU SPI".
3. EU SILC indicators "Inability to keep home adequately warm (percent of households)", "Settlement area per capita" are not included in EU SPI. ESPON EGTC will thus need to activate the consultation process with the National Statistical Institutes. Only ESPON EGTC will be entitled to view and process the raw data.
4. For indicators 2.2 "Organic farming: selected variables by size of farm (UAA) and NUTS 2 regions", 2.3 "Manure storage facilities by NUTS 3 regions", 6.3 "Population connected to wastewater collection and treatment systems by river basin district (RBD)", 11.3 "Victims killed in road accidents by NUTS2 regions", 12.1 "Municipal waste by NUTS 2 regions", and 16.1 "Crimes recorded by the police by NUTS 3 regions" the data is available for early years only outside the periods in focus. EUROSTAT has been contacted to investigate the future plans for updates.

5. Currently the 17 goals are considered at EU28 level. As described in the inception report the availability of the data at NUTS 2 level for Iceland, Switzerland, Norway and Liechtenstein is insufficient and we thus proposed to exclude from the tool as benchmarking with those countries will be very limited.

## 2.2 Data imputation

Imputation is used to address the time series gaps. For the purpose of this project the single imputation method is proposed which is considered the most suitable method, due to its simplicity and efficiency.

Several typologies of data gaps have been identified. In order to impute the missing values in a data set for two periods 2011-2013 and 2014-2016 at NUTS2 level, we propose the following methods:

1. If the data for the chosen period is available only for one year, we will use only this year;
2. If the data for the chosen period is available only for two years with/without a one-year gap between two reported years, an interpolation of high quality can be assumed. We will replace missing values with the average of the two values adjacent and calculate the average for the chosen period;
3. If at least 50% of the indicator is observed at the NUTS2, then the indicator can be included in the SDG localising tool. The NUTS1 or national values will be assigned to all the missing NUTS2 regions within the country. This approach means that the within-country variability of the Index at goal level is underestimated.
4. An alternative approach to the “50% rule”, mentioned above, is the use of backward or forward values in case of missing data in either one of the periods. In the case of consecutive missing values, the carry forward method uses the next preceding non-missing value and the carry backward the next succeeding non-missing value. The main advantage of this method is the possibility to show the variability among different regions in time, however, at the same time it can introduce bias in the analysis and perform poorly when data has a visible trend. Missing values should not be apart further than one year. This approach should be discussed with EUROSTAT.
5. We also propose for consideration and discussion the following approach used by RIS (2019)<sup>1</sup>: If regional data are available for the previous year, the ratio between the corresponding NUTS level and that at a higher aggregate level (NUTS 1 for NUTS 2 regions, country level for NUTS 1 regions) for the previous year is

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<sup>1</sup> [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=2ahUKEwiRidH-t8fnAhWNzaQKHQhZC84QFjACegQIBBAB&url=https%3A%2F%2Fec.europa.eu%2Fdocsroom%2Fdocuments%2F35946%2Fattachments%2F1%2Ftranslations%2Fen%2Frenditions%2Fnative&usg=AOvVaw2LPIUJugl2ZHqSz\\_nSVvyh](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=2ahUKEwiRidH-t8fnAhWNzaQKHQhZC84QFjACegQIBBAB&url=https%3A%2F%2Fec.europa.eu%2Fdocsroom%2Fdocuments%2F35946%2Fattachments%2F1%2Ftranslations%2Fen%2Frenditions%2Fnative&usg=AOvVaw2LPIUJugl2ZHqSz_nSVvyh)

multiplied with the current value at the higher aggregate level. If regional data for the previous year are not available, the same procedure as in step 2 will be applied using the ratio between the corresponding NUTS level and that at a higher aggregate level

### 3 Target setting

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. While this approach is methodologically fully legitimate, the project team felt this would not fully integrate the specific SDG targets and would not holistically reflect the reality of EU regions. Therefore the team have suggested the most suitable approach for boundaries setting for each indicator based on associated targets (see step 2).
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. Given the limited resources for an in depth examination of EU targets (examine relevant regulation, white papers, strategy documents) and given the timing (end of Europe 2020 and targets yet to be defined for 2030) inputs from ESPON EGTC and the steering committee to improve the target setting are very welcomed.

For each indicator the UN target, typology based on the language used in the UN target and the proposed target are provided in Table 2. The actual boundary will depend on assessing the data for each indicator and the final approach will be reviewed based on data quality and availability.

Table 2 SDG Targets

Goal	Confirmed indicator		Target proposed	Language used with UN target	Associated UN target
Goal 1	People at risk of poverty or social exclusion	Percentage	Reduce number of Europeans living below national poverty lines by 25% (following: Europe 2020) baseline	Reduce at least by half	By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions

Goal	Confirmed indicator		Target proposed	Language used with UN target	Associated UN target
			period= period A 2011-2013		
Goal 1	In work at-risk-of-poverty rate	Percentage	Reduce number of Europeans living below national poverty lines by 25% (following: Europe 2020) baseline period= period A 2011-2013	Reduce at least by half	By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
Goal 1	Satisfaction with housing: Percentage of people who feel satisfied with the dwelling they live in	Percentage	All (following: UN)	Ensure equal access	By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
Goal 1	Lack of adequate heating: people who are in the state of enforced inability to keep home adequately warm	Percentage	All (following: UN)	Ensure equal access	By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
Goal 1	Overcrowding: 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	Percentage	Reduce by half: target defined by using ESPON 32 countries average reduced by half (following: UN)	Reduce at least by half	By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
Goal 2	Insufficient food (EU SILC)	Percentage	Zero (following: UN)	End hunger	By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round
Goal 2	Organic farming: proportion of utilised agricultural area	Percentage	Best performer	Ensure	By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality
Goal 2	Manure storage facilities: Holdings with covered manure storage facilities as percentage of the total number of holdings having manure storage facilities	Percentage	Best performer		
Goal 3	Life expectancy at birth	Years	UN predictions for Europe (ESPON 32 countries average)	Ensure	Ensure healthy lives and promote well-being for all at all ages
Goal 3	General health status: Proportion of persons who assess	Percentage	Best performer(s)	Ensure	Ensure healthy lives and promote well-being for all at all ages

Goal	Confirmed indicator		Target proposed	Language used with UN target	Associated UN target
	their health to be very good or good to the question on self-perceived health ('How is your health in general?')				
Goal 3	Death rate due to tuberculosis, HIV and hepatitis by sex	Rate	Zero (following UN)	End	End the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases
Goal 3	Self-reported unmet need for medical examination and care by sex	Percentage	Zero (following: UN)	Universal	Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all
Goal 4	Early leavers from education and training by sex	Percentage	10% (following: Europe 2020)	Ensure - all	Ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes
Goal 4	Tertiary educational attainment, age group 25-64 by sex and NUTS 2 regions	Percentage	At least 40% having completed tertiary education (following: Europe 2020)	Substantially increase	Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex
Goal 4	Employment rates of young people not in education and training by sex, educational attainment level, years since completion of highest level of education and NUTS 2 regions	Percentage	At least 75% employment rate (following: Europe 2020 represents the wider EU employment target)	Substantially increase	By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship
Goal 4	Participation rates of selected age groups in education at regional level	Percentage	Completion (100%) (following: UN)	Ensure	Ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes
Goal 5	Difference between female and male employment rates	Percentage	Zero (following: UN)	End	End all forms of discrimination against all women and girls everywhere
Goal 5	Female students enrolled in tertiary education	Percentage of women	50% (following: UN)	Ensure equal access/substantially increase	By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university
Goal 5	Employment rates of females not in education and training since completion of highest level of education	Percentage of women	At least 75% employment rate (following: Europe 2020)	Substantially reduce/increase	By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship
Goal 5	Early female leavers from education and training	Percentage of women	Less than 10% (following: Europe 2020)	Ensure - all	ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes
Goal 6	Bathing sites with excellent water quality	Percentage of bathing sites	All (following: UN)	Universal	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation,

Goal	Confirmed indicator		Target proposed	Language used with UN target	Associated UN target
					paying special attention to the needs of women and girls and those in vulnerable situations
Goal 6	Population connected to wastewater collection and treatment systems by river basin district (RBD)	Percentage of population	All (following: UN)	Universal	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
Goal 6	Satisfaction with water quality	Per cent	All (following: UN)	Universal	By 2030, achieve universal and equitable access to safe and affordable drinking water for all
Goal 6	Lack of toilet in dwelling	Per cent	All (following: UN)	Universal	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
Goal 6	Sewage treatment: Urban wastewater with more stringent treatment as a percentage of collected wastewater	Percentage	All (following: EU Urban Wastewater Treatment Directive)	Universal	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
Goal 7	Household energy consumption per capita				Espon to inform
Goal 7	Renewable energy in heating and cooling of buildings	Percentage renewable	Increase share of renewable energy in final energy consumption to 32% (following: 2030 climate & energy framework)	Increase substantially	By 2030, increase substantially the share of renewable energy in the global energy mix
Goal 7	Carbon footprint of household consumption (Mt CO2 per capita)	Mt CO2	Reduce to 40% of 1990 level (following: EU GHG targets in Climate Strategy)		
Goal 7	Inability to keep home adequately warm	Percentage of households	All (following: UN)	Ensure equal access	By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
Goal 8	Regional gross domestic product (PPS per inhabitant) by NUTS 2 regions	Per cent	Sustain ESPON 34 countries average	Sustain	Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 percentage gross domestic product growth per annum in the least developed countries
Goal 8	Employment rates by sex, age, educational attainment level, citizenship and NUTS 2 regions	Per cent	At least 75% employment rate (following: Europe 2020)	Full	By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value
Goal 8	Long-term unemployment (12 months and more) by NUTS 2 regions	Per cent	At least 75% employment rate (following: Europe 2020)	Full	By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value
Goal 8	In work at-risk-of-poverty rate	Per cent	Reduce number of Europeans	Reduce at least by half	By 2030, reduce at least by half the proportion of men, women and

Goal	Confirmed indicator		Target proposed	Language used with UN target	Associated UN target
			living below national poverty lines by 25% (following: Europe 2020) baseline period= period A 2011-2013		children of all ages living in poverty in all its dimensions according to national definitions
Goal 9	Intramural R&D expenditure (GERD)	Per cent	3% of GDP in R&D (Europe 2020)	Enhance	Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending
Goal 9	Total R&D personnel	per 1000 inhabitants	Increase/best performer	Enhance	Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending
Goal 9	Equipment rate for public transport vehicles	Number of motor coaches, buses and trolleybuses per 1000 inhabitants	Best performer		Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
Goal 10	Disposable income of private households by NUTS 2 regions per inhabitant	PPS per inhabitant	60 % of national median equivalised disposable income (ESPON 34 countries) (following eurostat at-risk-of-poverty rate)	Reduce at least by half	By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
Goal 10	People at risk of poverty or social exclusion by NUTS 2 regions	Per cent	Reduce number of Europeans living below national poverty lines by 25% (following: Europe 2020) baseline period= period A 2011-2013	Reduce at least by half	By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
Goal 11	Overcrowding rate by poverty status	Per cent	All (following: UN)	Ensure equal access	By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
Goal 11	Change in settlement area per capita (km2 per capita)	Per cent	Maintain zero % change relative to 2015 level.	Maintain	By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries
Goal 11	Victims killed in road accidents by NUTS2 regions	rate	Use all ESPON 34 countries average reduced by half	Reduce by half	By 2020, halve the number of global deaths and injuries from road traffic accidents

Goal	Confirmed indicator		Target proposed	Language used with UN target	Associated UN target
Goal 11	Air pollution – pm 2.5	mean annual concentration (µg/m3)	Reduce to current target of 25 µg/m3 (EU Air Quality Directive)	Reduce	By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
Goal 12	Municipal waste by NUTS 2 regions (pilot project data)	tons per capita	Use all ESPON 34 countries average reduced by half	Reduce by half	By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses
Goal 12	Final energy consumption by households and business	ESPON to provide	At least 32.5% improvement in energy efficiency (Agreement on Revised Energy Efficiency Directive)		By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities
Goal 12	Uncollected sewage: Urban wastewater not collected by collecting systems nor treated by individual or other appropriate systems as a % of generated load	Per cent	zero (Urban Waste Water Treatment Directive)	Reduce	By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
Goal 13	Air pollution-pm10 Air pollution - pm2.5 Air pollution - ozone	pm2.5: mean annual concentration (µg/m3) pm10: number of days ozone: number of days	pm2.5: Reduce to current target of 25 µg/m3 pm10: Reduce number of days with level exceeding 50 µg/m3 to 35 ozone: Reduce number of days with level exceeding 120 µg/m3 to 25 (Air Quality Directive)	Reduce	By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
Goal 13	Carbon footprint of household consumption	Mt CO2	Reduce to 40% of 1990 level (EU GHG targets in Climate Strategy)	Reduce	UNFCCC By 2030, double the global rate of improvement in energy efficiency
Goal 14	Surface of marine sites designated under NATURA 2000	Percentage share in marine sites (km²)	Increase/best performer	Reduce, halt, protect	Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species
Goal 14	Bathing sites with excellent water quality	Percentage of excellent coastal and inland water	All		
Goal 15	Share of forest area	hectares of forest per capita	Increase/best performer	Reduce	Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species
Goal 15	Land covered by artificial surfaces	(proportion of all land)	Reduce or halt growth (following UN)	Reduce, halt, protect	Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity



Goal	Confirmed indicator		Target proposed	Language used with UN target	Associated UN target
					and, by 2020, protect and prevent the extinction of threatened species
Goal 15	Protected land (Natura 2000) Note: EU SPI to be checked	Percentage of land (km <sup>2</sup> ) belonging to the EU's Natura2000 network	increase/best performer	Reduce, halt, protect	Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species
Goal 16	Crimes recorded by the police	Percentage	EU average reduction by 2/3	Significantly reduce	Significantly reduce all forms of violence and related death rates everywhere
Goal 16	Trust in the legal system	Average rating	Increase/best performer	Ensure	Ensure responsive, inclusive, participatory and representative decision-making at all levels
Goal 16	Quality of Government	Index	Increase/best performer	Ensure	Ensure responsive, inclusive, participatory and representative decision-making at all levels
Goal 16	Trust in the EU	Average rating	Increase/best performer	Promote	Promote the rule of law at the national and international levels and ensure equal access to justice for all
Goal 16	Trust in the police	Average rating	Increase/best performer	Promote	Promote the rule of law at the national and international levels and ensure equal access to justice for all
Goal 17	Online interaction with public authorities	Percentage	Increase/best performer	Ensure	Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements
Goal 17	Innovative SMEs collaborating with others	Percentage	Increase/best performer	Enhance	Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism
Goal 17	Broadband at home	Percentage	Increase/best performer	Significantly increase	9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020
Goal 17	Public-private co-publications	Percentage	Increase/ best performer	Enhance	Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism
Goal 17	International scientific co-publications	Percentage	Increase/best performer	Enhance	Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1

Goal	Confirmed indicator		Target proposed	Language used with UN target	Associated UN target
					million people and public and private research and development spending

### **3.1 Pilots**

Upon approval of the targets the following three regions will be invited to act as pilots: 1) Eastern and midland (IE), 2) Catalonia (ES) and 3) Eastern Slovenia (SI).

The pilot study will be conducted in two steps:

- 1) The stakeholders from regional authorities will be asked to test the indicator framework. The objective will be to validate the relevance at the regional level and the acceptance and credibility of the proposed indicator framework.
- 2) The pilot regions will be requested to test, evaluate and informally report back on their experience and observations about the beta-version of the tool. Further adjustments of the tool will be applied.

An excel file with the indicator framework and corresponding targets will be shared with the regions and written feedback within the excel will be inquired namely by stating the 1) relevance (low, medium, high) of the indicators, 2) indicator gaps and 3) suitability of the target. A follow up phone call will be scheduled to go through the main points.

Due to the exceptional circumstances of COVID-19, more pilot regions may be contacted in case of no response from the ones indicated above.

## 4 SDG Localising tool

The SDG localising tool homepage, benchmark tool including the map and graphs, the library and user guide are described and visualised in the subsequents sections below. A clickable version can also be viewed here:

<https://preview.uxpin.com/1111beab5ceb83662b9b90f794240223cd1bd7fc#/pages/123096971/simulate/no-panels?mode=i>

### 4.1 Homepage

The design of the SDG localising tool homepage is presented below. Two entries to the tool are provided:

1. Benchmark option in the top and bottom right menu and
2. SDG icon in the centre of the homepage

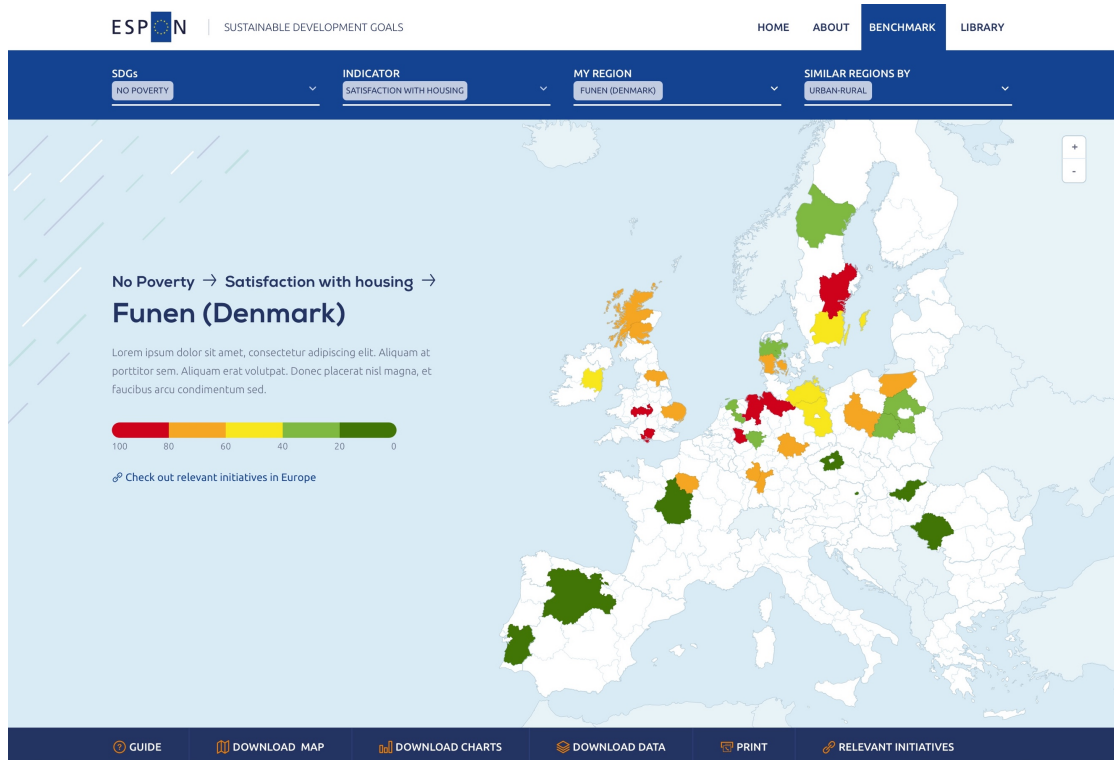
Using the 'Find out more' button the user could have access to the report including the objectives of this project, the indicator framework, target setting, imputations performed and the methodology for the goal level composites.



## 4.2 Map and Charts

The benchmark space of the tool includes the map and charts.

1. The map visualises each goal indicator by indicator with the possibility to choose similar regions for benchmarking purposes. Every time an indicator is selected an explanation of the indicator is provided. This is coupled by link to the goal related initiatives in Europe from the tool's library.



2. The radar chart shows all the indicators of the goal selected. It simultaneously visualises the region's distance to the median of the benchmark group of regions and the distance to the targets.
3. The box plot uses a filter to show indicator by indicator the growth by visualising the values in the different periods while also grouping the regions in quartiles.

## Benchmark

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aliquam at porttitor sem. Aliquam erat volutpat. Donec placerat nisl magna, et faucibus arcu condimentum sed.

CHART #1

Lorem ipsum chart name



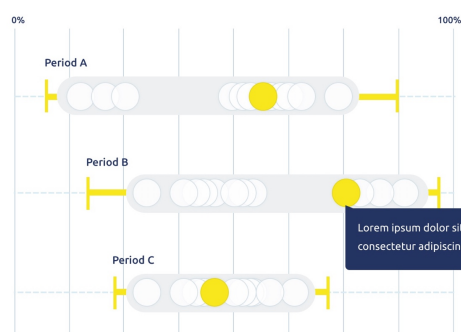
Median of the group Region's value Target  
Satisfaction with housing People at risk of poverty or social exclusion  
Lack of adequate heating In work at-risk-of-poverty rate Overcrowding

CHART #2

Lorem ipsum chart name

Indicator

SATISFACTION WITH HOUSING



### 4.3 Library

Access to the library will be provided through:

- Homepage: top right corner taking the user to the library homepage with all SDGs
- In the tool: A link will be provided taking the user to the library of the SDG viewed

The library will contain two types of documents:

- Initiatives of European countries or regions related to SDGs
- Studies on SDGs (namely those of EU institutions and of international organisations)

The content of the library and in particular that of the initiatives will be tagged according to:

- 17 SDGs: Initiatives will be tagged by all the relevant SDGs (hence one initiative may be tagged by more than one SDG)
- Five Ps (People, Prosperity, Planet, Peace): The UN's five Ps are considered optimal to group SDGs in the library.

The final assessment on the best way to allow users to filter the content of the library (SDGs and/or five Ps) will be made upon review of the content collected. Grouping according to the five Ps will guarantee less gaps in terms of coverage while the SDGs approach allows a more direct association to the SDGs and the tool.



## 4.4 Proposed structures for the user guidance

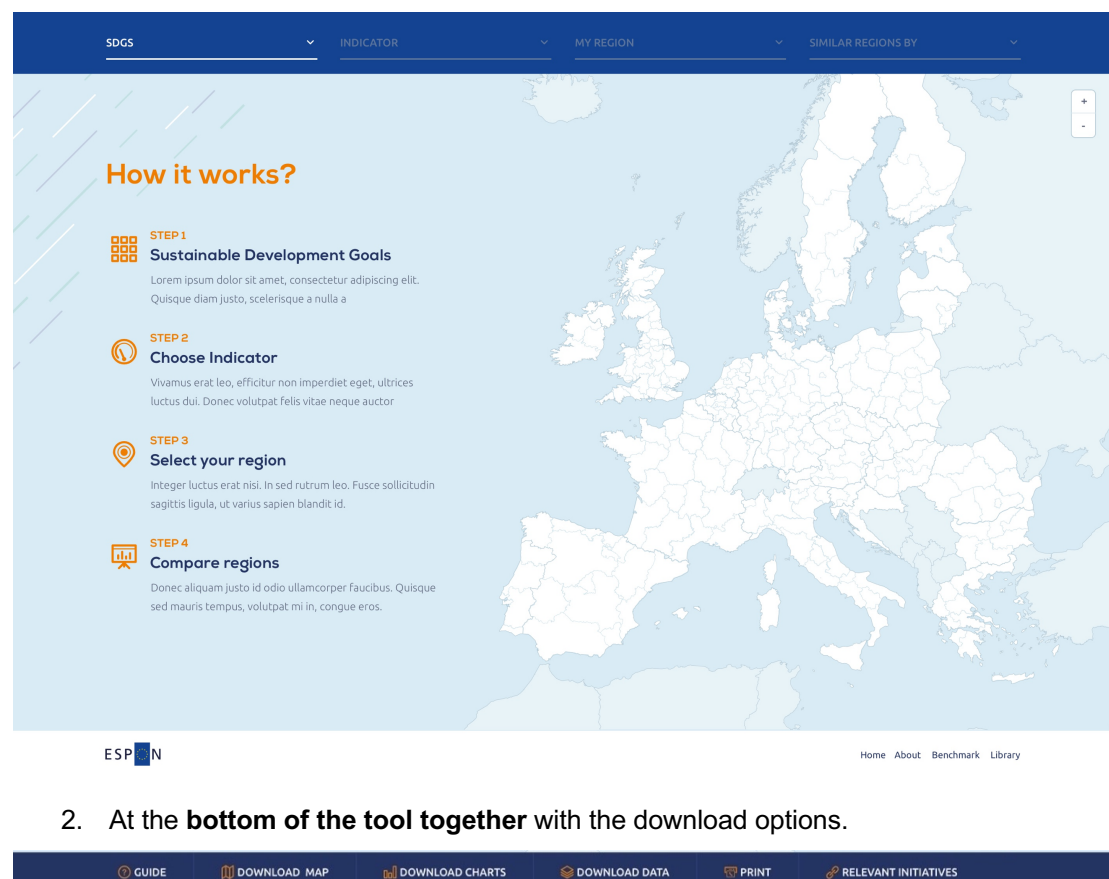
### User guide

The user guide will be a user tutorial on how to use the tool. We propose the following **structure**:

1. Introduction to the SDG localising tool
2. Detailed presentation of all its functionalities
3. Examples explaining, step by step, for each type of user:
  - a. how to use the tool and display the kind of information that they are most likely to be looking for:
    - i. for a region how to display their distance to the target, their progress over time, a comparison between them and other similar regions)
    - ii. for national governments, how to display an overview of their regions' distance to the target, how to identify areas for progress and support from the national level.

The user guidance we propose to **embed in the tool** using two ways:

1. When entering the tool before selecting the SDG, indicator, region and benchmark region. Even when the user has selected an SDG in the homepage the user guidance will appear until the user selects the indicator. The user guidance will be brief explaining in practical terms how to use the tool.



2. At the **bottom of the tool together** with the download options.



## Guidance sheet

The aim of the guidance sheet is to present and guide the user on the services and functionalities that the tool offers for users. The guidance sheet will follow the usual format of ESPON tools' guidance sheets: in four pages, it will provide:

- Introduction to the tool
- Overview of its main functionalities
- A couple of examples detailing how to visualise results and illustrate the usefulness of the tool.

The guidance sheet we propose to **embed in the tool's** homepage.

## Leaflet

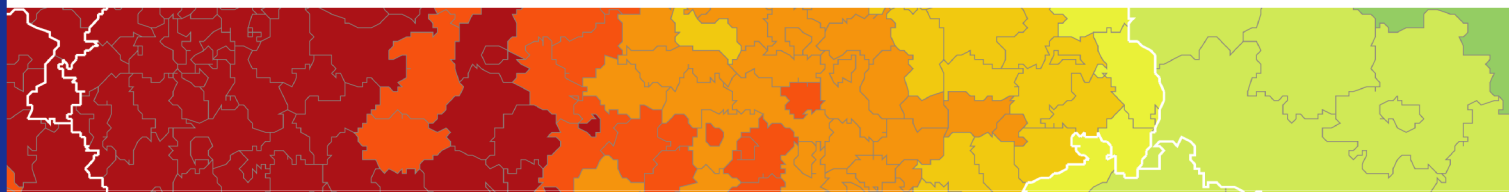
The leaflet will advertise the tool during awareness-raising activities and other opportunities to disseminate the tool. The key information will be presented with infographics and concise text. It will also include the link to the tool, guidance sheet and the library.

## 4.5 Administrator module

The administrator module will be built around the xls-file containing all data. The features expected include:

- Editorial changes:
  - Edit texts across the website (homepage, benchmark (1st page: <https://symu.co/vpcphp.sl>), about section, library)
  - Add new content to the library section
  - Edit "goal" landing page (texts, images etc) (<https://symu.co/zxdbnn.sl>)
- Data import:
  - Import data for the SDG tool (source data for the map and charts)
  - Add new or rename existing "periods". (NOTE: to create a new period, user would have to prepare and use a properly formatted .xls or .CVS file containing data for a given period. An exact template of the file will be defined during the tool development)
  - Delete and re-import data for a selected "period"
  - Rename existing indicators
  - Delete existing indicators
  - Add new indicators (NOTE: the easiest would be to delete a given period and reimport it with new indicators defined in the .xls / .csv file)

The features will be described in the draft final delivery.



ISBN: ONLY FOR (DRAFT) FINAL REPORT, REMOVE OTHERWISE

#### **ESPON 2020 – More information**

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