

KITCASP

Key Indicators for Territorial Cohesion and Spatial Planning

Targeted Analysis 2013/2/20

Final Report | 31 October 2013

Part D | Appendix C



This report presents the final results a Targeted Analysis conducted within the framework of the ESPON 2013 Programme, partly financed by the European Regional Development Fund.

The partnership behind the ESPON Programme consists of the EU Commission and the Member States of the EU28, plus Iceland, Liechtenstein, Norway and Switzerland. Each partner is represented in the ESPON Monitoring Committee.

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Appendix C:

Relevant ESPON Indicator Sets

Table AC1: SIESTA (Spatial Indicators For A 'Europe 2020 Strategy' Territorial Analysis)

Note that the filtering and final selection of indicators included a clear link between the indicator and the EU2020 Strategy, as well as availability among other criteria. Therefore, where the indicator did not align with EU2020 or the data to support the indicators were not available or the spatial coverage was unacceptable, the indicator was discarded.

Note that only that absolute indicators have been extracted from the definitive list of maps prepared within the SIESTA project (i.e. trends and distance to national targets have been omitted).

Key findings relevant to KITCASP:

- *Most of the indicators are not expressed at regional level (NUTS2/NUTS3) and, in an even worse situation, cities. In fact, some of the indicators considered headline targets of the EU2020S are unavailable at the regional level.*
- *The time series available for most of the indicators are short at regional scale (NUTS2/NUTS3), with the exception of demographic data, which usually have a longer time series. Also, other "traditional" measurements like the regional GPD per capita have acceptable time series but, they are geographically uneven.*
- *There are punctual data gaps in some selected indicators for some specific years, including recent dates. In the case of the EUROSTAT datasets, these gaps are usually related to small sample size of confidentiality issues.*
- *Sometimes the definitions of the indicators are not consistent across the EU space when comparing those provided by different national organisations. This strongly compromises the possibility of building robust new tailor-made datasets different from those found at EUROSTAT.*
- *In general, the impossibility of gathering data at the NUTS3 level which was understood to be "the ideal scale". The intense scrutiny of the databases has revealed the alarming lack of data on this scale, especially in the case of indicators related to energy, environment and sustainability.*

Smart Growth

Innovation	R&D expenditures as % of GDP
	Human resources dedicated in science and technology
	NBIC projects per urban area population. Urban areas.
	Business R&D expenditures as % of GDP
	Employment in knowledge-intensive activities as % of total employment
	Total patent applications per capita
	High-tech patent applications as a % of total patent applications
Education	Early school leavers
	Proportion of students not completing their compulsory education
	Tertiary educated as % of age group 30-34
	Share of population having completed tertiary education (age group 25-64)
	Share of young people NEET
Digital Society	Share of people working in the ICT sector
	ICT patent applications as a % of total patent applications
	Broadband penetration
	Share of population buying online
	Share of population that have never used a computer

Sustainable Growth	
Competitiveness and Economic Growth	Growth measured as GDP per capita in pps
	Labour productivity
	Contribution of medium-tech and high-tech products to the trade balance
	Number of headquarters of transnational firms
	Green patent applications as a % of total patent applications
	Public debt in % of GDP
Green Economy, Climate Change and Energy	Regional estimation of GHG emissions
	Variation of GHG emissions compared to 1990 levels
	Share of renewable energy in gross final energy consumption
	Wind energy potential
	Solar energy potential
	Energy intensity of the economy
	Share of employment in industries with high energy spending in total employment
	Share of people commuting in total employment
	Share of journeys to work by car
	Rate of municipal waste collection
	Urban waste-water treatment capacity
	Protected areas included in the Natura 2000 network as a share of total area
Inclusive Growth	
Employment, Skills and Jobs	Employment rate of age group 20-64
	Gender balance in employment of age group 20-64
	Unemployment rate
	Gender balance in unemployment
	Youth unemployment rate
	Lifelong learning participants
	Share of low-educated population
	Share of people qualified at level 1 or 2 ISCED
	Professionals in health sector per 1000 inhabitants
	Staff working in the public sector
Poverty and Exclusion	People at risk of poverty or social exclusion rate
	Disposable income per capita in pps
	Median disposable annual household income in pps
	At risk of poverty rate
	Share of households with less than 60% of the national median annual disposable income
	Share of severely materially deprived people in total population
	Share of people living in households with very low work intensity
	Share of long-term unemployment
	Share of long-term unemployment
	Ageing index
	Relation between the retirement age and life expectancy

Table AC2: PURR (Potential of Rural Regions)

<p><i>Some key findings relevant to KITCASP:</i></p> <ul style="list-style-type: none"> • Data collected in European scale is generally based on the standard territorial units for statistics in Europe on a fairly aggregated level (NUTS-2 and NUTS-3); these territorial units are not always the most relevant ones for territorial development. • Regions differ in size, economic structure, demographic structure, rural structure and in many other ways affecting comparative benchmarking. • The choice of data for benchmarking of stakeholder regions in European perspective is based on general territorial challenges, such as demography, economy, energy, climate change, environment hazards, transport infrastructure, and social and cultural transformations. • Indicators which measure specific issues that are relevant for territorial cohesion included: natural heritage and environment, climate and natural hazards, accessibility, human development index, environmental hazards, social and cultural affairs and others. 	
Economy	Lisbon performance measurement
	GDP/capita
	Employment
	Unemployment
	Total R&D expenditures
	Median disposable annual household income
	Share of tertiary educated people
	Human Development Index
	Happiness Index
	Happy Planet Index
	At risk of poverty rate
Demography	Population
	Urban-rural population
	Population density
	Life expectancy
	Population change
	Dependency ratio
	Ageing Index
	Life expectancy at birth
	Typology of the demographic status
	Future perspectives on population development
Transport, Accessibility	Multimodal accessibility
	Potential accessibility by air
	Potential accessibility by rail
	Potential accessibility by car to population and to GDP
	Households with broadband access
	Access to nearest national roads (min)
	Access to nearest railway station (min)
	Population potential 50 km
	Areas in 45 minutes reach from an urban center
	Distance to next MEGA
	Workers commuting to another NUTS-2 region
	Regional GVA in industries with high energy costs
Natural assets, Environment, Natural hazards and Climate change	Land cover
	NATURA 2000 areas
	Ecological footprint
	% of green space and open space per inhabitant
	Greenhouse gas emission
	Summer smog: ozone
	Summer smog: PM10 concentrations

	Residence density, settlement density
	Urban pressure
	Urban influence and human intervention
	Land fragmentation
	Share of natural and seminatural areas and population density
	Share of areas with high ecological value
	Natural hazard potential
	Impact of climate change
Energy	Share of industrial consumption of electricity
	Dependency on industries with high energy spending
	Energy poverty
	Share of employees in industries with high energy purchases
	Energy self-sufficiency and price sensibility
	Renewable energy consumption
	Wind power potential
	Solar energy output
	Future perspectives
Rural Development	Contribution of Agriculture to GVA
	Agricultural work productivity
	Farm structure
	Urban-rural typology
	Structural typology of rural areas
	Performance of rural areas
	Future perspectives for rural areas
Energy	Share of population in cultural professions
	Demand and supply of cultural resources
	Density of monuments
	Main functions of culture

Table AC3: TANGO (Territorial Approaches for New Governance)

Note that the data to populate these indicators is gathered through interviews using a set of predefined questions.

Indicators for Good Territorial Governance

Integrating Policy Sectors	Public policy packaging
	Cross-sector synergy
Co-ordinating actions of actors and institutions	Governing capacity
	Leadership
	Subsidiarity
Mobilising stakeholder participation	Democratic legitimacy
	Public accountability
	Transparency
Being adaptive to changing contexts	Reflexivity
	Adaptability
Realising place-based/territorial specificities and impacts	Territorial relationality
	Territorial knowledgeability and impacts

Table AC4: TPM (Territorial Performance Monitoring)	
<i>Note that absolute, change and scenario indicators have been included as relevant to KITCASP.</i>	
Benchmarking Indicators	
Globalisation	Population aged 15-64 born outside the EU
	Share of working age residents who moved from a different EU region within the last year
	Number of branches of multinationals active in advanced services
	Sales of the largest European companies
	Number of employees of the largest European companies
	Share of households with broadband internet connection
	Expenditure on R&D
	Relative number of patents
	Share of non-resident tourists
	Daily population accessible by car
	Migration into NUTS 3 regions
	Accessibility to passenger flights
	Share of population with tertiary education
	Early school leavers
	Unemployment rate
Demography	Young age dependency ratio
	Old age dependency ratio
	Labour force
	Total population
	Population growth
	Life expectancy at birth
	Median age
Climate Change	Soil sealing
	Share of NATURA 2000 areas
	Concentration of particulate matter at surface level
	Ozone concentration exceedances
	Potential energy consumption for heating
	Change in mean temperature January
	Change in mean temperature July
	Change in annual mean temperature
	Change in annual mean precipitation in summer months
	Change in annual mean precipitation in winter months
	Change in annual mean number of days with heavy rainfall
Energy	Solar energy resources
	Wind energy potential
	Fuel costs of freight traffic as % of GDP
	Employment in energy intensive industries

Table AC5: INTERCO (Indicators for Territorial Cohesion)	
<p><i>Developing knowledge base for measuring territorial cohesion. Some key conclusions relevant to KITCASP:</i></p> <ul style="list-style-type: none"> • <i>Changing perceptions and understanding of territorial cohesion given its political and complex nature require participatory and flexible tools for indicator definition/selection.</i> • <i>Composite indicators were not desired by the stakeholders.</i> • <i>Data for the wish indicators were leaving too many gaps in terms of territory covers as they are available only at national level and not for all countries yet.</i> • <i>When time series are not available, how could we analyse convergence?</i> • <i>Some indicators (e.g. life expectancy) not liked by stakeholders as could not enable the measurement of the concrete results of their political actions, yet they are needed to provide an overall context to territorial cohesion.</i> 	
Strong local economies ensuring global competitiveness	GDP per capita in PPS
	Overall unemployment rate
	Old age dependency ratio
	Labour productivity in industry and services
	Labour productivity per person employed
Innovative territories	Population aged 25-64 with tertiary education
	Intramural expenditures on R&D
	Employment rate 20-64
Fair access to services, market and jobs	Access to compulsory school
	Access to hospitals
	Accessibility of grocery services
	Access to universities
	Accessibility potential by road
	Accessibility potential by rail
	Accessibility potential by air
Inclusion and quality of life	Disposable household income
	Life expectancy at birth
	Proportion of early school leavers
	Gender imbalances
	Difference in female-male unemployment rates
	Ageing index
Attractive regions of high ecological values and strong territorial capital	Potential vulnerability to climate change (ESPON Climate)
	Air pollution: PM10
	Air pollution: Ozone concentrations
	Soil sealing per capita
	<i>Mortality, hazards and risks (wish indicator)</i>
	<i>Biodiversity (wish indicator)</i>
	<i>Renewable energy potential (wish indicator)</i>
Integrated polycentric territorial development	Population potential within 50 km
	Net migration rate
	Cooperation intensity (number of common projects between partners, from ESPON TERCO)
	Cooperation degree (the number of regions cooperating with each other, from ESPON TERCO)
	<i>Polycentricity index (wish indicator)</i>

Table AC6: EU-LUPA (European Land Use Patterns),

Some key considerations:

- *Land Use Function methodology applied at NUTS 2/3 level, based on a shared set of indicators available at pan European level. However, some key indicators not available for all regions or their quality did not suffice to be used.*
- *Further work needed on gathering new data at higher spatial resolution by the appropriate European institutions (e.g. Eurostat, EEA, JRC).*

Land use performance and land use efficiency	Areas harvested (total crop area)
	Landcover - Artificial non-agricultural vegetated areas
	Landcover - Forests and semi-natural areas
	Landcover - Green urban areas
	Gross domestic product (Purchasing Power Standard)
	Gross value added at basic prices - Agriculture and fishing
	Gross value added at basic prices - Total
	Landcover - Industry and Commercial areas
	Monuments and other tourist sights (index)
	Multimodal potential accessibility
	Landcover - Natural leisure
	Navigable rivers and canals
	Net migration
	NH3 emission
	Nights spent in tourist accomodations
	N-surplus
	Population density
	Pre-primary education
	Natural protected areas - CDDA and Natura2000
	P-surplus
	Status of coastal bathing water
	Status of inland bathing water
	Unemployment rates (age >=15)
	Landcover - Urban fabric area

Table AC7: ReRisk (Regions at Risk of Energy Poverty)	
<i>Some of the indicators could not be efficiently used due to existing data gaps, but indicators were brought forward on the basis that collection of these data is obligatory for Member States so should become available in the future.</i>	
	Temperature data
	Wealth creation and employment in industries with high energy purchases
	Employment in the transport sector
	Regional spending on transport fuel
	Commuting between regions
	Regional air travel
	Long-term unemployment
	Activity rate
	Age dependency ratio
	Disposable income of households
	Onshore wind power potential
	Photovoltaic potential
	Potential Urban Strategic Horizon (PUSH) factor (connectivity)

Table AC8: DEMIFER (Demographic and Migratory Flows Affecting European Regions and Cities)

Note that thematic units describing the state and development trends of the indicators are presented at NUTS2 level.

Population	Population change
	Population change by main components (migration and natural change)
	Natural population change
Demography	Life expectancy at birth
	Total fertility rate
	Birth rate
	Death rate
	Standardised mortality ratios
Migration	Net migration rate
	Net migration by main components
	Internal net migration
	Bilateral international brutto migration flows
	Immigration from non-European countries
	Emigration rate
	Net inter-country migration rates
	Net extra-Europe migration rates
	Foreign population
	Regional destination attractiveness
	Impact of migration on population
	Impact of migration on very old age dependency ratio
	Impact of migration on labour force
Age structure	Change in child ages 0-14
	Population aged 20-39
	Change in population aged 20-39
	Sex Ratio at Age 20-29
	Population aged 20-64
	Change in population aged 20-64
	Change in working age population
	Change in working ages 15-64
	Population aged 50-64
	Change in population aged 50-64
	Population aged 65+
	Change in population aged 65+
	Change in population aged 75+
	Change in population aged 80+
	Labour force replacement ratio
	Parent support ratio
Dependency ratios	Total dependency ratio
	Young-age dependency ratio
	Old-age dependency ratio
	Change in old-age dependency ratio
	“Real” dependency ratio
	Very-old-age dependency ratio
	Change in very-old-age dependency ratio
	Economic old-age dependency ratio
	Labour market dependency ratio
Labour markets	Tertiary educated
	Labour force participation

	Change in labour force
	Change in male labour force
	Change in female labour force
	Female aged 40-44 in labour force participation
	Male aged 20-24 in labour force participation
	Male aged 55-59 in labour force participation
	Unemployment rate
	Long-term unemployment
Economy	GDP in € per inhabitant
	GDP growth - € per inhabitant
	GDP in purchasing power parity per inhabitant
Demographic clusters and typologies	Cluster analysis of demographic indicators
	Cluster analysis of demographic growth
	Typology of the demographic status
	Euro standard (typology of demographic status)
	Challenge of labour force (typology of demographic status)
	Family potentials (typology of demographic status)
	Challenge of ageing (typology of demographic status)
	Challenge of decline (typology of demographic status)
	Young potentials (typology of demographic status)

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