Description of the Bes domains and indicators selected by the Scientific Commission and launched on 22 June 2012

1 Health

Basic concepts

Health is a central element in life and an essential condition for individual well-being and prosperity of populations, as documented at global level by the works of the WHO Commission on "Macroeconomics and Health (WHO 2001)" and recalled, at European level, by the Lisbon Strategy for Development and Employment launched by the European Commission in 2000 in response to the challenges of globalization and aging. Health outcomes have an impact on all dimensions of the individual life in all its different phases, modifying life conditions, behaviour, social relationships, opportunities and prospects of individuals and, often, of their families. While age increases, the role played by health conditions becomes increasingly important, and it is nearly exclusive among the oldest old, when the risk of ill health is greater and the impact on quality of life of people can be very severe.

Dimensions considered to represent the domain

The set of indicators selected for this domain describes essential elements of the health profile of population, across the main dimensions: objective, functional and subjective health. Indicators describing potential risk factors for health are also proposed. Indicators are organized into three lists.

1. **Global outcome indicators**: which give information about the phenomenon;
2. **Specific indicators for lifecycle phases**: global information is enriched with in depth information related to risks which are specific for different phases of the lifecycle;
3. **Indicators related to risk or health protection factors caused by lifestyles**: useful for assessing the sustainability of current levels of population health and of their desirable improvement.

List of indicators

1. Life expectancy at birth: Life expectancy expresses the average number of years that a child born in a given calendar year can expect to live if exposed during his whole life to the risks of death observed in the same year at different ages.
2. Healthy life expectancy at birth: It expresses the average number of years that a child born in a given calendar year can expect to live in good health on the assumption that the risks of death and perceived health conditions remain constant. It is built using the prevalence of individuals who respond positively ("good" or "very good") to the question on perceived health.

3. Physical Component Summary (Pcs): Summary of the scores of each individual answering the 12 questions on the Short Form Health Survey SF12 questionnaire on physical state (Physical Component Summary).
4. Mental Component Summary (Mcs): Summary of the scores of each individual answering the 12 questions on the questionnaire SF12 on psychological state (Mental Component Summary).
5. Infant mortality rate: Deaths during the first year of life per 10.000 born alive.
6. Road accidents mortality rate (15-34 years old): Mortality rate in road accidents by five year age groups for people aged 15-34 years, standardized by the European 2013 population of the same age groups.
7. Age-standardised cancer mortality rate: Mortality rate for cancer (initial cause) by five year age groups for people aged 20-64 years, standardized by the European 2013 population in the same age groups.
8. Age-standardised mortality rate for dementia and nervous system diseases: Mortality rate for nervous system diseases and psychical and behavioral disorders (initial cause) by five year age groups for people aged 65 years and over, standardized by the European 2013 population in the same age groups.
9. Life expectancy without activity limitations at 65 years of age: It expresses the average number of years that a person aged 65 can expect to live without suffering limitations in activities due to health problems. It is based on the prevalence of individuals who answer to be limited, for at least the past 6 months, because of a health problem in activities people usually do
10. Overweight or obesity: Proportion of population aged 18 and over overweight or obese. The indicator refers to the WHO classification of the Body Mass Index (BMI: ratio between the body weight, expressed in kilos, and the squared height, expressed in meters). The indicator is standardized using the european standard population 2013.
11. Smoking: Proportion of people aged 14 and over who report current smoking. The indicator is standardized using the European 2013 population as standard population.
12. Alcohol consumption: Proportion of people aged 14 and over with at least one risk behaviour in alcohol consumption. Taking into account the definitions adopted by the WHO and the recommendations from INRAN, in agreement with the National Institute of Health, are identified as "at-risk consumers" all those individuals who have at least one risk behaviour, exceeding the daily consumption of alcohol (according to specific thresholds for sex and age) or concentrating on a single occasion of consumption the intake of 6 or more units of any alcoholic drink (binge drinking). The indicator is standardized using the European 2013 population as standard population.
13. Sedentariness: Proportion of people aged 14 and over referring not to play sports neither continuously nor intermittently during their spare time, and people aged 14 and over referring not to perform any physical activity, such as walking at least 2 km, cycling, swimming, etc. The indicator is standardized using the European 2013 population as standard population.
14. Nutrition: Percentage of people aged 3 years and over who say they take every day at least 4 portions of fruit and vegetables. The indicator is standardized using the European 2013 population as standard population.

Table of indicators

N.	Name of indicators	Data source	Survey	Periodicity	Since	Territorial level
1	Life expectancy at birth	Istat	Life tables of Italian population	Yearly	2004	Yes
2	Healthy life expectancy at birth	Istat	Life tables of Italian population and Survey on Aspects of daily life	Yearly	2009	Yes
3	Physical Component Summary (Pcs)	Istat	Survey on health conditions and use of health services	Every 5 years	2005	Yes
4	Mental Component Summary (Mcs)	Istat	Survey on health conditions and use of health services	Every 5 years	2005	Yes
5	Infant mortality rate	Istat	Survey on deaths and causes of death	Yearly	2004	Yes
6	Road accidents mortality rate (15-34 years old)	Istat	For deaths: Survey on road accidents resulting in death or injury. For population: Survey on the municipal resident population by sex, year of birth and marital status	Yearly	2004	Yes
7	Age-standardised cancer mortality rate	Istat	For deaths: Survey on deaths and causes of death. For population: Survey on the municipal resident population	Yearly	2004	Yes
8	Age-standardised mortality rate for dementia and nervous system diseases	Istat	For deaths: Survey on deaths and causes of death. For population: Survey on the municipal resident population	Yearly	2004	Yes
9	Life expectancy without activity limitations at 65 years of age	Istat	Life tables of Italian population and Survey on Aspects of daily life	Yearly	2008	Yes
10	Overweight or obesity	Istat	Survey on Aspects of daily life	Yearly	2005	Yes
11	Smoking	Istat	Survey on Aspects of daily life	Yearly	2005	Yes
12	Alcohol consumption	Istat	Survey on Aspects of daily life	Yearly	2007	Yes
13	Sedentariness	Istat	Survey on Aspects of daily life	Yearly	2005	Yes
14	Nutrition	Istat	Survey on Aspects of daily life	Yearly	2005	Yes

2 Education and training

Basic concepts

Education, training and the level of competences affect the well-being of individuals and open up opportunities otherwise precluded. Education does not only have an intrinsic value but it directly affects the well-being of people. People with higher education level have higher standards of living and more possibilities to find work, they live longer and better because they have healthier lifestyles and more opportunities to find jobs in a less risky. Furthermore, higher levels of education and training are related to higher levels of access and enjoyment of goods and cultural services, and to an active participation in the production process in the cultural and creative sectors.

Dimensions considered to represent the domain

The domain takes into account four dimensions:

1. **Formal education**. Undertaken in schools and universities, it is the main pillar of competences that people acquire during lifetime. The population's educational level can be considered as a proxy of the stock of human capital available in a country.
2. **Long life learning**. People continue to acquire competences throughout lifetime, especially at work but also through the activities of their free time. The participation of adults to training activities is an important element in improving their competences.
3. **Levels of competences**. Education and training are indicators of the potential in terms of human capital but they do not give indications on the real competences of the population; for this reason it is necessary to measure the competences actually acquired and their impact on individual well-being.
4. **Cultural participation**. It represents an important source of "random learning" placing itself in a continuum with education and training, and having a direct and positive effect on life satisfaction.

List of indicators

1. Participation in early childhood education: Percentage of children aged 4-5 years participating in pre-primary education on total children aged 4-5 years
2. People with at least upper secondary education level (25-64 years old): Percentage of people aged 25-64 years having completed at least upper secondary education (ISCED level not below 3) on total people aged 25-64 years.
3. People having completed tertiary education (30-34 years old): Percentage of people aged 30-34 years having completed tertiary education (ISCED 5, 6, 7 or 8) on total people aged 30-34 years.
4. First-time entry rate to university by cohort of upper secondary graduates: Proportion of new-graduates from upper secondary education enrolled for the first time at university in the same year of upper secondary graduation (cohort-specific rate).

5. Early leavers from education and training: Percentage of population aged 18-24 years who have achieved only lower secondary (ISCED 2) and are not included in a training program on total population aged 18-24 years.
6. People not in education, employment, or training (Neet): Percentage of people aged 15-29 years that are not in education, employment, or training on total people aged 15-29 years
7. Participation in long-life learning : Percentage of people aged 25-64 years participating in formal or non-formal education on total people aged 25-64 years
8. Level of literacy: Scores obtained in the tests of functional literacy skills of students in the II classes of upper secondary education.
9. Level of numeracy: Scores obtained in the tests of numeracy skills of students in the II classes of upper secondary education
10. People with high level of IT competencies: Percentage of people aged 16-74 with advanced competences in all 4 groups identified in the "Digital competence framework".

Table of indicators

N.	Name of indicators	Data source	Survey	Periodicity	Since	Territorial level
1	Participation in early childhood education	MIUR	Ministry of Education, Universities and Research	Yearly	2007-2008	Yes
2	People with at least upper secondary education level (25-64 years old)	Istat	Labour force survey	Yearly	2004	Yes
3	People having completed tertiary education (30-34 years old)	Istat	Labour force survey	Yearly	2004	Yes
4	First-time entry rate to university by cohort of upper secondary graduates	MIUR	Ministry of Education, Universities and Research	Yearly	2013/2014	Yes
5	Early leavers from education and training	Istat	Istat, Labour force survey	Yearly	2004	Yes
6	People not in education, employment, or training (Neet)	Istat	Labour force survey	Yearly	2004	Yes
7	Participation in long-life learning	Istat	Labour force survey	Yearly	2004	Yes
8	Level of literacy	Invalsi	National Institute for the Educational Evaluation of Instruction and Training, Evaluation Service	Yearly	.2011/2012	Yes
9	Level of numeracy	Invalsi	National Institute for the Educational Evaluation of Instruction and Training, Evaluation Service	Yearly	2011/2012	Yes
10	People with high level of IT competencies	Istat	Survey on Aspects of daily life	Yearly	2015	Yes
11	Participation in early childhood education	Istat	Istat, Survey on Aspects of daily life	Yearly	2006	Yes

3 Work and life balance

Basic concepts

A job well paid, reasonably secure and corresponding to competences, is a universal aspiration of adult people and contributes significantly to the achievement of their wellbeing. It is well known that the absence of a "good job" has a negative impact on the level of wellbeing; nevertheless a bad distribution of work commitments which hamper the balance between working time and social and family life can have a similar negative impact. The sub-dimensions and the indicators chosen to represent this domain are meant to follow this approach, illustrating the contribution that the employment status may give to wellbeing in the Italian society.

Dimensions considered to represent the domain

Moving from the quantitative perspective of labor participation up to the subjective perspective of job satisfaction, the domain is articulated in four sub-dimensions:

1. **Participation and social inclusion**. It detects the quantitative aspect of work participation. It allows to highlight situations at higher risk of poverty and social exclusion, underlining the socio-economic effects of a low-intensity occupation.
2. **Work quality (stability, salary, competences and work safety).** The second dimension focuses attention on employment characteristics in terms of regulatory and de facto stability, salary, competences and work safety. The quality of employment is not homogeneous: there are good and bad jobs.
3. **Work and life balance.** This dimension is aimed at investigating the management of work time and life time in relation to family commitments. The compatibility between employment of women and their reproductive function is a crucial goal of labour policies. The quality of employment in a country is also measured on the possibility that women with children are able to reconcile paid work and family care.
4. **Uncertainty of employment and job satisfaction.** The last dimension intends to capture the subjective aspects of wellbeing at work, investigating perceived insecurity in the loss of employment and job satisfaction. Several studies adopted job satisfaction as a reasonable proxy for estimating the overall quality of work perceived by workers. According to these studies, job satisfaction is a good predictor of some behaviors of workers: from resignation, to absenteeism, to productivity.

List of indicators

1. Employment rate (20-64 years old): Percentage of employed people aged 20-64 on total

people aged 20-64

2. Non-participation rate: Percentage of unemployed people aged 15-74 plus part of the potential labour force aged 15-74 who are inactive not having looked for a job in the past 4 weeks but willing to work, on the total labour force aged 15-74 plus part of the potential labour force aged 15-74 who are inactive not having looked for a job in the past 4 weeks but willing to work.

3. Transition rate (12 months time-distance) from non-standard to standard employment: Percentage of people employed in non-standard jobs at the time t0 (employees with temporary jobs + term-contract workers + project worker + occasional hired workers + single customer self-employed without employees) which have a standard job (permanent employees + self-employed with employees + no single customer self-employed without employees) a year later on total people employed in non-standard jobs at the time t0

4. Share of employed persons with temporary jobs for at least 5 years: Percentage of temporary employees and term-contract workers who began their current job at least 5 years prior to interview on total temporary employees and term-contract workers

5. Share of employees with below 2/3 of median hourly earnings: Percentage of employees with an hourly wage of less than 2/3 of the median on total number of employees.

6. Share of over-qualified employed persons: Percentage of people employed with a qualification higher than the qualification held by the majority of people who exercise the same profession on total employed people.

7. Incidence rate of fatal occupational injuries or injuries leading to permanent disability: Proportion of fatal occupational injuries or injuries leading to permanent disability on total people employed (excluding the armed forces) per 10,000.

8. Share of employed persons not in regular occupation: People employed who do not comply with work, fiscal and pension laws on total people employed.

9. Ratio of employment rate for women aged 25-49 with at least one child aged 0-5 to the employment rate of women 25-49 years without children, multiplied by 100: Employment rate of women aged 25-49 with at least one child aged 0-5 / Employment rate of women aged 25-49 without children.

10. Share of population aged 15-64 years that work over 60 hours per week (including paid work and household work): Population aged 15-64 years that work over 60 hours per week of paid work and household work / population aged 15-64 years

11. Share of household work time carried out by women in a couple on the total of the household work time: Household work time carried out by women / household work time carried out by both partner * 100

12. Share of employed persons who feel satisfied with their work: The indicator is built as the average level of satisfaction (eg, using a scale from 0 to 10) in more than one dimension: the type of work, earnings, prospects of career, relations with others, working conditions

and environment, reconciliation with lifetimes.

13. Share of employed persons who feel their work unsecure: Employed persons who, in the following 6 months, consider it is likely they lose their job and it is not at all or a little likely that they find another similar job / Total employed persons * 100
14. Involuntary part time: People employed in a part time job because they did not find a full time job on total employed people

Table of indicators

N.	Name of indicators	Data source	Survey	Periodicity	Since	Territorial level
1	Employment rate (20-64 years old)	Istat	Labour force survey	Yearly	2004	Yes
2	Non-participation rate	Istat	Labour force survey	Yearly	2004	Yes
3	Transition rate (12 months time-distance) from non-standard to standard employment	Istat	Labour force survey	Yearly	2013	Yes
4	Share of employed persons with temporary jobs for at least 5 years	Istat	Labour force survey	Yearly	2004	Yes
5	Share of employees with below 2/3 of median hourly earnings	Istat	Labour force survey	Yearly	2008	Yes
6	Share of over-qualified employed persons	Istat	Labour force survey	Yearly	2004	Yes
7	Incidence rate of fatal occupational injuries or injuries leading to permanent disability	Inail	Inail	Yearly	2005	Yes
8	Share of employed persons not in regular occupation	Istat	National Accounts	Yearly	2004	Yes
9	Ratio of employment rate for women aged 25-49 with at least one child aged 0-5 to the employment rate of women 25-49 years without children, multiplied by 100.	Istat	Labour force survey	Yearly	2004	Yes
10	Share of population aged 15-64 years that work over 60 hours per week (including paid work and household work)	Istat	Time use survey	Every 5 years	2002/2003	Yes
11	Share of household work time carried out by women in a couple on the total of the household work time	Istat	Time use survey	Every 5 years	1988/1989	Yes
12	Share of employed persons who feel satisfied with their work	Istat	Labour force survey	Yearly	2003	Yes
13	Share of employed persons who feel their work unsecure	Istat	Labour force survey	Yearly	2013	Yes
14	Involuntary part time	Istat	Labour force survey	Yearly	2004	Yes

4 Economic well-being

Basic concepts

Earning capacities and economic resources are not seen as an end but rather as a mean by which an individual is able to obtain and to support a specific standard of living. Variables which can help measuring the economic well-being include income, wealth, spending on consumer goods, housing conditions and ownership of durable goods. As for most of the other dimensions of well-being, it is important to go over the mere study of mean or median levels of the chosen indicators, evaluating also the distribution among population: the judgment on the level of material well-being of a society can change if the same overall mean income is equally divided among citizens or it is concentrated in the hands of a few wealthy people.

Dimensions considered to represent the domain

The domain was divided into two sub-dimensions:

1. **Available income and wealth.** The income can be seen as the return of the assets individuals have at their disposal, real, financial and human. In a market economy, income measures the purchasing power of individuals and it is therefore a very significant variable in estimating the level of economic well-being. Wealth, as well as guaranteeing income, reduces insecurity, making people less vulnerable to the possible negative events that may affect them; it facilitate access to credit, and therefore allows people both to equilibrate their consumption pattern along the life cycle and to invest in physical and human capital; it confers social prestige. This sub-dimension also includes the analysis of debt.
2. **Expenditure on consumption and material conditions of life.** Expenditure on consumption represents a direct estimate of goods and services that determine living conditions of an individual or a household, even if interpersonal comparisons are affected by differences in preferences and individual habits. Expenditure is strongly correlated to income. Material life conditions measure what is available in practice to individuals and the difficulties they encounter in acquiring the desired goods and services, capturing aspects that could not be detected by the level of income or consumption.

List of indicators

1. Per capita adjusted disposable income: Ratio between disposable income of consumer households and the total number of residents (in euros).
2. Disposable income inequality: Ratio of total equivalised income received by the 20% of the population with the highest income to that received by the 20% of the population with the lowest income.
3. People at risk of poverty:Percentage of persons at risk of poverty, with an equivalised income less than or equal to 60% of the median equivalised income.

4. Per capita net wealth: Ratio of total net wealth of households to the total number of residents.
5. People living in financially vulnerable households: Percentage of households with debt service greater than 30% of disposable income on total resident households.
6. People living in absolute poverty: Proportion of individuals belonging to households with an overall consumption expenditure equal or below the threshold of absolute poverty.
7. Severe material deprivation rate: Share of population living in households lacking at least 4 items out of the following 9 items: i) to pay rent or utility bills, ii) keep home adequately warm, iii) face unexpected expenses (of 800 euros in 2014), iv) eat meat, fish or a protein equivalent every second day, v) a week holiday away from home, or could not afford) vi) a car, vii) a washing machine, viii) a colour TV, or ix) a telephone.
8. Severe housing deprivation rate: Share of population living in a dwelling which is considered as overcrowded, while also exhibiting at least one of the housing deprivation measures. Housing deprivation is calculated by reference to households with a leaking roof, neither a bath, nor a shower, nor an indoor flushing toilet, or a dwelling considered too dark.
9. Index of economic distress: Share of individuals in households that, considering all the available income, declare to get to the end of the month with great difficulty
10. Low work intensity: Proportion of people living in households with very low work intensity namely household members of working age (person aged 18–59 years, with the exclusion of dependent children aged 18–24) that have worked during the income reference year less than 20% of the number of months that could theoretically have been worked by the same household members.

Table of indicators

N.	Name of indicators	Data source	Survey	Periodicity	Since	Territorial level
1	Per capita adjusted disposable income	Istat	National Accounts	Yearly	2004	Yes
2	Disposable income inequality	Istat	Eu-Silc.	Yearly	2004	Yes
3	People at risk of poverty	Istat	Eu-Silc.	Yearly	2004	Yes
4	Per capita net wealth	Bank of Italy	Bank of Italy, Financial accounts and household wealth (SHIW)	Every 2 years	2000	No
5	People living in financially vulnerable households	Bank of Italy	Bank of Italy, Financial accounts and household wealth (SHIW)	Every 2 years	2008	No
6	People living in absolute poverty	Istat	Household Budget Survey	Yearly	2005	No
7	Severe material deprivation rate	Istat	Eu-Silc.	Yearly	2004	Yes
8	Severe housing deprivation rate	Istat	Eu-Silc.	Yearly	2004	Yes
9	Index of economic distress	Istat	Eu-Silc.	Yearly	2004	Yes
10	Low work intensity	Istat	Eu-Silc.	Yearly	2004	Yes

5 Social relationships

Basic concepts

Relational networks to which individuals belong and in which they recognize themselves, represent a fundamental resource that allows pursuing their own ends relying on additional resources compared to the available endowments of economic and cultural capital (Bourdieu, Coleman). In literature it is widely recognised that a generalized climate of interpersonal trust, high involvement in associative networks and widespread civic culture increase individual wellbeing and social cohesion, allowing a better performance, greater efficiency of public policies and a lower cost of economic transactions.

In Italy the informal networks, that include all the relationships that gravitate around individuals, are of particular interest (family relationships, parenting, friendship, neighbourhood, mutual help). These networks put in place human and material resources to provide support and protection to individuals both in everyday life and in critical moments and periods of discomfort, representing an essential element of social cohesion.

Dimensions considered to represent the domain

The proposed indicators are organized according to a scheme based on three areas considered as drivers of wellbeing of individuals, families and social groups. This is a scheme that is inspired by the classic "welfare diamond", for three vertices of which the relations are fundamental: Civil Society, Family and Market. The other vertex constituted by the component State, even if covered by some indicators in this domain, will be specifically detailed in the domain "Policy and Institutions."

1. **Civil society**. The relational aspects referring to the component "civil society" of welfare were distinguished in two major aspects, trying to keep into account both traditional and emerging forms of participation to civil society:
    - social participation, considered as participation in associations and volunteering
    - generalized trust
2. **Social economy**. A market that values the relations in order to create utility (not only in monetary terms) and that is able to create relationships based on reciprocity and trust can have a positive influence on the level of well-being of a society. In recent years there has been a blossoming of new forms of participation anchored to principles of reciprocity, solidarity, ideal, ethical or religious values, which have won more and more social relevance. These activities, in contrast to those falling within the traditional market, are ruled by different motivations from individual economic interest and are based on capital relations, social ties and collaboration. Unfortunately, it is not currently available a data source which is systematic, complete and of appropriate statistical quality, allowing to describe this dimension. Given its importance, the Commission considered opportune to propose some indicators that can be derived from the more consolidated sources of data currently available in the social solidarity field.

3. **Family**. It is a dimension of particular relevance in Italy but it is not exempt from difficulties of measure. The distinction appearing in literature between “bridging” and “bonding” social capital is very complex. The first one connects people belonging to different social realities and conditions (for examples through participation to social movements); the second connects people who are similar for some important traits (e.g. by ethnicity or parenthood). As the Oecd report How’s Life? says, “Too much bonding in the absence of bridging social capital can lead to ‘in group/out group’ dynamics, leading to the exclusion of those outside the bonding group. Network can also foster values that are detrimental for society, as in the case with mafia or terrorist organisations”. Taking into account this complexity we tried to select indicators that would allow to explain this fundamental aspect of social life. The family context in which people live is also used as a background variable to analyse many of the indicators proposed, believing that it can provide important additional information on the behaviour of population.

Indicators

1. Very satisfied with family relations: Percentage of people aged 14 and over that are very satisfied with family relations on total population aged 14 and over.
2. Very satisfied with friends relations: Percentage of people aged 14 and over that are very satisfied with relations with friends on total population aged 14 and over.
3. People to rely on: Percentage of people aged 14 and over that have relatives, friends or neighbors they can rely on, on total population aged 14 and over.
4. Social participation: People aged 14 and over that have performed at least one social participation activity in the last 12 months on total population aged 14 and over. The activities in question are: participation in meetings of associations (cultural/recreational, ecological, civil rights, peace); participation in meetings of trade union organizations, professional or trade associations; meetings of political parties and/or performance of free activities for a party; payment of a monthly or quarterly fee for a sports club.
5. Civic and political participation: People aged 14 and over who perform at least one of the activities of civic and political participation on total population aged 14 and over. The activities in question are: to speak about politics at least once a week; to inform of the facts of Italian politics at least once a week; to attend online consultation or voting on social issues (civic) or political (e.g. urban planning, sign a petition) at least once in the 3 months prior to the interview, to read and to post opinions on social or political issues on the web at least once in the 3 months preceding the interview.
6. Voluntary activity: Percentage of people aged 14 and over that have performed free activities for voluntary associations or groups in the last 12 months on total population aged 14 and over.
7. Association funding: Percentage of people aged 14 and over that have funded associations in the last 12 months on total population aged 14 and over.
8. No-profit organizations: Number of no-profit organizations per 10,000 inhabitants.
9. Generalized trust: Percentage of people aged 14 and over that feel that most people are worthy of trust on the total population aged 14 and over.

Table of indicators

N.	Name of indicators	Data source	Survey	Periodicity	Since	Territorial level
1	Very satisfied with family relations	Istat	Survey on Aspects of daily life	Yearly	2005	Yes
2	Very satisfied with friends relations	Istat	Survey on Aspects of daily life	Yearly	2005	Yes
3	People to rely on	Istat	Survey on Aspects of daily life	Yearly	1998	Yes
4	Social participation	Istat	Survey on Aspects of daily life	Yearly	2005	Yes
5	Civic and political participation	Istat	Survey on Aspects of daily life	Yearly	2011	Yes
6	Voluntary activity	Istat	Survey on Aspects of daily life	Yearly	2005	Yes
7	Association funding	Istat	Survey on Aspects of daily life	Yearly	2005	Yes
8	No-profit organizations	Istat	Census of industry and services - Survey on non-profit institutions.	Every 10 years	1999	Yes
9	Generalized trust	Istat	Survey on Aspects of daily life	Yearly	2010	Yes

6 Politics and Institutions

Basic concepts

The domain is based on the consideration that the trust expressed by the citizens to the institutions, as well as civic and political participation facilitate cooperation and social cohesion while allowing greater effi-ciency of public policies and a lower cost of transactions. Starting from this assumption a reflection has been carried out on the information needed to measure issues and problems – such as trust, participa-tion, equity and social cohesion – the importance of which has been further highlighted by the current economic crisis.

Dimensions considered to represent the domain

Firstly, a set of indicators has been identified to provide an initial measure of the components of social capital relating to the political and institutional framework. The indicators are based on the data available at present in official statistics (with a deficit of information regarding the compliance with the rules). Sec-ondly, in an attempt to overcome at least in part the inadequacy of available statistical information, the document contains recommendations to design of a specific survey on the subject of civicness. The pro-posed indicators refer to the institutional sphere of the state as drivers of well-being of individuals, fami-lies and social groups in the local and national contexts. The dimensions considered to represent the do-main are:

1. **Civic and political participation;**
2. **Trust in institutions and social cohesion;**
3. **Shared values and norms.**

This last aspect although relevant it is not measurable for lack of indicators of good quality. In particular, it would be essential to have objective and subjective measures of corrup-tion.;

Equity is a cross-cutting aspect across which is analysed in the other domains by using appropriate break-downs for reading the indicators from this perspective, with particular reference to gender and age. In the domain “policy and institutions” appeared, however, of particular importance to give a particular rele-vance to equity with respect to gender and age introducing some specific indicators.

List of indicators

1. Voter turnout: Percentage of eligible voter who cast a ballot in the last election for the European Parliament.
2. Trust in the parliament: Average score of trust in the Italian Parliament (on a scale from 0 to 10) expressed by people aged 14 and over.
3. Trust in judicial system: Average score of trust in the judicial system (on a scale from 0 to 10) expressed by people aged 14 and over.
4. Trust in political parties: Average score of trust in political parties (on a scale from 0 to 10) expressed by people aged 14 and over.
5. Trust in other institutions: Average score of trust in the police and the fire brigade (on a scale from 0 to 10) expressed by people aged 14 and over.
6. Women and political representation in Parliament: Percentage of women elected in Parliament on total number of MPs.
7. Women and political representation at regional level: Percentage of women elected in regional councils on total number of elected people.
8. Women in decision-making bodies: Percentage of women in position of high responsibility within the following bodies: Constitutional court, Magistrates' Governing Council, Regulatory authorities (competition, communication, privacy, securities market), Embassies.
9. Women in the boards of companies listed in stock exchange: Percentage of women in the board of companies listed in stock exchange.
10. Median age of members of Parliament: Average age of MPs
11. Length of civil proceedings: Effective average duration in days of proceedings set up in ordinary courts.
12. Prison density: Percentage of prisoners in penal institutions on the total capacity of penal institutions.

Table of indicators

N.	Name of indicators	Data source	Survey	Periodicity	Since	Territorial level
1	Voter turnout	Ministry of the Interior	Ministry of the Interior	Occasional	1979	Yes
2	Trust in the parliament	Istat	Survey on Aspects of daily life	Yearly	2011	Yes
3	Trust in judicial system	Istat	Survey on Aspects of daily life	Yearly	2011	Yes
4	Trust in political parties	Istat	Survey on Aspects of daily life	Yearly	2011	Yes
5	Trust in other institutions	Istat	Survey on Aspects of daily life	Yearly	2012	Yes
6	Women and political representation in Parliament	Istat	Processing of data from the Chamber of Deputies and the Senate	Occasional	2008	Yes
7	Women and political representation at regional level	Individual regional councils	Individual regional councils	Occasional	2012	Yes
8	Women in decision-making bodies	Various	Various	Occasional	2013	Yes
9	Women in the boards of companies listed in stock exchange	Consob	Consob.	Yearly	2004	Yes
10	Median age of members of Parliament	Istat	Processing of data from the Chamber of Deputies and the Senate	Occasional	2014	Yes
11	Length of civil proceedings	Ministry of Justice	Ministry of Justice	Yearly	2012	Yes
12	Prison density	Istat	Processing of data from the Ministry of Justice, Penitentiary Administration Department	Yearly	2004	Yes

7 Security

Basic concepts

According to Sen, development can be seen as an expanding process of real freedoms enjoyed by humans while wellbeing is the freedom to enjoy what we have reason to value (Sen, 2000). In this sense it is certain that the subjective perception and the experience of objective safety in daily life in Italy become of paramount importance in the construction of individual and community well-being. Personal security is part of the foundation of individual wellbeing. Being victim of a crime can result in economic loss, physical and/or psychological damage due to a suffered trauma. The most important effect of criminality on well-being is the sense of vulnerability that it determines on individuals. The fear to be victim of crime can strongly affect personal freedom, quality of life and development of territories. Also the theme of violence is closely related to personal security and quality of life.

Dimensions considered to represent the domain

The complexity of the phenomenon results in the need of taking into account both objective and subjective indicators, because from the point of view of quality of life it is important how we feel when we face criminality and not only how many crimes have occurred.
For **objective indicators** two dimensions were considered:

1. **Criminality**. Criminality is one of the most common threats to personal security in developed and emerging countries. Crime has both a direct and indirect effect on people. Direct consequences affect physical and mental health, economic loss, and can be more or less durable. Also the crime indirect effect should be considered when we analyze its relation with well-being. Indirect victimization involves not only the victims but also their social entourage as well as the wider audience that is affected by the disproportionate attention given to criminality by the media.
2. **Suffered physical and sexual violence inside and outside home**. The physical and sexual violence suffered inside and outside home has a direct and indirect effect on people. The effect of suffered violence can persist for long periods, even for the whole life, in terms of ability to manage daily life, medical costs, dependence on others, capacity to achieve happiness. Indirect effects are also cause of insecurity, increased worry and anxiety, from which an obstacle to daily activities may arise.

For **subjective indicators** two dimensions were considered:

1. **Perception of social and environmental degradation**;
2. **Fear of crime**.

Indicators

1. Homicide rate: Number of homicide on total population per 100,000.

2. Burglary rate: Number of burglaries / households * 1,000.
3. Pick-pocketing rate: Number of pick-pocketing on total population per 1,000.
4. Robbery rate: Number of robberies on total population per 1,000.
5. Physical violence rate: Percentage of women aged 16-70 victim of physical violence in the last 5 years before the interview on total women aged 16-70.
6. Sexual violence rate: Percentage of women aged 16-70 victim of sexual violence in the last 5 years before the interview on total women aged 16-70.
7. Intimate partnership violence rate: Percentage of women aged 16-70 victim of physical or sexual violence by the partner or ex-partner in the last 5 years before the interview on total women aged 16-70 who have or had a partner.
8. Worries of being victim of a sexual violence: Percentage of people aged 14 years and over who are very or quite worried of being victim of a sexual violence on total population aged 14 and over.
9. Fear of crime rate: Percentage of people aged 14 and over feeling unsafe walking alone when it is dark in the area where they live on total population aged 14 and over.
10. Concrete fear rate: Percentage of people aged 14 and over who are afraid of becoming concretely a victim of crime in the last 3 months on total population aged 14 and over.
11. Social decay (or incivilities) rate: Percentage of people aged 14 and over who often see elements of social and environmental decay in the area where they live on total population aged 14 and over.

Table of indicators

N.	Name of indicators	Data source	Survey	Periodicity	Since	Territorial level
1	Homicide rate	Ministry of the Interior	Ministry of the Interior - SDI	Yearly	2004	Yes
2	Burglary rate	Istat	Processing on data on crimes reported to Police Forces (Ministry of Interiors) and data on Citizens' Safety Survey	Yearly	2004	Yes
3	Pick-pocketing rate	Istat	Processing on data on crimes reported to Police Forces (Ministry of Interiors) and data on Citizens' Safety Survey	Yearly	2004	Yes
4	Robbery rate	Istat	Processing on data on crimes reported to Police Forces (Ministry of Interiors) and data on Citizens' Safety Survey	Yearly	2004	Yes
5	Physical violence rate	Istat	Women Safety Survey	Every 5 years	2006	Yes
6	Sexual violence rate	Istat	Women Safety Survey	Every 5 years	2006	Yes
7	Intimate partnership violence rate	Istat	Women Safety Survey	Every 5 years	2006	Yes
8	Worries of being victim of a sexual violence	Istat	Citizens' Safety Survey	Every 5 years	2002	Yes
9	Fear of crime rate	Istat	Citizens' Safety Survey	Every 5 years	2002	Yes
10	Concrete fear rate	Istat	Citizens' Safety Survey	Every 5 years	2009	Yes
11	Social decay (or incivilities) rate	Istat	Citizens' Safety Survey	Every 5 years	2002	Yes

8 Subjective well-being

Basic concepts

It is widely acquired in literature that collecting information on subjective aspects is of high information and analytical value. Perceptions and evaluations affect the way people face life and take advantage of opportunities. Subjective indicators are useful complement to the most objectifiable indicators, because they allow evaluating the possible differences between what people report on their perceiving regarding their satisfaction and what it is captured by statistical observation of economic and social phenomena. The inclusion of subjective indicators allows having a more detailed and complete overview of the overall picture related to the evaluation of well-being [1].
The concept of well-being (which can be more generally referred to as quality of life) is organized in literature in two macro dimensions (Michalos, 2008; Zapf, 1975, 1984):

- living conditions, with both objective and subjective aspects;
- subjective well-being.

The second dimension has a cross-sectional character, because it may be related both to specific areas of life and to life as a whole. The "subjective well-being" domain proposed here concerns indeed assessments and perceptions expressed directly by individuals on their life in general, but also those related to more specific areas of life, which refer to different domains of BES. Subjective information complete the picture of several domains, such as, for instance, the indicator on satisfaction for family relationships which has been included in the domain Social relationships.

[1] The thematic group on subjective well-being was invited to cooperate with other groups to identify what kind of subjective information could be identified to complete each area, both in terms of subjective assessment of living conditions (opinions, confidence, etc.) and in terms of subjective well-being (satisfaction).

Dimensions considered to represent the domain

The concept of subjective well-being is defined by the following dimensions:

1. **Cognitive dimension**. It represents the process by which each individual evaluates (in terms of "satisfaction") his life as a whole retrospectively. This subjective assessment refers to specific personal standards (expectations, desires, ideals, past experiences, etc). This consciousness allows to express a level of satisfaction which depends on the achievement of his own objectives, the realization of his own aspirations, the comparison with his own ideals, his own past experiences or results achieved by other significant people in his own life. In other words, life satisfaction is the results of an individual cognitive process that evaluates his own position in regard to standards (Nuvolati 2002) which are defined in relation to several aspects.

2. **Affective dimension**. It indicates emotions that people experience during their daily life. Such emotions can be positive (pleasant affect) or negative (unpleasant affect) and they are analysed conceptually in a distinct way, because they are determined by different variables (Bradburn 1969; Diener/Emmons 1984; Argyle 1987). In contrast with the cognitive component, which involves an afterthought on his own life up to a given point in time, the affective components are related to the current situation.

Research on measurement of the affective component is still in progress, therefore in this phase the definition of the indicators proposed for BES will refer only to the cognitive component.

List of indicators

1. Life satisfaction: Percentage of people aged 14 and over with a level of life satisfaction from 8 to 10 on total population aged 14 and over.

2. Leisure time satisfaction: Percentage of people aged 14 and over very or quite satisfied with their leisure time on total population aged 14 and over.

3. Positive judgement f future perspectives: Percentage of people aged 14 and over which believe their personal situation will improve in the next 5 years on total population aged 14 and over.
4. Negative judgement of future perspectives: Percentage of people aged 14 and over which believe their personal situation will worsen in the next 5 years on total population aged 14 and over.

Table of indicators

N.	Name of indicators	Data source	Survey	Periodicity	Since	Territorial level
1	Life satisfaction	Istat	Survey on Aspects of daily life	Yearly	2010	Yes
2	Leisure time satisfaction	Istat	Survey on Aspects of daily life	Yearly	2005	Yes
3	Positive judgement f future perspectives	Istat	Survey on Aspects of daily life	Yearly	2012	Yes
4	Negative judgement of future perspectives	Istat	Survey on Aspects of daily life	Yearly	2012	Yes

9 Landscape and cultural heritage

Basic concepts

The domain of Landscape and Cultural Heritage has been defined starting from the classical distinction between the two dimensions of the landscape concept, proposed by Biasutti [1]. First, "the *sensible* or visual *landscape*, consisting of what the eye can embrace, or (…) is perceivable by all the senses; a landscape that can be reproduced by a photograph (…), as well as by a painter's picture, or a writer's description". Second, the *geographical landscape*, that is "an abstract synthesis of the visible landscapes, detecting from these the elements or features that are the most frequent over a given space which may vary in size, but is in any case bigger than that enclosed in a single horizon". The geographical landscape is divided into three sub-domains – urban, rural, natural – and the first two, that are shaped by the man's work, are considered as an integral part of the cultural heritage. Heritage can be considered, indeed, either as a sum of items (the "heritage properties": museums, monuments, archaeological areas, etc.), or – in a broader sense – as the organic whole of these elements and their respective territorial contexts.

For the *geographical landscape*, the relationship with well-being can therefore be identified with the state of implementation of the principle of the protection of "the landscape and the historical and artistic heritage of the Nation" (Constitution of the Italian Republic, Art. 9). Both are regarded as common goods, whose protection must be guaranteed over the entire national territory (equity) and for the future generations (sustainability). In this regard, it is important to underline that from effective protection policies derive not only intangible benefits, but also concrete opportunities for local development (e.g., in terms of value added for tourism or for qualification of agri-food production), as well as the production of important ecosystem services (e.g., conservation of biodiversity, protection of soil, etc.).

The *sensible landscape*, on the other hand, directly contributes to well-being on an existential level: the factors that determine its influence on the quality of life invest a sphere of meaning that is wider than that of the mere visual perception, and of the aesthetic values usually associated with it ("experience"). It also includes, at least, the social attention to the protection of landscape itself as an environmental issue ("awareness").

In the thematic document of the Scientific Commission that identified the Bes indicators (June 2012), the establishment of Landscape and Cultural Heritage as a domain of its own, motivated by the outstanding relevance of such themes in the Italian context [2], was accompanied by the recognition of a necessary experimental phase, for development of robust indicators and the search for new sources. Moving from the first results obtained, in 2017 a revision of the domain was carried out, which modified the set of indicators without altering the original conceptual scheme.

[1] Biasutti R., Il paesaggio terrestre, Utet, Torino: 2nd ed. 1962.

[2] This domain was not among those proposed by the Stiglitz Report (2009), of which the Bes Report largely resumes the structure.

Dimensions considered for the representation of the domain

In the representation of the domain both objective and subjective aspects were considered: the first through indicators referring to the consistency, status, evolutionary trends of Landscape and Cultural heritage and of the related policies of protection and enhancement (based on existing data sources, and often through the integration of different sources); the latter through indicators of perception (which can be sourced only by direct surveys).

List of indicators

1. Current expenditure of Municipalities for the management of cultural heritage (museums, libraries, art galleries) in euro per capita
2. Density and importance of museum heritage: Number of permanent exhibition facilities per 100 sq.km (museums, archaeological sites and monuments open to public). Values weighted by the number of visitors.
3. Illegal building rate: Ratio of the number of unauthorised buildings to the number of building permits issued by the Municipalities.
4. Erosion of rural space from urban sprawl: Percentage ratio of rural areas affected by urban sprawl (“rural areas affected by urban sprawl”: areas with increasing low-density urbanization and significant loss of agricultural land).
5. Erosion of rural space from abandonment: Percentage ratio of rural areas affected by abandonment (“rural areas affected by abandonment”: rural areas with significant losses of population and agricultural land).
6. Pressures of mining and quarrying activities: Volume of mineral resources extracted (cubic metres) per sq.km.
7. Impact of forest fires: Proportion of burnt forest area (wooded and non-wooded) per 1,000 sq.km.
8. Spread of rural tourism facilities: Number of farmhouses per 100 sq.km.
9. Presence of Historic Parks/Gardens and other Urban Parks recognised of significant public interest: Percentage ratio of the area of parks and gardens classified as “historic” and/or “of a significant public interest” by the Legislative Decree no. 42/2004 to the total area of the provincial capital Municipalities.
10. People that are not satisfied with the quality of landscape of the place where they live: Proportion of population reporting that the landscape of the place where they live is affected by evident deterioration.
11. Concern about landscape deterioration: Proportion of population reporting, among the environmental problems for which they express more concern, the decay of landscape due to overbuilding.

Table of indicators

N.	Name of indicators	Data source	Survey	Periodicity	Since	Territorial level
1	Current expenditure of Municipalities for the management of cultural heritage	Istat	Processing of data from Istat, Final balance sheets of municipal governments	Yearly	2001	Yes
2	Density and importance of musems' heritage	Istat	Survey on museums and other cultural institutions	Yearly	2015	Yes
3	Illegal building rate	Cresme	Center for social, economic and market research for building and the territory (Cresme)	Yearly	2004	Yes
4	Erosion of farmland from urban sprawl	Istat	Processing of data from Istat, General Census on Agriculture, General Census on Popoluation and Housing, Census Mapping.	Every 10 years	2001	Yes
5	Erosion of farmland from abandonment	Istat	Processing of data from Istat, General Census on Agriculture, General Census on Popoluation and Housing, Census Mapping.	Every 10 years	2001	Yes
6	Pressures of mining and quarrying activities	Istat	Anthropic pressure and natural hazards. Mining and quarrying extraction activities	Yearly	2013	Yes
7	Impact of forest fires	Istat	Processing of data from the State Forestry Corps	Yearly	2005	Yes
8	Spread of rural tourism facilities	Istat	Survey on farmhouses	Yearly	2003	Yes
9	Presence of Historic Parks/Gardens and other Urban Parks recognised of significant public interest	Istat	Processing of data from Istat, Survey on urban environmental data and Census Mapping.	Yearly	2011	Yes
10	People that are not satisfied with the quality of landscape of the place where they live	Istat	Survey on Aspects of daily life	Yearly	2012	Yes
11	Concern about landscape deterioration	Istat	Survey on Aspects of daily life	Yearly	2013	Yes

10 Environment

Basic concepts

An environment which is in a vital and healthy state constitutes a prerequisite to ensure authentic well-being for all components of society. To have unpolluted water, clean air and uncontaminated food we need a pristine environmental context, where productive and social human activities are integrated with nature respecting its structural integrity and avoiding that the socio-economic metabolism (the flows of matter and energy activated by man) exceeds the capacity of supply of raw materials and absorption of residues of the natural environment. In synthesis, if our societies are not able to live within the boundaries of a single Planet (Rockstrom's *planetary boundaries*), well-being can not be for all or lasting.

The description of indicators is organized according to the DPSIR model categories (Drivers, Pressures, State, Impact, Responses). The conceptual scheme breaks down the relationship between the natural system and the anthropic system in successive phases, connected to each other through a causal circuit. The scheme starts from the description of the socio-economic characteristics (*drivers*) of a territory that imply physical exchanges with the natural environment, such as the withdrawal of natural resources, and therefore exert on them stresses or *pressures*. This determines an alteration of the *state*, that is the qualitative and quantitative conditions of the natural environment which, in turn, have an impact on the socio-economic system, for example on the health of people, or on the characteristics of ecosystems (*impacts*). The anthropic system also tends to react (giving *responses*) to the environmental change in progress, to eliminate its causes or consequences.

In the 2017 Report some changes were introduced to the set of indicators defined in the Scientific Commission Document of June 2012, aimed at improving territorial representativeness, eliminating redundancies and enriching information on the stress on water resources and waste management.

Dimensions considered to describe the domain

The variables/parameters identified by the Scientific Commission to describe the environmental contribution to the collective well-being are:

- **Water quality**. The quality of water is a fundamental aspect that directly affects human well-being and health.
- **Air quality**. The quality of air has potential consequences on the state of environment and human health and consequently on people well-being.
- **Quality of soil and territory**. Soil has a primary role in water and waste management, air pollution control, and has direct effects on flooding and landslides. The quality of natural soils, and their "erosion", and the environmental quality of the areas where people live are crucial for human well-being.

- **Biodiversity**. The ecological services guaranteed by biodiversity in marine and terrestrial environments are an essential basis for production of resources, air and water purification, and for the maintenance of natural capital, the access to which directly impacts on people well-being. Biodiversity preservation is crucial for a sustainable development and is threatened by changes occurring on a planetary scale, associated to climate change and to the present models of production and expenditure.
- **Subjective evaluation of quality of natural environment**. The well-being of people connected with quality of natural environment has consequences on the perception that citizens have about environmental conditions.
- **Material, energy and climate change**. The environmental issues associated with the use and consumption of material, energy and emissions of climate-altering gases have great relevance for sustainable development; this dimension detects both the shortage of natural resources and the potential of quality degradation of natural environment due to the use of traditional sources of energy, firstly related with greenhouse gas emissions.

List of indicators

(Pressure indicators)

1. Emissions of CO_2 and other greenhouse gasses: Tons of CO_2 equivalent per capita.
2. Domestic material consumption: Quantity of materials, transformed in emissions, waste or new stocks, in million tons.
3. Water losses in urban supply system: Total water losses in urban supply system (percentage value on the total input volume on water supply network).
4. Landfill of waste: Percentage of municipal waste sent to landfill on total municipal waste collected.

(State indicators)

5. Quality of urban air - PM_{10}: Percentage of control units of provincial capitals with valid measurements that have exceeded the daily limit value for PM10 (50 µg/m^3) for over 35 days in the year.
6. Quality of urban air - nitrogen dioxide: Percentage of control units of provincial capitals with valid measurements that exceeded the annual limit value for NO_2 (40 µg / m^3).
7. Quality of marine coastal waters: Percentage of bathing marine coastal waters on total coasts.
8. Urban green: Square meters of urban parks and gardens per inhabitants.
9. Satisfaction for the environment: Percentage of people aged 14 and over very or quite satisfied of the environmental situation (air, water, noise) of the area where they live on total population aged 14 and over.

(Impact indicators)

10. Contaminated sites: Size of contaminated sites
11. Areas with hydrogeological risks: Percentage of population living in areas subject to landslide on total population.

(Response indicators)

12. Sewage treatment: Percentage of polluting loads collected in secondary or advanced plants, in equivalent inhabitants, compared to the total urban loads (Aetu) generated.
13. Protected natural areas: Percentage share of terrestrial protected natural areas included in Italian Official List of Protected Areas (Euap) and Natura 2000 Network
14. Concern for biodiversity loss: Percentage of people aged 14 and over who believe that biodiversity loss is among the five most important environmental problems on total population aged 14 and over.
15. Energy from renewable sources: Percentage of energy consumptions provided by renewable sources on total internal consumptions.
16. Separate collection of municipal waste: Percentage of municipal waste object of separate collection on total municipal waste

Table of indicators

N.	Name of indicators	Data source	Survey	Periodicity	Since	Territorial level
1	Emissions of CO2 and other greenhouse gasses	Istat-Ispra	Inventory and emissions accounts	Every 3 years	1995	No
2	Domestic material consumption	Istat	Domestic material consumption accounts	Yearly	2000	No
3	Water losses in urban supply system	Istat	Urban Water Census	Every 3 years	2005	Yes
4	Landfill of waste	Istat	Processing on data from Ispra	Yearly	2004	Yes
5	Quality of urban air - PM10	Istat	Survey on urban environmental data	Yearly	2013	Yes
6	Quality of urban air - nitrogen dioxide	Istat	Survey on urban environmental data	Yearly	2013	Yes
7	Quality of marine coastal waters	Istat	Processing on data from the Ministry of health	Yearly	2013	Yes

8	Urban green	Istat	Survey on urban environmental data	Yearly	2011	Yes
9	Satisfaction for the enviroment	Istat	Survey on Aspects of daily life	Yearly	2005	Yes
10	Contaminated sites	Ministry of Environment, Land and Sea	Ministry of Environment, Land and Sea	Yearly	2014	Yes
11	Areas with hydrogeological risks	Ispra	Hydrogeological instability in Italy: hazard and risk indicators	Occasional	2011	Yes
12	Sewage treatment	Istat	Water census	Every 3 years	2005	Yes
13	Protected natural areas	Istat	Processing of data from the Ministry of Environment, Land and Sea	Occasional	2012	Yes
14	Concern for biodiversity loss	Istat	Survey on Aspects of daily life	Yearly	2012	Yes
15	Energy from renewable sources	Terna	Terna	Yearly	2004	Yes
16	Separate collection of municipal waste	Istat	Processing on data from Ispra	Yearly	2004	Yes

11 Innovation, research and creativity

Basic concepts

Innovation and Research are an indirect determinant of well-being and the base of social and economic progress. In the identification of suitable dimensions and the related indicators, preference was given to those that best capture these phenomena. Moreover an effort was done in estimating a creativity indicator, using as a proxy the percentage of employment working in cultural and creative activities. The ability of our country to attract young people with a high level of education was also included as indicative of propensity in a future progress.

Dimensions considered to represent the domain

Among the indicators that are considered most important and representative to the evaluation of innovation and research and were selected those which are able to provide a measurement of the processes of creation, application and diffusion of knowledge. In order to obtain a consistent overview on these aspects, the indicators of innovation, research and creativity were grouped into macro categories that refer these three distinct dimensions:

1. **Creation of knowledge**
2. **Application and diffusion of knowledge**
3. **Creative** propensity

List of indicators

1. R&D intensity: Percentage of R&D expenditure on GDP
2. Patent propensity: Number of patent applications filed to the European Patent Office (EPO) per million of inhabitants.
3. Impact of knowledge workers on employment: Percentage of employees with tertiary education (ISCED 5-6-7-8) in scientific-technological occupations (ISCO 2-3) on total employees.
4. Innovation rate of the national productive system: Percentage of firms that have introduced technological (product or process), organizational or marketing innovation in a three-year period on total number of firms with at least 10 persons employed.
5. Intellectual property products (as part of gross fixed capital formation): The value of expenditure on research and development, mineral exploration and evaluation, computer software and database, entertaiment literary or artistic originals and other intellectual proprety procucts intended to be used for more than one year. Chained values ¿¿with reference year 2010 (millions of euro), Indexed 2007 = 100.

6. Cultural employment (% of total employment): Percentage of employees in cultural and creative enterprises (77 CP2011 professional units detected within the Isco08: 216, 235, 262, 264, 265, 343, 352, 441,731) out of the total number of employees (15 years and over).
7. Brain circulation (italians, 25-39 years old): Net migration rate of holders of a tertiary degree: (immigrants-emigrants) / total resident population * 1,000. Both numerator and denominator refer to italian holders of a tertiary degree, 25-39 years old.

Table of indicators

N.	Name of indicators	Data source	Survey	Periodicity	Since	Territorial level
1	R&D intensity	Istat	R&D survey in companies; R&D survey in non-profit organizations; Survey on R&D in public bodies.	Yearly	2004	Yes
2	Patent propensity	Istat, Eurostat	Istat, Eurostat.	Yearly	2004	Yes
3	Impact of knowledge workers on employment	Istat	Labour force survey	Yearly	2004	Yes
4	Innovation rate of the national productive system	Istat	Cis (Community Innovation Survey).	Yearly	2004	Yes
5	Intellectual property products (as part of gross fixed capital formation)	Istat	National Accounts	Yearly	2000	No
6	Cultural employment (% of total employment)	Istat	Labour force survey	Yearly	2011	Yes
7	Brain circulation (italians, 25-39 years old)	Istat	Numerator: Registrations and cancellations from the registry for residence transfer (ISCAN); Denominator: Labour Force Survey	Yearly	2012	Yes

12 Quality of services

Basic concepts

The link between the availability of services and citizens' well-being is based on an interpretive approach in which high quality public investments improve the general context in which people live and work and their social and economic interconnections. The choice of services to be taken as a reference depends on two distinct considerations relating to what qualifies a service as essential in the specific context of a policy, and what conditions must be met to define feasible targets. The identification of services and quality of performances depends on the different level of development, which increases the level and types of services seen as essential. For example, in more developed contexts, the minimum set of health services refers to a wider range of treatments. Aspects of equity and distribution, that is the connection between individual income and availability of services, are also relevant: the inadequate availability of services particularly affects those who do not have sufficient income conditions to resort to alternatives, while the non-availability of basic services is in itself a factor of poverty and exclusion. In this framework poverty is understood as the deprivation of opportunities and basic assets to which every person is entitled (nutrition, basic education, access to health services, water services, the possibility of participation in social and political life, ability to work, …). This implies that inadequate services directly worsen the conditions of marginalization and exclusion, and therefore, decisive action on improving quantity and quality of services contributes directly to the reduction of social exclusion and poverty.

Dimensions considered to represent the domain

Based on the recent work of the Department of Public Administration (DFP, 2010) to assess the actual quality of public services, the Independent Commission for the Evaluation and Transparency of Government (Civit) identified the relevant dimensions for measuring quality of public services. "The analysis of the quality of a service indicates how and to what extent an organization delivers quality services, which comply promptly, consistently and fully to the requests of potential users, minimizing the trouble, the number of steps necessary, inconvenience caused by disruptions". It does not include the quality of the delivery process, rather involving aspects of efficiency, affecting only indirectly the citizen, or the subjective perception of users. The Commission identifies four essential dimensions: accessibility, timeliness, transparency and effectiveness. Here, the dimensions of transparency and timeliness (for which, however, the statistical information is extremely scarce) are considered as elements of accessibility or effectiveness, which are therefore consider as central dimensions of quality.

Even if infrastructures supply are in most cases only a pre-requisite for the achievement of a high standard in the delivery of services, in some cases aspects of infrastructures supply were taken into account as proxy of accessibility.

Furthermore, also on the basis of information provided by the CNEL-ISTAT Steering Committee, of criteria of data availability parsimony of indicators, the thematic group proposes to structure the analysis through three main areas of services: social services (health and social care), public utilities (energy, water and waste) and mobility. Therefore, it is possible to analyze each of the three main areas of services through the dimensions of accessibility and effectiveness.

List of indicators

1. Beds in residential health care facilities: Beds in residential health care facilities per 1,000 inhabitants
2. Children who benefited of early childhood services: Percentage of children aged zero to two years who benefited of early childhood services (crèches, micro-crèches or supplementary and innovative services) on total population aged 0-2.
3. Integrated home assistance service. Percentage of people aged 65 and over who benefited from integrated home assistance service.
4. Composite index of service accessibility: Percentage of households who find very difficult to reach some basic services (pharmacy, emergency room, post office, police, carabinieri, municipal offices, crèches, nursery, primary and secondary school, market and supermarket).
5. Broadband coverage: Population covered with ultra-broadband (at least 30 Mbps) as a percentage of resident population.
6. Irregularities in water supply: Percentage of households who report irregularities in water supply on total number of households.
7. Irregularities in electric power distribution: Frequency of accidental long lasting electric power cuts (cuts without notice longer than 3 minutes) (average number per consumer).
8. Place-Km of public transport networks: Place-Km of public transport networks per inhabitant
9. Time devoted to mobility: Minutes devoted to mobility on an average weekday.
10. Satisfaction with means of transport: Percentage of users who rated 8 or more (over 10) for all means of transport used regularly (more than once a week), over the total number of regular users..

Table of indicators

N.	Name of indicators	Data source	Survey	Periodicity	Since	Territorial level
1	Beds in residential health care facilies	Istat	Survey on social and health residential care facilities	Yearly	2011	Yes
2	Children who benefited of early childhood services	Istat	Census survey on interventions and social services of single and associated municipalities	Yearly	2004	Yes
3	Integrated home assistance service	Istat	Processing of data from the Ministry of Health, Health information system	Yearly	2004	Yes
4	Composite index of service accessibility	Istat	Survey on Aspects of daily life	Yearly	2006	Yes
5	Broadband coverage	Istat	Processing of data from the Ministry of Economic Development	Yearly	2013	Yes
6	Irregularities in water supply	Istat	Survey on Aspects of daily life	Yearly	2006	Yes
7	Irregularities in electric power distribution	Istat	Processing of data from the Authority for Electricity gas and water system	Yearly	2004	Yes
8	Place-Km of public transport networks	Istat	Survey on urban environmental data	Yearly	2004	Yes
9	Time devoted to mobility	Istat	Time use survey	Every 5 years	2003	Yes
10	Satisfaction with means of transport	Istat	Survey on Aspects of daily life	Yearly	2005	Yes