Final report of the expert group on quality of life indicators

2017 edition

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1 | **Introduction**

In August 2009, the European Commission published a communication with the title 'GDP and beyond — Measuring progress in a changing world' which proposes five priority actions to further develop economic, environmental and social indicators and to report more accurately on distribution and inequalities, taking also the household and individual perspective into account.

In September 2009, the Commission on the Measurement of Economic Performance and Social Progress (Stiglitz-Sen-Fitoussi Commission) published a report with 12 recommendations on how to better measure economic performance, societal well-being and sustainability.

In taking up the challenges presented by these initiatives, the European Statistical System's Sponsorship Group on Measuring Progress, Well-being and Sustainable Development (SpG) was created jointly by INSEE and Eurostat and started its work in spring 2010. The Sponsorship Group focused on translating the actions and recommendations from the two reports into concrete actions for the European Statistical System (ESS).

In September 2010 The DGINS Conference in Sofia reconfirmed the commitment of the members of the ESS to the Group and in November 2011, the European Statistical System Committee endorsed the final report of the Sponsorship Group.

The key recommendations of the Sponsorship Group in the quality of life area were the following:

- strengthen the household perspective and distributional aspects of income, consumption and wealth,

- improve multi-dimensional measures of quality of life,

- develop a scoreboard of indicators on the basis of existing data, covering as much as possible all the dimensions,

- as part of the scoreboard, investigate the possible development and relevance of synthetic indicators (not to be mistaken with composite indicators),

- further develop the statistical coverage of quality of life, develop EU-Statistics of Income and Living Conditions (EU-SILC) as a core instrument complemented by other data sources, use ESS data source whenever available.

The Directors of Social Statistics, at their meeting on 21 March 2012, approved a mandate of the Quality of Life Expert Group (EG). The work of the Expert Group consisted of:

- finalising the list of indicators on quality of life,
- identifying the data gaps and making recommendations on the possible future data collections to complete the information.

The Expert Group met eight times over the years 2012-2015.

A final, comprehensive framework alongside a first set of quality of life indicators has been developed and headline indicators chosen.

The framework was disseminated through a Dedicated Section on Eurostat's webpage that is being updated following developments and data availability.

Moreover, the Expert Group advised on analysis of the results of the EU-SILC ad hoc module 2013 on subjective well-being. These results were presented in the statistical book 'Quality of life' published by Eurostat in June 2015.

This final report was endorsed by the Directors of Social Statistics in October 2016. It describes the outcomes of the work of the Expert Group (concentrated on the framework of quality of life indicators) and its main recommendations.

The annex to the report includes information about national and international experiences with work on quality of life indicators.

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2 Structure of the framework and headline indicators

Quality of life is a broader concept than economic production and living standards. It includes the full range of factors that influences what we value in living, reaching beyond its material side[1].

The Stiglitz-Sen-Fitoussi Commission highlighted that well-being and quality of life are inherently multidimensional concepts. Building on this vision, the Sponsorship Group endorsed a framework encompassing 9 dimensions:

1. **Material living conditions**
2. **Productive or other main activity**
3. **Health**
4. **Education**
5. **Leisure and social interactions**
6. **Economic security and personal safety**
7. **Governance and basic rights**
8. **Natural and living environment**
9. **Overall experience of life**

To implement the framework, the Quality of Life Expert Group chose a set of indicators on the basis of existing data, covering as much as possible all the dimensions. For each dimension one or two headline indicators were selected.

Several criteria for selecting indicators, and in particular the headline indicators, were used.

a) General criteria

In order to assess the quality of an indicator, several general criteria (that can be applied in any context) are to be taken into account, as the Eurostat code of practice underlines:

- relevance;
- accuracy and reliability;
- timeliness;
- comparability (level of harmonisation between Member States);
- clarity (ease of understanding, communicability, capacity to tell narratives).

b)   Specific criteria

Furthermore, a few additional criteria can be added as specific to the Quality of life indicators framework, in line with the recommendations of the Stiglitz, Sen and Fitoussi Report and of the Sponsorship Group:

● both subjective and objective indicators should be included;

● association with well-being, i.e. if it is a strong predictor or not. However it was confirmed that that the subjective well-being is one of the dimensions of the framework and should not be treated as an output;

● univocal, clear meaning of the interpretation (does a higher value imply a positive situation and how is a change in the indicators' value to be interpreted);

● responsiveness (whether or not the indicator is sensitive to policy change);

● consistency with other frameworks related to the quality of life and progress of the society (e.g. EU-2020 strategy, Sustainable Development Indicators);

● coverage — if an indicator can show information about the whole dimension, or even on several dimensions at once;

● breakdowns according to specific (and possibly harmonised) sub-populations should be available, in order to have information about distributions;

● the possibility for the grouping of values into the categories 'high', 'medium' and 'low' is desirable, as it would allow a synthetic overview of the whole population, without a focus on the deprivation side;

● 'aggregability': in order to potentially proceed at a later stage with the construction of an aggregated indicator(s), the headline indicators should be chosen as coming from the same dataset (the kind of information they provide is relatively easy to derive from information coming from that specific micro dataset);

● continuity — if the variable(s) used to calculate the indicator are planned to continue to be collected in the future.

Whenever possible and appropriate, the indicators were also carefully studied on their correlations with other indicators relevant to the same topic or domain. In order to limit the number of indicators and avoid conceptual duplications as well as reduce complexity of the data, whenever possible or necessary, new or synthetic indicators within the dimensions were proposed.

For each dimension one or more **<u>headline indicators</u>** were selected (they are marked in bold and underlined in what follows).

Approach for inequality

Conceptually, there would be two ways of including inequality in the framework.

One option would be to have a separate inequality dimension. The other option would be to look at inequality within each dimension or even in relation to an indicator. The Expert Group chose this second approach, in order to focus on inequality not in just one factor, e.g. income, but to encourage users to explore inequality in all quality of life dimensions (income but also health, education, etc.). To facilitate this, indicators whenever possible allow analysis of the distribution.

Objective versus subjective indicators

It is usual to consider that indicators may be objective or subjective. This distinction is very relevant in the sense that both objective situations and subjective perceptions determine in fine the well-being of the person. The consensus, already expressed in the Stiglitz, Sen and Fitoussi Report, that both dimensions matters and should be measured by statistical offices in an encompassing framework, is now accepted. Some indicators are clearly objective, like the income. Others are clearly subjective, like life satisfaction. However, the border between subjective and objective indicators is often blurred by the measurement methods. Therefore, this apparently simple distinction is more complex than it appears and some clarifications might be useful so as to avoid debates that are not necessarily conclusive.

In particular, we could distinguish between the nature of the phenomena (objectives one, like air pollution or subjective assessments, like affects) and the way the information is collected (through objective traces, like tax registers, or self-reported questions, like assessment of global limitation in activities - GALI). We are therefore considering a scheme in which these two dimensions (nature of the phenomenon and means of reporting) are crossed.

		Reporting method	
		Objective	Subjective
Nature of the phenomenon	Objective	Urban population exposure to air pollution by particulate matter	Self-perceived health
	Subjective	*(Situation not existing in the framework)*	Life satisfaction

This table illustrates the scheme. Several indicators proposed in the framework are clearly in the top left part of the table (objective situation and objective measure), like on income or homicides, other are clearly in the bottom right part of the table (subjective phenomenon and subjective reporting), like the satisfaction indicators or safety feelings. Many elements of the framework are however targeting objective phenomenon but are self-reported, like skills or health. The classification of these indicators as subjective or objective has not been pursued.

Quality of life indicators - overview by dimension

1. Material living conditions

This dimension covers three topics: 1.1 Income, 1.2 Consumption and 1.3 Material conditions.
Wealth is considered in the topic 'Economic security' of the dimension 'Economic security and physical safety'.

1.1 Income

Four objective indicators on income were selected (two of them being headline indicators):

➢ **Median disposable equivalised income**

➢ **Income inequality (S80/S20 income quintile ratio)**

➢ At-risk-of-poverty rate

➢ At-risk-of-poverty rate anchored at fixed moment in time

They are complemented by one subjective indicator:

➢ Satisfaction with financial situation

1.2 Consumption

Two objective indicators were selected in two sub-topics: 1.2.1 Consumption and 1.2.2 Constrained consumption.

1.2.1 Consumption

➢ Actual individual consumption (per capita)

1.2.2 Constrained consumption

➢ Basic expenses in the total household expenditure

1.3 Material conditions

This topic is divided into two sub-topics: 1.3.1 Material deprivation and 1.3.2 Housing conditions.

1.3.1 Material deprivation

Two indicators were chosen in this sub-topic, one proposed as headline indicator:

➢ **Severe material deprivation rate**

and

➢ (In)ability to make ends meet

1.3.2 Housing conditions

➢ Structural problems of the dwelling

➢ Space in the dwelling (overcrowding/under-occupation)

These two objective indicators are complemented by the subjective evaluation of the accommodation:

➢ Satisfaction with accommodation

2. Productive or other main activity

This dimension covers two broad domains:

I.   Economic activity (employment/unemployment):
2.1 Quantity of employment
2.2 Quality of employment

II.   Other main activity (economic inactivity)
2.3 Main reason for economic inactivity
2.4 Unpaid work

I. ECONOMIC ACTIVITY — EMPLOYMENT/UNEMPLOYMENT

2.1 Quantity of employment

This topic includes two sub-topics: 2.1.1 Employment and unemployment, 2.1.2 Underemployment

2.1.1 Employment and unemployment

Three objective indicators were chosen there (of which one headline indicator):

➢ **Employment rate**

➢ Unemployment rate

➢ Long-term unemployment rate

2.1.2 Underemployment (in terms of intensity/quantity of work)

Two objective indicators were selected:

➢ People living in households with very low work intensity

➢ Underemployed part-time workers

2.2 Quality of employment

This topic was divided into five sub-topics: 2.2.1 Income and benefits from employment, 2.2.2 Health and safety at work, 2.2.3 Work/life balance, 2.2.4 Temporary work and 2.2.5 Assessment of job quality.

2.2.1 Income and benefits from employment

One objective indicator is selected:

➢ Low-wage earners

2.2.2 Temporary work

Two objective indicators are proposed:

➢ Temporary contracts
➢ 'Involuntary' temporary contracts

2.2.3 Over-qualification (underemployment in terms of quality of work)

One objective indicator:

➢ Over-qualification rate

is complemented by another, subjective one:

➢ Self-reported over-qualification

2.2.4 Health and safety at work

One objective indicator is selected:

➢ Incidence rate of fatal accidents at work

Four other indicators are proposed:

➢ Persons reporting an accident at work
➢ Persons reporting work-related health problems
➢ Persons reporting exposure at work to factors adversely affecting physical well-being
➢ Persons reporting exposure at work to factors adversely affecting mental well-being

2.2.5 Work/life balance

Four objective indicators are proposed on working time:

➢ Average number of usual weekly hours of work
➢ Long working hours (more than 48 per week)
➢ Atypical working hours (usual work during evenings, nights, Saturdays or Sundays)
➢ Flexibility of the work schedule

They are complemented by one subjective indicator on commuting:

➢ Satisfaction with commuting time

2.2.6 Assessment of the job quality

One subjective (headline) indicator is chosen:

➢ **Job satisfaction**

Other indicators should be developed (please see recommendations).

II. OTHER MAIN ACTIVITY

2.3 Main reason for economic inactivity

2.3.1 Inactive population

➢ Inactive population by reason of inactivity

2.3.2 Unpaid work — indicators to be developed (see recommendations)

3. Health

This dimension covers three topics: 3.1 Outcomes, 3.2 Determinants (healthy and unhealthy behaviours) and 3.3 Access to healthcare.

3.1 Outcomes

This topic covers two sub-topics:

3.1.1 Life expectancy

One (headline) indicator is chosen:

➢ **Life expectancy at birth**

3.1.2 Health status

Three indicators are proposed (of which one headline indicator):

➢ Healthy Life Years
➢ **Self-perceived health**
➢ Self-reported mental health

3.2 Determinants (healthy and unhealthy behaviours)

Five indicators were chosen:

➢ Body Mass Index

➢ Daily smokers

➢ Hazardous alcohol consumption

➢ Practice of physical activity

➢ Consumption of fruits and vegetables

3.3 Access to healthcare

Here one indicator is proposed:

➢ Unmet needs for medical care

4. Education

This dimension covers three topics: 4.1 Competences and skills, 4.2 Lifelong learning and 4.3 Opportunities for education.

4.1 Competences and skills

4.1.1 Educational attainment

Two objective indicators were selected (of which one headline indicator)

➢ Educational attainment (headline indicator: **Tertiary educational attainment**)

➢ Early leavers from education and training

4.1.2 Self-reported skills

Three indicators are proposed (one on internet/digital skills and two on knowledge of foreign languages):

➢ Individuals' level of internet (digital) skills

➢ Knowledge of foreign languages:

    ➢ Population reporting not to know any foreign language

    ➢ Level of best known foreign language

4.1.3 Assessed skills

Indicators on the assessment of three categories of skills (literacy, numeracy and problem solving in technology-rich environments) can be found in the Programme for the International Assessment of Adult Competencies (PIAAC) results. One of them is proposed here:

➢ Mean literacy proficiency score

4.2 Lifelong learning

One objective indicator is chosen:

➢ Participation in adult education and training

4.3 Opportunities for education

One objective indicator is proposed:

➢ Participation in education of children four-year-olds

5. Leisure and social interactions

This dimension covers two topics mentioned in its title: 5.1 Leisure and 5.2. Social interactions.

5.1 Leisure

5.1.1 Quantity of leisure

Two indicators are proposed (of which one headline indicator):

➢ Non-participation in culture or sport activities
➢ **Satisfaction with time use**

5.1.2 Quality of leisure

No indicator on quality of leisure is currently available within ESS. Indicators on this topic should be developed — please see recommendations.

5.1.3 Access to leisure

➢ Financial obstacles to leisure participation

5.2 Social interactions

This topic is divided into four sub-topics. One of indicators — on social support — is selected as a headline indicator.

5.2.1 Relations with people

➢ Frequency of getting together with friends
➢ Satisfaction with personal relationships

5.2.2 Activities for people

➢ Participation in formal voluntary activities
➢ Participation in informal voluntary activities

5.2.3 Social support

➤ **Help from others (having someone to rely on in case of need)**

➤ Having someone to discuss personal matters with

5.2.4 Social cohesion

➤ Trust in others

➤ Perception of social inclusion (to be developed; please see recommendations)

6. Economic security and physical safety

This dimension covers two topics: 6.1 Economic security and 6.2. Physical safety.

6.1 Economic security

6.1.1 Wealth (assets)

The indicator chosen is also a headline indicator on the topic on economic security:

➤ **Population unable to face unexpected financial expenses**

6.1.2 Debt

The proposed indicator is on:

➤ Population in arrears

6.1.3 Income insecurity

One objective indicator is proposed here:

➤ Percentage of persons employed in the previous year transitioning to unemployment this year

6.2. Physical safety

6.2.1 Crime

Two indicators were selected for this topic (both being headline indicators): one objective and one subjective.

➤ **Homicide rate**

➤ **Perception of crime, violence or vandalism in the living area**

6.2.2 Perception of physical safety

One subjective indicator is proposed:

➤ Safety feeling (population feeling safe when walking alone in their area after dark)

7. Governance and basic rights

This dimension covers three topics: 7.1 Institutions and public services, 7.2 Discrimination and equal opportunities, 7.3 Active citizenship.

7.1 Institutions and public services

7.1.1 Trust in institutions

Three subjective indicators were found on this topic and one chosen (for the time being) as a headline indicator — trust in the legal system.

> ➢ **Trust in the legal system**, the political system and the police

7.1.2 Satisfaction with public services

This topic needs further development (please see recommendations)

7.2 Discrimination and equal opportunities

7.2.1 Discrimination

This topic requires further development. The variables to possibly be included in future surveys could concern perceived and/or experienced discrimination.

7.2.2 Equal opportunities

Two variables are proposed to be taken into account: gender and migrant background. Three objective indicators are then proposed:

➢ Gender employment rate gap

➢ Gender pay gap

➢ Gap in employment rates between nationals and non-EU citizens

7.3 Active citizenship

One indicator is proposed:

➢ Active citizenship

Indicators on 'Voice and accountability' should be developed (please see recommendations).

8. Natural and living environment

This dimension covers three topics: 8.1 Pollution (including noise), 8.2 Access to green and recreational spaces and 8.3 Landscape and built environment.

8.1 Pollution (including noise)

Three indicators were selected for this topic: one objective (headline indicator) and two subjective (one being also a headline indicator):

➤ **Urban population exposure to air pollution by particulate matter (PM10)**

➤ **Perception of pollution, grime or other environmental problems**

➤ Noise from neighbours or from the street

8.2 Access to green and recreational spaces

One subjective indicator is proposed:

➤ Satisfaction with recreational and green areas

8.3 Landscape and built environment

One subjective indicator was selected:

➤ Satisfaction with living environment

9. Overall experience of life

This dimension covers three topics: 9.1 Life satisfaction, 9.2 Affects and 9.3 Meaning and purpose of life.

All selected indicators are subjective; 'Overall life satisfaction' is the headline indicator.

9.1 Life satisfaction

➤ **Overall life satisfaction**

9.2 Affects

➤ Negative affects (being very nervous; feeling down in the dumps; feeling downhearted or depressed) — please see recommendations

➤ Positive affects (being happy)

9.3 Meaning and purpose of life

➤ Assessing whether life is worthwhile

List of headline indicators

Dimension	Indicator	Source
1. Material living conditions	Median income	EU-SILC, yearly
	S80/S20 (inequality of income)	EU-SILC, yearly
	Severe deprivation rate	EU-SILC, yearly
2. Productive or other main activity	Employment rate	EU-LFS; yearly
	Job satisfaction	EU-SILC ahm 2013
3. Health	Life expectancy	Demography, yearly
	Self-perceived health status	EU-SILC, yearly
4. Education	Tertiary educational attainment	EU-LFS, yearly
5. Leisure and social interactions	Satisfaction with time use	EU-SILC ahm 2013
	Help from others	EU-SILC ahm 2013
6. Economic and physical security	Inability to afford unexpected expenses	EU-SILC, yearly
	Homicide rate	Police records, yearly
	Perception of crime, violence or vandalism in the living area	EU-SILC, yearly
7. Governance and basic rights	Trust in the legal system	EU-SILC ahm 2013
8. Natural and living environment	Urban pollution	EEA, yearly
	Perception of pollution, grime or other environmental problems in the living area	EU-SILC, yearly
9. Overall experience of life	Life satisfaction	EU-SILC ahm 2013

3 Detailed list of the indicators

1. Material living conditions

The progress of societies has been traditionally related to access to — or ownership of — material goods. In economic sciences this mindset was reflected specially within growth theory — mainly expressed in changing rates of Gross Domestic Product (GDP) — which focuses on the production side of those goods and services. This one-sided expression of societal progress measured in material, mostly monetary terms, has been broadly criticised. Nowadays many institutions and national initiatives strive for a broader understanding of societal progress and human well-being and claim that traditional economic growth based politics are not enough for guiding our steps to a better future. This was the case for the 2007 UN Istanbul Declaration on 'Measuring and Fostering the Progress of Societies' as well as the Commission Communication 'GDP and beyond: measuring progress in a changing world'(COM(2009), 433 final).

Nevertheless, material living conditions seem to be an irreplaceable component when estimating societal progress and quality of life and it was recognised by the Stiglitz Commission as the first of eight dimensions of well-being (Stiglitz, Sen, Fittousi, 2009). Very well-known indicator sets of societal and human progress such as the *Human Development Index* of the United Nations or the *How´s Life* indicator set of the OECD also include this topic, relying on traditional indicators such as GDP per capita.

Following further recommendations of the Stiglitz-Sen-Fittoussi Report, the Expert Group decided when describing material living conditions, to focus on the income and consumption side of the phenomenon rather than on the production.

The Expert Group also stressed the importance of indicators measuring disparities within society such as the 'S80/S20 income quintile share ratio'. Describing deprivation both in incomes and in housing conditions also seems to be of relevance because of its direct consequences for quality of life. Therefore it was decided to use the at-risk-of-poverty-rate which is also one of the indicators to monitor the objective of combating poverty included in the Commission´s Europe 2020 Strategy.

The material deprivation indicators concern the living conditions of households, including material standards and overcrowding.

1.1 Income

The Canberra Handbook (2001) highlights that '… income is most often considered to be the best (or least bad) measure of individual welfare or utility. However, both consumption and wealth are important complementary measures of economic well-being'.

Income allows people to satisfy their needs and pursue many other goals that they deem important to their lives, while wealth makes it possible to sustain these choices over time. Moreover, increases in income have been associated with improvements in other dimensions over well-being, such as life expectancy, educational attainment, etc., although there are discussions on the strength of associations and the directions of causality. At the macroeconomic level, economic resources allow countries to invest in education, health, security, etc.

Research shows that individual/household income and life satisfaction are positively related at any point in time. Most cross-sectional studies reveal a positive correlation between the log of individual (or household) income and self-reported well-being.

All proposed indicators evaluate the income situation of a household either directly (median income) or in relation to the rest of the society (S80/S20 ratio and at-risk-of-poverty rates).

The Commission on the Measurement of Economic Performance and Social Progress (Stiglitz, Sen & Fitoussi, 2009) underlined the importance of considering median household income. In particular, the report recommended that the household perspective is emphasised and the distribution of income be given more prominence.
As it represents the middle of the income distribution, the median household income provides a good indication of the standard of living of the 'typical' household in terms of income. Since the income distribution is often characterised by extreme outliers, in particular in the high income groups, the use of the median which is not disturbed by the outliers, ensures a more accurate estimation of a representative income level. Thus, looking at median income creates more focus on inclusive growth that generates wider benefits. Average measures of per capita income give no indication of how available resources are distributed across the population and can remain unchanged while the distribution of income becomes less equal.

Research suggests that income is particularly important to well-being for the population at the lower ends of the income distribution. The income-life satisfaction relationship is stronger among low-income groups and weakens as income levels rise. This is concordant with standard economic theory which posits declining marginal utility of income as income rises.

S80/S20 income quintile ratio is a measure of the inequality of income distribution. This indicator complements the at-risk-of-poverty indicator by providing a measure of the income of the poorest households relative to the richest. Atkinson et al. (2002)[2] note that, 'from the standpoint of inclusion, there is a distinct concern with the gap between the bottom and the top of the distribution.' The S80/S20 ratio is particularly relevant in this context as it is less sensitive to changes at the tails of the distribution than other common measures of income inequality such as the Gini coefficient or the P90/P10 ratio.

The at-risk-of-poverty rate focuses on the low-income group (below 60 % median) in comparison to other residents in that country. Given the nature of the retained threshold, and the fact that having an income below this threshold is neither a necessary nor a sufficient condition of having a low standard of living, this indicator is referred to as a measure of poverty risk. This rate depends on the median income in the country that could vary over time and therefore could be associated with quality of life in an ambiguous way. For instance a fall in overall income levels and therefore of the median

disposable income will lead to a lower threshold. Consequently, and counter-intuitively, this may lead to lower risk of poverty rates, even masking real increases in the number of people who are finding it difficult to make ends meet. Similarly, an increase in median income may lead to a rise in poverty rates, if this increase is not uniformly shared among economic groups. That's why the at-risk-of poverty rate anchored at a fixed moment is needed to allow comparisons over time over a given poverty threshold.

All these indicators on income refer to the concept of equivalised disposable income.

➢ **Median equivalised disposable income**

Definition

Median (concept)
The median is the middle value in a group of numbers ranked in order. It means that it divides the total frequency into two halves. In other words, it is the number in a range of scores that falls exactly in the middle so that 50 % of the scores are above and 50 % are below.

Household disposable income is established by summing up all monetary incomes received from any source by each member of the household (including income from work, investment and social benefits) plus income received at the household level, and deducting taxes and social contributions paid. In order to reflect differences in household size and composition, this total is divided by the number of 'equivalent adults' using a standard (equivalence) scale, the so-called modified OECD scale, which attributes a weight of 1.0 to the first adult in the household, a weight of 0.5 to each subsequent member of the household aged 14 and over, and a weight of 0.3 to household members aged less than 14. The resulting figure is called *equivalised disposable income* and is attributed to each member of the household. For the purpose of poverty indicators, the equivalised disposable income is calculated from the total disposable income of each household divided by the equivalised household size; consequently, each person in the household is considered to have the same equivalised income.

The income reference period is a fixed 12-month period (such as the previous calendar or tax year) for all countries except the United Kingdom for which the income reference period is the current year of the survey and Ireland for which the survey is continuous and income is collected for the 12 months prior to the survey.

The indicator is expressed in Euro, national currency or the purchasing power standard (PPS).

Comment: Since income distribution is often characterised by extreme outliers, in particular in the high income groups, the use of the median which is not disturbed by the outliers, ensures a more accurate estimation of a representative income level. Thus, median disposable income is an indicator of the average person's purchasing power.

Observing the median and mean income in parallel over time is important to identify differences in the trend. An increase in a country's mean value alongside a more stable median value can suggest that the general income increase is absorbed mainly by the group of the richest (although this group is not numerous).

Data source

EU-SILC, yearly

➤ **Income inequality — S80/S20 income quintile share ratio**

Definition

The *income quintile share ratio*, often referred to as the 'S80/S20 ratio', is defined as the ratio of the total income received by the top quintile (i.e. the 20 % of the population with the highest income) to that received by the bottom quintile (i.e. the 20 % of the population with the lowest income). For example, a S80/S20 ratio of 6 means that people at the top of the income scale earn on average six times more than those at the bottom.

Comment: While it does not convey information on the distribution of income across all economic groups, the indicator is a convenient way to compare inequality over time or across countries.

Data source

EU-SILC, yearly

➤ **At-risk-of-poverty rate**

Definition

The at-risk-of-poverty rate is the share of people with an equivalised disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 % of the household national median equivalised disposable income (i.e. after social transfers).

Data source

EU-SILC, yearly

➤ **At-risk-of-poverty rate anchored at a fixed moment in time**

Definition

At-risk-of-poverty rate for which the 60 % threshold has been anchored at a fixed moment in time (e.g. for the year 2008).

For a given year (T) the indicator is defined as the percentage of persons in the total population who are at-risk-of-poverty anchored at a fixed moment in time (2008) and adjusted for inflation. 2008 is the current reference time, reflecting the introduction of the EU 2020 targets and the onset of the economic crisis.
Adjustment is based on the annual harmonised indices of consumer prices (HICPs).

Comment: The poverty threshold of the base year (2008) is adjusted for inflation. This operation results in the 'real' value of the threshold base year, i.e. adjusted for price increases in subsequent years. The remaining difference between the 'inflation adjusted' threshold of the base year and the threshold of the current year reflects evolutions in living standards.
The base or reference year (currently 2008) is meant to change in regular intervals. The inflation rate to be applied should correspond to the survey years both for the base year (2008) and the given year (T).

Data source

EU-SILC, yearly

> ➤ **Satisfaction with financial situation of the household**

Definition

The indicator on satisfaction with financial situation was constructed based on the answers provided by the EU-SILC respondent to the question about opinion/feeling on the degree of satisfaction with the financial situation of his/her household. The respondent should have made a broad, reflective appraisal of all areas of his/her financial situation in a particular point in time ('these days'). Respondent should have taken into account income adequacy, level of savings, capacity to pay back debt and money owed, ability to meet large emergency expenses, level of assets for the entire household.

The responses scale used was from 0 to 10, where 0 means not at all satisfied and 10 completely satisfied.

The indicator on average satisfaction is the average of the scores.

The indicator on share of population reporting low satisfaction refers to 0-5 ratings, medium satisfaction refers to 6-8 and high satisfaction to 9-10.

Data source

EU-SILC, 2013 ad hoc module on well-being; in the future: six-year rolling module on quality of life and social and cultural participation

1.2 Consumption

For many households, income is their most important economic resource for meeting everyday living expenses. However, the consumption of goods and services (reflected by expenditure) is pivotal in meeting a household's requirements. It is argued that income and expenditure together represent a more important determinant of well-being from a personal finance perspective than income alone.

Households can smooth expenditure by, for example, adjusting savings, drawing on wealth and borrowing. Conversely, incomes may be more volatile, a finding that led to Friedman's 'permanent income hypothesis' which suggests that decisions made by consumers are based on long-term income expectations rather than their current income. Therefore, because expenditures fluctuate less than incomes, they can be considered a better proxy of living standards. Recent analysis shows that /household spending matters more to many aspects of personal well-being than household income. As household spending rises, average ratings of life satisfaction, the sense that what one does in life is worthwhile, and happiness, also rise. Unlike household income, the level of household spending is not significantly related to anxiety. This may be because spending is the means by which we acquire not only necessities but also the extras which add to enjoyment of life, while income is more related to a sense of financial security (Lewis,Snape & Tonkin, 2014)3.

The Commission on the Measurement of Economic Performance and Social Progress (Stiglitz, Sen& Fitoussi, 2009) recommended that greater prominence should be given to the distributions of both income and expenditure across households and, furthermore, that it is desirable to have information on the joint distribution of these dimensions (together with wealth).

For given levels of expenditure, and everything else being equal, people with higher income can be regarded as having a higher level of well-being from a personal finance perspective than people with

lower income. With higher income, they have greater opportunity to increase expenditure now, if desired, or to save income that might be used to finance expenditure in the future.

While GDP per capita is often considered as an indicator of a country's living standard, it is actually the sum of all goods and services produced in that country. As highlighted in the 2009 'Report on the measurement of economic performance and social progress' by Stiglitz, Sen and Fitoussi, actual individual consumption per capita is an alternative indicator better suited to describe the material welfare situation of households as it takes account of widespread differences across countries in the shares of public financing for the provision of education and health services to individuals.

The Commission on the Measurement of Economic Performance and Social Progress (Stiglitz, Sen & Fitoussi, 2009) highlighted that properly defined, household income and expenditure should reflect in-kind services provided by the State, such as subsidised health care and educational services.

Actual individual consumption (AIC) is not influenced by the fact that the organisation of certain important services consumed by households, like health and education services differs a lot across countries. For example, if dental services are paid for by the government in one country, and by households in another, an international comparison based on household final consumption expenditure would not compare like with like, whereas one based on AIC would.

Already in XIX century Engel's law stated that as income rises, the proportion of income spent on food falls, even if actual expenditure on food rises. This statement about food can be enlarged for all basic household expenses.
The indicator on constrained consumption presents the percentage of households for which the most essential, regular and quasi-unavoidable expenses — on housing and food — form the main component of their total expenditure, going even to a level of higher than 70 %.

1.2.1 Consumption

➢ **Actual individual consumption per capita (in PPS)**

Definition

Abbreviated as *AIC*, actual individual consumption refers to all goods and services actually consumed by households. It encompasses consumer goods and services purchased directly by households, as well as services provided by non-profit institutions and the government for individual consumption (e.g. health and education services). In international comparisons, the term is usually preferred over the narrower concept of household consumption, because the latter is influenced by the extent to which non-profit institutions and general government act as service providers.

$AIC = C_{HH} + C_{NPISH} + C_{GG}^{IND}$

where C_{HH}: consumer goods and services purchased directly by households; $C_{NPISH} + C_{GG}^{IND}$: social transfers in kind

Purchasing power parities, abbreviated as *PPPs*, are indicators of price level differences across countries. PPPs tell us how many currency units a given quantity of goods and services costs in different countries. Using PPPs to convert expenditure expressed in national currencies into an artificial common currency, the purchasing power standard (PPS), eliminates the effect of price level differences across countries created by fluctuations in currency exchange rates. Purchasing power parities are obtained by comparing price levels for a basket of comparable goods and services that are selected to be representative of consumption patterns in the various countries.

PPPs make it possible to produce meaningful indicators (based on either price or volume) required for cross-country comparisons, truly reflecting the differences in the purchasing power of, for example, households. Monetary exchange rates cannot be used to compare the volumes of income or expenditure because they usually reflect more elements than just price differences, for example, volumes of financial transactions between currencies and expectations in the foreign exchange markets.

Data source

National Accounts, yearly

1.2.2 Constrained consumption

➢ **Basic expenses in the total household expenditure (< 50 %, 50 %-70 % and >=70 % of all expenditure)**

Definition

This indicator covers the percentage of their total expenditure (less than 50 %, between 50 % and 70 %, 70 % and more) that households spent on housing, water, electricity, gas and other fuels as well as on food and non-alcoholic beverages.

The COICOP (Classification of Individual Consumption According to Purpose) expenditure categories the indicator refers to are:

CP01   *Food and non-alcoholic beverages*

CP011   *Food*

CP012   *Non-alcoholic beverages*

CP04   *Housing, water, electricity, gas and other fuels*

CP041   *Actual rentals for housing*

CP0411   *Actual rentals paid by tenants*

CP0412   *Other actual rentals*

CP042   *Imputed rentals for housing*

CP0421   *Imputed rentals of owner-occupiers*

CP0422   *Other imputed rentals*

CP043   *Maintenance and repair of the dwelling*

CP0431   *Materials for the maintenance and repair of the dwelling*

CP0432   *Services for the maintenance and repair of the dwelling*

CP044   *Water supply and miscellaneous services relating to the dwelling*

CP0441   *Water supply*

CP0442   *Refuse collection*

CP0443   *Sewerage collection*

CP0444   *Other services relating to the dwelling n.e.c.*

CP045   *Electricity, gas and other fuels*

CP0451   *Electricity*

CP0452   *Gas*

CP0453   *Liquid fuels*

CP0454   *Solid fuels*

CP0455   *Heat energy*

Data source

Household Budget Survey, wave 2010; next wave: 2015 (results in 2017)

The Household Budget Survey data are collected via the national household budget surveys in each participating country. The data collection involves a combination of one or more interviews and diaries or logs maintained by households and/or individuals, generally on a daily basis.

The survey was conducted approximately every 5 years: 1988, 1994, 1999, 2005, 2010 and 2015.

The household final consumption expenditure is measured in national currency, Euro and PPS.

1.3 Material conditions

While risk of poverty provides an estimate of the proportion of people whose living conditions are affected by a lack of resources, an indicator on severe material deprivation provides a necessary complementary view, based on objective and absolute criteria. The measure reflects the differences in living standards across countries and is thus much needed in the international context.

Information on material deprivation provides a supporting non-monetary and outcome based measure which considers enforced lack of material goods, financial difficulties and individuals' abilities to live a decent life. Atkinson et al. (2002)[2] note that 'income is central but other aspects of an individual's financial situation are also very important in terms of standard of living and quality of life. In particular, the extent to which people can draw on accumulated savings or borrow to meet current spending needs or unforeseen emergencies, as opposed to being already deeply in debt so that financing that debt depletes the resources available to meet those needs, can make a very great difference to the subjective experience of a particular income level.'

Subjective indicator — perceived ability to make ends meet — provides additional insight in the analysis of people's material conditions.

Housing conditions have an obvious important impact on the quality of life. Housing should give a sense of personal security, privacy and personal space. Poor housing quality (e.g. lack of access to basic sanitation and functional utilities, overcrowding, etc.) is also a major driver of health status, with effects on both physical and mental health. It can lead to domestic violence and to children's low school performance. The capacity to engage in basic social activities, such as inviting people into one's home, may also be threatened by poor housing conditions. Research has also shown that poor housing quality is associated with lower levels of democratic participation and, more generally, with lower levels of social capital. Low housing quality is then associated with lower well-being and with psychological stress.

Indicators measuring housing quality are a necessary complement to material deprivation when assessing material conditions. Several aspects of an objective nature are important such as the existence of structural problems of the dwelling (damp walls, leaking roof, etc.), overcrowding and — more and more rarely — the lack of basic amenities (toilet and shower or bath).

The indicator on overcrowding offers an overview of housing conditions regarding dwelling size from a twofold perspective: firstly, from a strict health-related point of view, considering space as a basic requirement for preventing health issues as the WHO has pointed out; secondly, when it comes to well-being, the lack of privacy seems to be determinant since studies indicate that crowding is stressful particularly for some specific sub-populations such as children or women (see e.g. Ewans et al., 2002 or Regoeczi 4).

At the same time, living in under-occupied dwellings is not considered an efficient use of space, nor is it necessarily environmentally friendly. Furthermore, under-occupied dwellings might also present a risk factor for loneliness.

1.3.1 Material deprivation

➢ **Severe material deprivation rate**

Definition

The severe material deprivation rate is defined as the percentage of the population faced with the enforced inability to afford indicative material standards considered by most people to be desirable or even necessary to lead an adequate life.

Severe materially deprived persons experience at least four out of the nine following deprivation items, i.e. cannot afford 1) to pay rent or utility bills, 2) to keep home adequately warm, 3) to face unexpected expenses, 4) to eat meat, fish or a protein equivalent every second day, 5) one week annual holiday away from home, 6) a car, 7) a washing machine, 8) a colour TV, or 9) a telephone.

Data source

EU-SILC, yearly

➤ **(In)ability to make ends meet**

Definition

The indicator is based on the EU-SILC variable 'Ability to make ends meet' and is calculated as % of replies in the appropriate answer categories of the variable (see below).

The format of the question for this variable is:

Thinking of your household's total income, is your household able to make ends meet, namely, to pay for its usual necessary expenses?
1. with great difficulty
2. with difficulty
3. with some difficulty
4. fairly easily
5. easily
6. very easily

The respondent's assessment should be based on the household's total income (all income sources are to be taken into account, possibly also the irregular ones).

The usual necessary expenses of the household should include housing related costs but exclude business and farm work costs.

Data source

EU-SILC, yearly

1.3.2 Housing conditions

➤ **Structural problems of the dwelling**

Definition

The indicator presents a percentage of total population living in a dwelling with a leaking roof, damp walls, floors or foundation, or rot in window frames or floor.

Data source

EU-SILC, yearly

Comment: The indicator is currently being reviewed as for the number and types of deficits.

➤ **Space in the dwelling (overcrowding or under-occupation)**

Definition

Minimum number of rooms considered adequate, equals:
- one room for the household;
- one room per couple in the household;
- one room for each single person aged 18 or more;

- one room per pair of single people of the same gender between 12 and 17 years of age;
- one room for each single person between 12 and 17 years of age and not included in the previous category;
- one room per pair of children under 12 years of age.

A person is considered as living in an overcrowded household if the household does not have at its disposal an adequate number of rooms as defined above.

The *overcrowding rate* is defined as the percentage of the population living in an overcrowded household.

For statistical purposes, a dwelling is defined as under-occupied if the household living in it has at its' disposal more than the minimum number of rooms considered adequate. The classic cause of under-occupation is older individuals or couples remaining in their home after their children have grown up and left.

The *under-occupation rate* is the percentage of population living in an under-occupied dwelling.

Data source

EU-SILC, yearly

➢ **Satisfaction with accommodation**

Definition

The indicator on satisfaction with accommodation is based on the answers provided by the respondent to the question about opinion/feeling about the degree of satisfaction with the accommodation in terms of meeting the household needs/opinion on the price (intended as financial burden related to accommodation) and taking into account space, neighbourhood, distance to work, quality and other aspects.

The response scale used was from 0 to 10, where 0 means not at all satisfied and 10 completely satisfied.

The indicator on average satisfaction is the average of the scores.

The indicator on share of population reporting low satisfaction refers to 0-5 ratings, medium satisfaction refers to 6-8 and high satisfaction to 9-10.

Data source

EU-SILC, 2013 ad hoc module on well-being; in the future: EU-SILC 3-year rolling module on housing

2. Productive or other main activity

Productive or other main activity refers to both paid and unpaid work. However, data are available concerning various aspects of the former (including the lack thereof) and hardly cover the latter. Hence, the indicators proposed for this dimension refer mainly to gainful employment.

Work affects quality of life not only because of the income it generates but also because of the role it plays in giving people their identity and opportunities to socialise with others. People's paid work consumes a significant part of their time and shapes their sense of fulfilment and happiness. If work provides individuals with an opportunity to be creative, learn new things, engage in activities that produce a sense of achievement and reward, and gain an income sufficient to enhance their capabilities, then their quality of life can improve. Conversely, if they experience discrimination, insecurity, fear of physical injury, or have to work long hours for inadequate pay, they may feel that their quality of life is deteriorating. In addition, a lack of work and unemployment have been shown to have a negative impact on psychological health.

Paid work but also unpaid main activities such as domestic work, affect quality of life besides the income or utility generated, because they are an important determinant of personal identity and provide opportunities for social interaction. Apart from mere access to employment (i.e. the quantitative aspect), the quality of paid work is especially important, since it relates to personal dignity. Hence, 'addressing the quality of jobs and employment conditions' and the aspect is covered in the Guidelines for the Employment Policies of the Member States (Council Decision 2010/707/EU).

It should be noted that employment quantity and quality are complementary and, therefore, not to be substituted when it comes to measuring improvements in the quality of life. Improvements in quantity affect mostly the un- and the underemployed, whereas improvements in quality affect most those in employment. The complementarity between employment quantity and quality as regards well-being has been reflected for some time in the European Commission's European Employment Strategy for 'more and better jobs'.

I. ECONOMIC ACTIVITY — EMPLOYMENT/UNEMPLOYMENT

2.1 Quantity of employment

2.1.1 Employment and unemployment

The employment rate is considered to be a key social indicator for analytical purposes when studying developments within labour markets. Reaching 75 % of the working-age population in employment is also one of the targets of the EU 2020 strategy. The employment rate is also many economists' favourite gauge of the jobs picture. The rate is used to evaluate the ability of the economy to create jobs and therefore is used in conjunction with the unemployment rate for a general evaluation of the labour market stance. Having a high rate means that a large proportion of the population of working age are employed which in general will have positive effects on GDP per capita.
Nevertheless, this indicator is affected by the structure of the population (e.g. a higher share of the school-age population will lower the employment rate). In these circumstances, a lower employment rate in one country will not imply lower well-being than in a country where the employment rate is higher. Conversely, people may be employed but working less than they would wish, a limitation partially covered by the underemployment indicator. Additionally, the ratio does not give an indication of the number of hours worked per person or the size of the black market, as well as the quality of

jobs: earnings quality, labour market security and the quality of the working environment. Therefore, the analysis of the labour market must be done in conjunction with other statistics. Country comparisons of changes in employment rates as well as changes in several other labour market indicators are also affected by differences in the cyclical positions of the various countries.

Besides the role of employment for identity and sense of purpose of a person, jobs can also contribute to the improvement of individuals' social ties and by most governments the creation of decent jobs is seen as the best route out of poverty and misery.

Jobs help develop new skills and abilities and create opportunities for social and professional relationships. Being unemployed has a large and negative effect on physical and mental health and on subjective well-being.

The unemployment rate is very important for understanding the quality of life in a country as its negative effects (both at the micro and macro level) have been widely proven by research. Unemployment is associated with a variety of problems and pathologies, from higher divorce rates, higher suicide rates to higher incidences of alcoholism. And the relationship is not just a correlation: there is a causal connection.

As noted by the Commission on the Measurement of Economic Performance and Social Progress (Stiglitz, Sen & Fitoussi, 2009), 'people who become unemployed report lower life evaluations, even after controlling for their lower income, and with little adaptation over time; unemployed people also report a higher prevalence of various negative effects (sadness, stress and pain) and lower levels of positive ones (joy). These subjective measures suggest that the costs of unemployment exceed the income-loss suffered by those who lose their jobs, reflecting the existence of non-pecuniary effects among the unemployed and of fears and anxieties generated by unemployment in the rest of society'.

Unemployment is strongly associated with low levels of life satisfaction and happiness. The link between unemployment and underemployment and lower subjective well-being has been documented in several studies (see Abdalallah, Stoll and Eiffe, 2013 5). Importantly, research has shown that this link cannot be explained purely on the basis of characteristics (e.g. bad health) that may make individuals less likely to be employed. In other words, being unemployed has an impact on well-being regardless of other characteristics that may be associated with it (ibid.)

It should be noted that one limitation of the unemployment indicator from the perspective of assessing well-being is that it excludes people who wish to work but feel discouraged about actively seeking a job, because they deem their probability of finding one to be very low.

Long-term unemployment places people at risk of poverty, deprivation and social exclusion.

Some studies have suggested that people's subjective well-being tends to adapt to prolonged unemployment, i.e. the negative effect of unemployment on well-being is reduced. Others have shown that people who have been unemployed for over a year experience a greater adverse effect on their well-being than those unemployed for a shorter period (see, for example, Abdallah, Stoll and Eiffe, 2013 5).

➤ **Employment rate**

Definition

Employment rate represents the percentage of employed people in the total population of the same age group (15-74).

Employed persons are persons who performed work, even for just one hour per week, for pay, profit or family gain during the reference week or were not at work but had a job or business from which they were temporarily absent because of, for instance, illness, holidays, industrial dispute, and education or training.

Data source

EU Labour Force Survey (LFS), yearly

➢ **Unemployment rate**

Definition

Unemployment rate is a percentage of unemployed people in the active population of the same age group (15-74).

Unemployed persons are persons who were without work during the reference week, were currently available for work and were either actively seeking work in the past four weeks or had already found a job to start within the next three months.

The economically active population (labour force) comprises employed and unemployed persons.

Data source

EU-LFS, yearly

➢ **Long-term unemployment rate**

Definition

The long-term unemployment rate is the share of persons unemployed since 12 months or more in the total population of active persons in the labour market.

The duration of unemployment should be defined as the duration of job search or as the period of time since the last job was held (if this period is shorter than the duration of the search for a job).

The indicator concerns age group (15-74). Economically active persons are those who are either employed or unemployed.

Data source

EU-LFS, yearly

2.1.2 Underemployment

Low work intensity is a major determinant of the risk of cumulating income poverty and deprivation.

Involuntary part-time employment measures one aspect of underemployment which is important in the context of quality of life. If people work fewer hours than they would like to, this has implications for their opportunities to earn income, interact socially and shape their identity, all of which impinge on their quality of life. People sometimes accept part-time work for lack of full-time alternatives. In some Member States without favourable legislation or collective agreements for this type of contract,

part-time work may involve inferior conditions as regards access to benefits and opportunities for training and career advancement.

The first indicator presented below reflects more generally the situation of the population in situation of underemployment (caused by various reasons) and the second one focuses on the people who are involuntarily in such situation (are ready to work more).

➢ **People living in households with very low work intensity**

Definition

This indicator is defined as the percentage of persons living in a household having work intensity below or equal to a threshold set at 0.20.

The *work intensity of a household* is the ratio of the total number of months that all working-age household members have worked during the income reference year and the total number of months the same household members theoretically could have worked in the same period.

A working-age person is a person aged 18-59 years, with the exclusion of students in the age group between 18 and 24 years.

Households composed only of children, of students aged less than 25 and/or people aged 60 or more are completely excluded from the indicator calculation.

Comment: It is possible that wealthy people are among the people living in households with very low work intensity.

Data source

EU-SILC, yearly

➢ **Involuntary part-time employment (underemployment in terms of quantity of work)**

Definition

The indicator provides the percentage of underemployed part-time workers in the active population.

Underemployed part-time workers are persons aged 15-74 working part-time who wish to work additional hours and are available to do so.

Part-time work is self-reported by individuals. The distinction between full-time and part-time work is based on a spontaneous response by the respondent (except in the Netherlands, Iceland and Norway where part-time is determined if the usual hours are fewer than 35 hours and full-time if the usual hours are 35 hours or more, and in Sweden where this criterion is applied to the self-employed). This variable refers to the main job.

Data source

EU-LFS, yearly

2.2 Quality of employment

Apart from mere access to employment (i.e. the quantitative aspect), the quality of paid work is especially important, since it relates to personal dignity. Hence, addressing the quality of jobs and employment conditions is covered in the Guidelines for the Employment Policies of the Member States (Council Decision 2010/707/EU).

The Bureau of the Conference of European Statisticians established the Expert Group on Measuring Quality of Employment to develop a set of internationally agreed guidelines for compiling quality of employment statistics. The result of the work of this expert group is a statistical framework for measuring quality of employment, published in 2015. Within seven dimensions of this framework there are indicators which were chosen also for the Quality of life framework.

2.2.1 Income and benefits from employment

➢ **Low-wage earners (as a proportion of all employees)**

Definition

Low-wage earners are defined as employees (excluding apprentices) earning two thirds or less of the national median gross hourly earnings.

Median earnings are defined so that half of the population earns less than this value and the other half earns more.

Employees are all persons who have a direct employment contract with the enterprise or local unit and receive remuneration, irrespective of the type of work performed, the number of hours worked (full or part-time) and the duration of their contract (fixed or indefinite).

These statistics (coming from the Structure of Earnings Survey) refer to enterprises with at least 10 employees in the areas of economic activities defined by NACE Rev. 2 sections B to S excluding O.

Comment: Beside the median (or two thirds of the median) earnings, the actual level of the median earnings (in real terms) for a given country should also be considered as an important indicator of quality of life, especially if the overall level of earnings is low for that particular country (hence not many people captured under the low-wage earners threshold).

Data source

The Structure of Earnings Survey (SES) - every 4 years: 2010, 2015, 2020.., and yearly additional data collections

2.2.2 Temporary work

Indicators on temporary contracts provide information about the security of employment which obviously influences the economic security and consequently the quality of life of the concerned employees. This type of work affects young people in particular. They have difficulties in achieving stability at the beginning of their professional life. It can also influence decisions to start a family.

As there are different reasons for temporary jobs — education or training, probationary period or can be wanted by the person, it is relevant to distinguish the '*involuntary*' reason — a person has a contract of limited duration because he/she could not find a permanent job.

➤ **Temporary contracts**

Definition

Percentage of employees with temporary contracts in the total of employees.

Employees with a limited duration job/contract are employees whose main job will terminate either after a period fixed in advance, or after a period not known in advance, but nevertheless defined by objective criteria, such as the completion of an assignment or the period of absence of an employee temporarily replaced. This category includes:
o   persons with a fixed-term contract
o   persons with a seasonal job
o   persons engaged by a temporary employment agency or business and hired out to a third party for the carrying out of a 'work mission' (unless there is a work contract of unlimited duration with the employment agency or business)
o   persons with specific training contracts.
o   persons having a contract for a probationary period.

Data source

EU-LFS, yearly

➤ **'Involuntary' temporary contracts**

Definition

Percentage of employees having a temporary contract because they could not find a permanent job, among all employees having a temporary contract.

'*Person could not find a permanent job'* is one of the reasons of having a temporary contract (other reasons being: '*did not want a permanent job', 'in education or training', 'probationary period'*).

Data source

EU-LFS, yearly

2.2.3 Over-qualification (underemployment in terms of quality of work)

The importance of the indicators on over-qualification is twofold — at an individual level and at a societal level.

For the individual, working in a job that requires a lower qualification than that resulting from the person's successful completion of a given level of education can have an important negative impact on self-esteem, job satisfaction and overall quality of life assessment. Working in such a job, in general implies lower income.

For the society, high *over-qualification rate* indicates a suboptimal usage of its stock of human capital, which can hamper social and economic development both in the short and the long term.

The indicator comparing educational attainment level with the (ISCO) level of occupation is a proxy of the mismatch between the qualification obtained and the work performed. It should be specified that this indicator refers only to the population with tertiary educational level. It is more difficult to capture in statistics matching upper secondary educational attainment to occupations, especially in different national contexts of the labour market.

In addition to this indicator, the subjective *self-reported over-qualification* (as collected for example in the EU-LFS 2014 ad hoc module) can complete information of this issue.

➢ **Over-qualification rate**

Definition

The indicator presents a percentage of employed persons with tertiary educational attainment (International Standard Classification of Education (ISCED) levels 5-8) who work in jobs which normally don't require tertiary qualifications (ISCO category higher than 3 — starting with category 4: 'Clerical work support workers'). Those working for the Armed Forces (ISCO code 0) are not included.

Data source

EU-LFS, yearly

➢ **Self-reported over-qualification**

Definition

Currently, this indicator, coming from the EU-LFS ad hoc module 2014, measures the percentage of employed persons who answered yes to the question: *Considering your educational level, experience and skills, do you feel over-qualified for your current main job?*

Here over-qualified means that the qualifications and skills of the person would allow for more demanding tasks to be undertaken than the current job requires.

Data source

EU-LFS ad hoc module 2014; next: planned for 2021

2.2.4 Health and safety at work

As noted in Stiglitz-Sen-Fitoussi's Report, 'Paid work contributes to quality of life both positively and negatively. Paid work provides income as well as identity and social interactions, but it may also be a source of negative experiences and risks' [1].

This underscores the importance of collecting systematic information on the quality of paid work as a number of international organisations have been doing in the context of their ongoing studies of

'decent work'.([1]) Decent work is a multidimensional concept, which includes health and safety at work.

The only objective and well comparable indicator on health and safety at work is that on *fatal accidents at work*, coming from national administrative data provided within the European Statistics on Accidents at Work (ESAW).

Four indicators on health and safety at work have been chosen from the EU-LFS ad hoc modules devoted to this topic (conducted in 2007 and 2013): 1) accidents at work, 2) work-related health problems, and exposure to factors that can adversely affect either 3) mental well-being or 4) physical well-being.

➢ **Incidence rate of fatal accidents at work**

Definition

An incidence rate relates the number of fatal accidents to the corresponding working population (per 100 000).

For the indicator in the quality of life framework, this ratio is not standardised (the weight of economic sectors is not taken into account).

Data source

European statistics on accidents at work (ESAW), yearly

➢ **Percentage of persons reporting an accident at work**

Definition

The percentage of persons, working or having worked during the past 12 months, reporting an accident at work.

An ***accident at work*** resulting in injuries is a discrete occurrence which leads to physical harm, even if this did not lead to a sick leave. The accident occurred while engaged in an occupational activity or during the time spent at work. Excluded are occupational diseases, accidents during leisure time and injuries as a result of accidents during the journey from home to work or from work to home.

The population covered by this indicator is everybody aged 15-64.

Data source

EU-LFS ad hoc modules 2007 and 2013; next module planned for 2020

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1 See the International Labour Organisation's (ILO) measurement of Decent Work; the European Commission Quality of Work Indicators; the Quality of Job and Employment indicators used for the European Working Conditions Survey; and the Expert Group on Measuring Quality of Employment established by the Bureau of the Conference of European Statisticians.

➢ **Percentage of persons reporting work-related health problems**

Definition

Percentage of persons working or having worked during the last 12 months, reporting at least one work-related health problem.

A work-related health problem covers all diseases, disabilities and other physical or mental health problems, apart from accidental injuries, suffered by the person during the last 12 months, and caused or made worse by the work. This is a broad concept that covers much more than the recognised occupational diseases.

The concept of the work-related health problem is based on a self-assessment of survey respondents in regard to their work-related state of health.

The EU-LFS ad hoc module includes complaints irrespective of their severity. It includes not only health problems caused by work but also those made worse by work. It includes health problems where the onset was more than one year prior to the survey, in the case that the respondent had suffered from the health problem during the last 12 months.

The population covered by this indicator is everybody aged 15-64.

Data source

EU-LFS ad hoc modules 2007 and 2013; next module planned for 2020

➢ **Percentage of persons reporting exposure at work to factors that can adversely affect physical well-being**

Definition

The percentage of persons who reported exposure at work to at least one factor that can adversely affect physical well-being.

The questions concern workplace exposure to a number of factors that a person is clearly exposed to more frequently or more intensively than people experience in general day to day life.

The factors relating to physical well-being include:

- chemicals, dust, fumes, smoke or gases;

- noise or vibration, difficult work postures, work movements or handling of heavy loads

- risk of accident.

The population covered by this indicator are employed persons aged 15-64.

Data source

EU Labour Force Survey ad hoc modules 2007 and 2013; next module planned for 2020

> **Percentage of persons reporting exposure at work to factors that can adversely affect mental well-being**

Definition

The percentage of persons who reported exposure at work to at least one factor that can adversely affect mental well-being.

The questions concern workplace exposure to a number of factors that a person is clearly exposed to more frequently or more intensively than people experience in general day to day life.

The factors relating to mental well-being include:
- harassment and bullying
- violence or threat of violence
- time pressure or overload of work

The population covered by this indicator are employed persons aged 15-64.

Data source

EU-LFS ad hoc modules 2007 and 2013; next module planned for 2020

2.2.5 Work/private life balance

The number of hours usually worked per week influences work-life balance, which in turn has an effect on subjective well-being. However, this effect is not linear. Research has shown that subjective well-being increases with the number of hours an individual works per week but only up to a certain point beyond which it starts to deteriorate, possibly because excessive (*over 48 hours per week*) working hours reduce job satisfaction which in turn reduces overall fulfilment (Abdallah, Stoll and Eiffe, 2013 5).

However, it is also relevant to analyse atypical working hours more in detail, with the breakdown by the sector of employment, as some occupations require per se atypical working hours.

Working schedule flexibility is an essential component of the balance work/private life. In particular, it facilitates — to some extent — reconciliation of work and family responsibilities. Flexitime is a variable work schedule, in contrast to traditional work arrangements requiring employees to work a standard 9 am to 5 pm day. Under flexitime, there is typically a core of the day when employees are expected to be at work, while the rest of the working day is 'flexitime' — in which employees can choose when they work, subject to achieving total daily, weekly or monthly hours the employer expects and subject to the necessary work being done.

Time of commuting between home and work is a very important element for the quality of life. Apart from the Time Use Survey, data on the amount of the commuting time are very rarely collected. However, a subjective indicator on *satisfaction with commuting time* is available from the EU-SILC ad hoc module 2013.

> **Average number of usual weekly hours of work in main job**

Definition

The average number of hours worked corresponds to the number of hours the person normally works. This includes all hours worked including overtime, regardless of whether they were paid. It excludes travel time between home and workplace, and main meal breaks (normally taken at midday).

Data source

EU-LFS, yearly

> **Long working hours (persons employed usually working more than 48 hours by week)**

Definition

The percentage of employed usually working more than 48 hours by week.

The indicator is calculated taking into account the total number of hours usually worked, in the main job for those who don't have a second one and in the main plus second job for those who do. The indicator refers to all persons employed (regardless of whether they were working full-time or part-time).

The principle of the 48-hour week threshold was adopted by ILO. Having a working time that exceeds this threshold can have a negative effect not only on a worker's health but also on their safety and work-life balance.

Data source

EU-LFS, yearly

> **Atypical working hours — percentage of employed persons usually working evenings, Saturdays or Sundays; percentage of employed persons working during nights**

Definition

The percentage of employed persons who work on a usual basis (more than half of the time in a month) either during the evenings or on Saturday or on Sunday (but not during the night). Currently, only separate indicators (work on Saturday, Sunday and evening) are available.

Percentage of employed usually working during nights should be presented separately as this type of work is particularly harmful for health and family life.

Saturday and Sunday working: this concept should be interpreted strictly on the basis of formal agreements concluded with the employer. Employees taking office work home and/or occasionally working at the workplace on Saturdays or Sundays are not included. Working on Saturdays (or Sundays), in this context, means having worked two or more Saturdays (or Sundays) during a four-week reference period before the interview.

Evening work is considered to be work done after usual working hours but before the usual hours of sleep in the Member State concerned. It implies the opportunity to sleep at normal times.

Night work: work done during usual sleeping hours and implying unusual sleeping times. The indicator covers work during the night for at least 50 % of the days on which the person worked, during a four-week reference period before the survey interview.

Comment: Currently, only separate indicators (on evening, Saturday, Sunday, night work) are available.

Data source

EU-LFS, yearly

> **Flexibility of the working schedule**

Definition

Percentage of employees who reported no flexibility/some flexibility/complete flexibility of their schedule.

In the EU-LFS ahm 2010, the following categories of answers were available:
- *fixed start and end of a working day or varying working time as decided by the employer;*
- *flexitime/working time banking;*
- *daily number of hours fixed, but some flexibility within the day;*
- *determines own work schedule (no formal boundaries).*

Data source

EU-LFS 2010 ad hoc module on 'Reconciliation between work and family life'; next module on work arrangements is planned for 2019

> **Satisfaction with commuting time**

Definition

The indicator on satisfaction with commuting time is constructed based on the answers provided by the respondent to the question about opinion/feeling about the degree of satisfaction with the commuting time.

The respondent should have made a broad, reflective appraisal of all areas of his/her commuting time to work in a particular point in time (current).The response scale used was from 0 to 10, where 0 means not at all satisfied and 10 completely satisfied.

The indicator on average satisfaction is the average of the scores.

The indicator on share of population reporting low satisfaction refers to 0-5 ratings, medium satisfaction refers to 6-8 and high satisfaction to 9-10.

Data source

EU-SILC, 2013 ad hoc module on well-being; next: EU-SILC 3-year rolling module on labour

2.2.6 Assessment of job quality

A subjective assessment of job quality should complete the objective indicators. The main indicator proposed is about overall job satisfaction.

A more detailed subjective evaluation of employment may concern relationships at work (with colleagues and supervisor) as well as work motivation (e.g. job autonomy).

➢ **Job satisfaction**

Definition

The indicator on job satisfaction is constructed based on the answers provided by the respondent to the question on opinion/feeling about the degree of satisfaction with his/her job. The respondent should have made a broad, reflective appraisal of all areas of his/her job in a particular point in time (current situation).

The activity status is based on the person's own perception of their main activity. This is in principle, determined on the basis of the most time spent, but no criteria have been specified explicitly.

The response scale used was from 0 to 10, where 0 means not at all satisfied and 10 completely satisfied. The indicator on average satisfaction is the average of the scores.

The indicator on share of population reporting low satisfaction refers to 0-5 ratings, medium satisfaction refers to 6-8 and high satisfaction to 9-10.

Data source

EU-SILC, 2013 ad hoc module on well-being; in the future: EU-SILC 3-year rolling module on labour

➢ **Job autonomy — possibility to influence content and order of tasks**

To be developed — see recommendations (p.86)

➢ **Good relationship with direct supervisor**

To be developed — see recommendations (p.86)

➢ **Good relationship with colleagues**

To be developed — see recommendations (p.86)

➢ **Work under pressure/stress**

To be developed — see recommendations (p.86)

2.3 Other main activity

Economic activity — employment or unemployment — concerns only a fraction of the population and there is still an large number of economically inactive people who should be covered ('described') by

indicators to complete the picture of the whole society concerned by the assessment of the quality of life. Each sub-group of inactive population has its own characteristics, concerns and problems influencing quality of life.

What's more, many active and inactive people do valuable but unpaid work, that is very important from the individual as well as societal perspective.

As concerns indicators, contextual data on the structure of the economically inactive population, currently available from the EU-LFS, should be accompanied in the future by better indicators on persons doing unpaid work (taking care of children or older people, doing voluntary work).

2.3.1 Inactive population

➢ **Inactive persons by main reason of inactivity**

Definition

Distribution of inactive population presents the percentage of inactive persons who are not seeking employment for different reasons, e.g. because they:
- are in education or training
- are retired
- are ill or disabled
- have family responsibilities (care of children, incapacitated adults, etc.).

Presentation of these data by sex and age is of an evident relevance (for students, retired people, women taking care of young children).

Data source

EU-LFS, yearly

2.3.2 Unpaid work

To be developed — percentage and characteristics of persons doing 'unpaid work' (please see recommendations, p.86).

3. Health

Physical and mental problems, as well as ill health, undermine the quality and shorten the length of people's lives. They also inhibit economic and social development by stripping countries of valuable human capital. Poor health conditions mean that a significant part of a given population is unable to benefit from the general progress of society or actively engage in civic activities. Long and healthy lives are therefore not just an overarching personal aim for most people. They are also considered as an almost universally acceptable measure of societal well-being, incorporated in relevant indices on quality of life, such as the United Nations "Human Development Index".

Improving health conditions by preventing and treating injuries, ill health and diseases, accounts for a significant part of government and private expenditure in Europe. The effectiveness of this significant investment can be measured using objective criteria and by gauging the perceptions of individuals. This is because health outcome indicators such as life expectancy or infant mortality do not usually

take into account many conditions that undermine individual health — from mild mental disorders to dental problems. The state of people's health in Europe is therefore measured using a combination of objective health outcome indicators such as life expectancy, and self-evaluations of health status and subjective perceptions regarding access to healthcare. These indicators also include elements that constitute risk factors for health resulting from lifestyle such as hazardous behaviours (e.g. smoking) likely to have an impact on future levels of health, and thus the well-being of European societies.

Available data show that although health conditions are related to GDP, they are not completely dependent on the wealth in a given economy. Although poorer countries generally fare worse than richer ones, e.g. in terms of reducing the number of preventable deaths (e.g. infant mortality), the marked differences between countries can also be attributed to other factors, including the effectiveness of national healthcare systems, inequalities in access to healthcare, the living environment and individual and cultural choices (e.g. dietary habits). For example, more money per capita is spent on healthcare in the United States than in any European country. Yet according to the World Health Organisation, life expectancy in most EU Member States is higher than in the US. This suggests that the way in which the provision of healthcare is organised (if the providers are private or public organisations, for example), the quality of healthcare services, environmental factors and cultural choices also affect health outcomes.

Health is a European policy goal of the utmost importance. The Third EU Health Programme 2014-2020 underlines the importance of health policy, especially in light of the challenges related to demographic change that Europe is facing, as well as the need for action to reduce inequalities in health as a condition for inclusive growth.

In the framework of indicators on quality of life, the health dimension is described using demographic indicators such as life expectancy and from an individual perspective by self-assessed health status, behaviours that can influence someone' health, exposure to unhealthy situations and possibilities of receiving timely and relevant treatment in case of need. All these contribute to the general assessment of the health situation in the society.

3.1 Health status

The health status of a population is difficult to measure because it is hard to define among individuals, populations, cultures, or even across time periods. As a result, the demographic measure of *life expectancy* of populations at different ages has often been used as a measure of a nation's health status because it is based on a characteristic that is simple and easy to understand — namely, that of death. Mortality rates have declined overall for all socioeconomic groups but still there are significant differences in individual's mortality rates strongly influenced by social factors such as education, economic activity (employed, unemployed) and income level.

The indicator on *healthy life years* (HLY) is very relevant for the assessment of the quality of life by focusing on those years that may be enjoyed by individuals free from the limitations of illness or disability. Chronic disease, frailty, mental disorders and physical disability become more prevalent in older age and often result in a lower quality of life for those who suffer from such conditions, while the burden of these conditions may also impact on healthcare and pension provisions. This indicator focuses on the quality of life spent in a healthy state, rather than the 'quantity' of life measured by life expectancy.
Healthy life years may have positive economic consequences. Increase of healthy life years would increase work productivity and other activities which may push economic growth. Moreover it would reduce health care expenditure.

An increase in healthy life years is one of the main goals for European health policy. And it would not only improve the situation of individuals but also result in lower levels of public health care expenditure. If healthy life years are increasing more rapidly than life expectancy, it means that people are living more years in better health.

Self-perceived health is a subjective measure of overall health status. Health encompasses not only the absence of disease but also a state of well-being and the capability to function in the face of changing circumstances. Moreover, this subjective state has important consequences. For example, persons who consider themselves to be in poor health may be more likely to be depressed, to have impaired function, and to lead less productive and fulfilling lives. In addition, self-perceived health status is an important determinant of perceived need (and demand) for health care and other health-related services.

Individuals' self-assessment of their health may include aspects that are difficult to capture clinically, such as incipient disease, disease severity, physiological and psychological reserves, and social function. Caution is required in making cross-country comparisons of perceived general health, since people's assessment of their health is subjective and can be affected by their social and cultural backgrounds.

Mental health is an important component of health status, as expressed in the WHO's definition of health: 'A state of complete physical, mental and social well-being, and not merely the absence of disease' (WHO).

Mild-to-moderate mental disorders affect around 20 % of the working-age population in the average OECD country. They are predominantly highly treatable disorders such as anxiety and depression. People with severe mental illness die up to 20 years younger, have much higher unemployment and are poorer than the general population. Mental disorders, however, not only have a negative impact on an individual's well-being but also on his/her networks and on society. The societal impact is significant as they contribute to unemployment, sickness absence and lost productivity at work. The direct and indirect costs of mental ill health are very high and can amount to over 4 % of GDP (OECD 2014).

> **Life expectancy at birth**

Definition

Life expectancy at a certain age is the mean additional number of years that a person of that age can expect to live, if subjected throughout the rest of his or her life to the current mortality conditions (age-specific probabilities of dying, i.e. the death rates observed for the current period). Life expectancy at birth refers to the age of 1.

Gender differences are of particular importance for this indicator, given the difference in life expectancy between women and men.

Data source

Demographic data, yearly

Comment: This 'classical' headline indicator may potentially be replaced in the future by the indicator 'healthy life years' (please see below), provided the estimates of HLY are assessed as sufficiently robust.

➢ **Healthy Life Years**

Definition

The indicator of healthy life years (*HLY*) measures the number of remaining years that a person of a specific age is expected to live in healthy conditions (without any severe or moderate health problems). The indicator is also called disability-free life expectancy (DFLE).

HLY is a composite indicator that combines mortality data with health status data — long-term limitations in usual activities due to health problems.

The notion of health problem for Eurostat's HLY is reflecting a disability dimension and is based on a self-perceived situation. The question in the survey aims to measure the extent of any limitations for at least six months because of a health problem that may have affected respondents as regards activities they usually do.

The Global Activity Limitation Instrument (GALI) is used to annually collect data on activity limitation in EU-SILC as from 2004.

Data source

Demographic data and EU-SILC, yearly

➢ **Self-perceived health**

Definition

Self-perceived health: subjective assessment by the respondent of his/her health.

The concept is operationalised in the surveys by a question on how a person perceives his/her health in general, using one of the answer categories: *very good/ good/ fair/ bad/ very bad.*

The indicator shows the percentage of people reporting their health as very good/good/fair/bad/very bad. Often the first two categories are aggregated together.

Data source

EU-SILC, yearly

Also: European Health Interview Survey (EHIS) 2014; next: 2019

➢ **Self-reported mental health (depressive symptoms)**

Definition

Self-reported mental health is based on the Patient Health Questionnaire (PHQ-8) which encompasses a subset of the mental health problems. It is an instrument for assessing and monitoring the prevalence and severity of current depressive symptoms and functional impairment and to make tentative depression diagnosis.

The concept is operationalised in the EHIS 2014 by the following questions:

Over the last 2 weeks, how often have you been bothered by any of the following problems?

a. little interest or pleasure in doing things?

b. feeling down, depressed or hopeless?

c. having trouble falling or staying asleep, or sleeping too much?

d. feeling tired or having little energy?

e. having poor appetite or overeating?

f. feeling bad about yourself, feeling being a failure?

g. having trouble concentrating on things, such as reading the newspaper or watching television?

h. moving or speaking so slowly that other people could have noticed, or being so fidgety or restless?

The reply to this question is completed by that on the frequency, with the following categories: *Not at all / Several days / More than half the days / Nearly every day).*

The indicator on the prevalence of current depressive symptoms is calculated in several steps:

- calculate dummy variables with the cut-off point 'more than half the days'
- generate sum score for 'more than half the days'
- calculate the binary variable 'major depressive symptoms' (if item a. or b. and five or more items of a. — h score at least 'more than half the days')
- calculate the binary variable 'other depressive symptoms' (if item a. or b. and two, three or four items of a. — h. score at least 'More than half the days')
- calculate the binary variable 'any depressive symptoms' (if either 'major depressive symptoms' or 'other depressive symptoms' is reported).

Data source

EHIS 2014; next: 2019

3.2 Determinants of health

The set of indicators on health determinants covers the most common and measurable behaviours that influence people's health. These indicators provide information about risk factors for individual's health resulting from lifestyle and individual and cultural choices (e.g. dietary habits).

For example, obesity (information from the Body Mass Index (BMI) indicator) is among the main causes of premature deaths and major threats to public and individual health, that then obviously influences the quality of life of individuals.

Tobacco consumption is the single largest avoidable health risk in the European Union. It is the most significant cause of premature death in the EU, responsible for nearly 700 000 deaths every year. In addition, smokers have more life years in poor health. Many forms of cancer, cardiovascular and respiratory diseases are linked to tobacco use, which causes more problems than alcohol, drugs, high blood pressure, excess weight or high cholesterol.

Alcohol is an important factor for numerous chronic diseases (liver cirrhosis, diseases of the circulatory system, etc.). The pattern of *alcohol consumption* has changed in various Member States during recent decades but in total alcohol consumption remains high and at individual level excessive drinking involves high health-related risks.

Monitoring physical activity focuses more generally on the measurement of the effect of physical activity on health status and risks of morbidity and mortality. In particular, increased physical activity contributes to the reduction of mortality for all causes and in particular cardiovascular mortality; it decreases the risk of colorectal cancer, diabetes, depression, and is a factor in the prevention of osteoporosis. There is a strong social gradient for physical activities and the distinction between working and leisure time activities is essential from this point of view.

Fruits and vegetables are important components of a healthy diet. Reduced fruit and vegetable consumption is linked to poor health and increased risk of several diseases (e.g. cardiovascular diseases and certain types of cancer).

Preventing illness by promoting healthy behaviours is an important policy action that can be initiated or enforced, based on evidence provided by health determinants indicators.

> **Body Mass Index**

Definition

Body Mass Index (BMI) is defined as the weight of the person in kilos, divided by the square of the height in metres. For dissemination purposes, the following distribution subdivision (according to the international obesity Task Force - IOTF) is used:
-    underweight: BMI less than 18.5
-    normal weight: BMI between 18.5 and less than 25
-    overweight; BMI between 25 and less than 30
-    obese: BMI equal or greater than 30.

The BMI is calculated for adults only (18+);

Data source

EHIS 2008 and 2014; next: 2019

> **Daily smokers**

Definition

Daily smokers of cigarettes: proportion of people who smoke cigarettes (manufactured and hand-rolled) daily.

Data source

EHIS 2008 and 2014; next: 2019

Comment: This indicator was not computed in EHIS 2008 for France and Turkey (no data).

> **Hazardous alcohol consumption**

Definition

Indicator on hazardous alcohol consumption is defined as the proportion of people reporting to have had an average rate of consumption of more than 20 grams pure alcohol daily for women and more than 40 grams daily for men.

It is operationalised in EHIS 2014 by the following questions:

AL1 *In the past 12 months, how often have you had an alcoholic drink of any kind [beer, wine, cider, spirits, cocktails, pre-mixes, liquor, homemade alcohol…]?*
(Every day or almost every day / 5 - 6 days a week / 3 - 4 days a week / 1 - 2 days a week / 2 - 3 days in a month / Once a month / Less than once a month / Not in the past 12 months, as I no longer drink alcohol / Never, or only a few sips or trials, in my whole life)

AL2 *Thinking of Monday to Thursday, on how many of these 4 days do you usually drink alcohol?*
(On all 4 days / On 3 of the 4 days / On 2 of the 4 days / On 1 of the 4 days / On none of the 4 days)

AL3 *From Monday to Thursday, how many drinks do you have on average on such a day when you drink alcohol?*
(16 or more drinks a day / 10-15 drinks a day / 6 - 9 drinks a day / 4 - 5 drinks a day / 3 drinks a day / 2 drinks a day / 1 drink a day / 0 drink a day)

AL4 *Thinking of Friday to Sunday, on how many of these 3 days do you usually drink alcohol?*
(On all 3 days / On 2 of the 3 days / On 1 of the 3 days / On none of the 3 days)

AL5 *From Friday to Sunday, how many drinks do you have on average on such a day when you drink alcohol?*
(16 or more drinks a day / 10-15 drinks a day / 6 - 9 drinks a day / 4 - 5 drinks a day / 3 drinks a day / 2 drinks a day / 1 drink a day / 0 drink a day)

AL6 *In the past 12 months, how often have you had 6 or more drinks containing alcohol on one occasion? For instance, during a party, a meal, an evening out with friends, alone at home, …*
(Every day or almost / 5 - 6 days a week / 3 - 4 days a week / 1 - 2 days a week / 2 - 3 days in a month / Once a month / Less than once a month / Not in the past 12 months / Never in my whole life)

Data source

EHIS 2014, next: 2019

> ➢ **Regular practice of physical activity**

Definition

Indicator on health-enhancing (non-work-related) aerobic physical activity is defined as the proportion of people aged 18-64 years doing at least 150 minutes of at least moderate-intensity aerobic (non-work-related) physical activity per week.

It is operationalised (in EHIS 2014) with the following questions:

PE2 *In a typical week, on how many days do you WALK for at least 10 minutes continuously in order to get to and from places?*

  ([Number of days] / I never carry out such physical activities)

PE3 *How much time do you spend walking in order to get to and from places on a typical day?*

  (10 - 29 minutes per day / 30 - 59 minutes per day / 1 hour to less than 2 hours per day / 2 hours to less than 3 hours per day / 3 hours or more per day)

PE4 *In a typical week, on how many days do you BICYCLE for at least 10 minutes continuously to get to and from places?*

  ([Number of days] / I never carry out such physical activities)

PE5   *How much time do you spend bicycling in order to get to and from places on a typical day?*

         (10 - 29 minutes per day / 30 - 59 minutes per day / 1 hour to less than 2 hours per day / 2 hours to less than 3 hours per day / 3 hours or more per day)

PE6   *In a typical week, on how many days do you carry out sports, fitness or recreational (leisure) physical activities for at least 10 minutes continuously?*

         ([Number of days] / I never carry out such physical activities)

PE7   *How much time in total do you spend on sports, fitness or recreational (leisure) physical activities in a typical week?*

         ([hours: minutes] per week)

PE8   *In a typical week, on how many days do you carry out physical activities specifically designed to STRENGTHEN your muscles such as doing resistance training or strength exercises? Include all such activities even if you have mentioned them before.*

         ([Number of days] / I never carry out such physical activities)

Data source

EHIS 2014; next: 2019

> ➤ **Consumption of fruits and vegetables**

Definition

Proportion of adult persons (18+) consuming at least five servings of fruit and vegetables a day.

Data source

EHIS 2014; next: 2019

3.3 Access to healthcare

The concept of healthcare used here refers to the sum of activities carried out by public and private institutions to prevent and cure illness, reduce premature mortality, care for the sick and promote public health. Medical examinations and treatment are obviously the most important aspects of healthcare. It is therefore very important that the population does not encounter *barriers to access* when seeking healthcare.

Barriers to accessing health services include cost, distance, waiting times, lack of cultural sensitivities and discrimination. For non-native speakers, language can be an obstacle for those seeking to access services, while barriers to health care may result from poor understanding or a lack of knowledge with respect to a patient's rights and the administrative practices and requirements of health systems.

➢ **Self-reported unmet needs for medical care**

Definition

Self-reported unmet needs: persons own assessment of whether he or she needed examination or treatment for a specific type of medical care but didn't have it or didn't seek it.

The indicator presents the percentage of people who reported unmet needs for medical care.

Medical care: refers to individual health care services (medical examination or treatment excluding dental care) provided by or under direct supervision of medical doctors or equivalent professions according to national health care systems.

Main reasons for unmet needs observed in EU-SILC are the following:
– *could not afford to (too expensive)*
– *waiting list*
– *too far to travel or no means of transportation*
– *could not take time because of work, care for children or for others*
– *fear of doctors/dentists, hospitals, examination or treatment*
– *wanted to wait and see if problem got better on its own*
– *didn't know any good medical doctor (resp. dentist)*
– *other reasons.*

'Reasons of barriers of access' combines the following three reasons: *'Could not afford to (too expensive)', 'Waiting list'* and *'Too far to travel or no means of transportation'.*

Data source

EU-SILC, yearly

4. Education

A long tradition of economic research has stressed the importance of education in providing the skills and competencies that underpin economic production. But education matters for quality of life independent of its effects on people's earnings and productivity.

Education is strongly associated with people's life evaluations, even after controlling for the higher income it brings. Furthermore, better-educated people typically have lower unemployment, better health status, more social connections, and greater engagement in civic and political life. While the available evidence does not always allow conclusions about the direct causation between education and these other dimensions of quality of life, there is a consensus that education brings a range of returns (monetary and non-monetary) that benefit both the person investing in the education and the community in which they live.

Education empowers individuals by increasing their knowledge and their cognitive, social and emotional skills, as well as improving habits, values and attitudes towards healthy lifestyles and active citizenship.

Available educational indicators cover a broad range of fields. Some refer to inputs (e.g. school enrolment, educational expenditure and school resources), while others refer to throughputs and outputs (e.g. graduation rates, completed years of schooling, standardised test-measures of people's

achievements in terms of literacy and numeracy). Which of these indicators is more relevant depends on the stage of a country's development and on the goal of the evaluation exercise.

Some of the most relevant indicators for assessing the effect of education on quality of life are measures of people's competencies.

4.1 Competencies and skills

Education is the formal process by which society, through schools, colleges, universities and other institutions, deliberately transmits its cultural heritage and its accumulated knowledge, values and skills to the next generation. Education, as the basis of human civilisation and a major driver of economic growth, benefits society and has a major impact on the quality of life of individuals. A lack of skills and competencies limits access to good jobs and economic prosperity, increases the risk of social exclusion and poverty, and may hinder full participation in civic and political affairs.

Skills are described in three ways: by using *educational attainment* and *early leavers from education and training* indicators used as a proxy; by allowing the respondent to self-report on the level of some skills (foreign languages and internet), by direct testing and assessing the set of skills defined in the PIAAC programme.

Skills and competencies are a complex and statistically challenging area: 'soft' skills acquired in social life or knowledge obtained outside the formal educational system are hard to measure. But to assess skills, information on educational attainment has to be complemented by that on *self-reported skills* or if possible by *assessment of competencies.*

4.1.1 Educational attainment

Higher levels of educational attainment are generally linked to better occupational prospects and higher income for individuals, hence having a positive effect on their quality of life. People who have completed tertiary education can most often secure their jobs: the unemployment rate decreases with the educational level.

Ending formal education at lower secondary level has a strong impact on the future life of young people. Early school leavers face a higher risk of social exclusion and poverty and are also less likely to participate in the civic life and political affairs of their society. This is also because education enhances people's understanding of the world they live in, and hence the perception of their ability to influence it.

➢ **Educational attainment level**

Definition

Educational attainment represents the percentage of the population having successfully completed a given level of education (e.g. lower secondary, tertiary, etc.). The headline indicator refers to the **tertiary educational attainment**.

The educational attainment level is defined as the highest level of education successfully completed. The expression 'level successfully completed' must be associated with obtaining a certificate or a diploma, when there is certification.
As tertiary education is most often completed after the age of 24, indicators on educational attainment refer mainly to the population aged 25+.

International Standard Classification of Education (ISCED) is the reference classification for organising education programmes and related qualifications by education levels. ISCED 2011 replaces ISCED 1997 and is implemented in all EU data collections from 2014.

Compared to ISCED 1997 which had seven levels of education, ISCED 2011 has nine levels — from level 0 to level 8:

- o ISCED 0: Early childhood education ('less than primary' for educational attainment)
- o ISCED 1: Primary education
- o ISCED 2: Lower secondary education
- o ISCED 3: Upper secondary education
- o ISCED 4: Post-secondary non-tertiary education
- o Tertiary education:
- o ISCED 5: Short-cycle tertiary education
- o ISCED 6: Bachelor's or equivalent level
- o ISCED 7: Master's or equivalent level
- o ISCED 8: Doctoral or equivalent level

In the online database data on educational attainment are presented as follows:

- The aggregate '*low educational attainment'* corresponds to codes 0, 1 and 2 of ISCED 2011 (0, 1-2 and 3C short of the ISCED 97), i.e. at most lower secondary education.
- The aggregate '*medium educational attainment'* corresponds to the ISCED 2011 levels 3 and 4 (3C long 3A, 3B and 4 in ISCED 1997).
- The aggregate 'high *(tertiary)* educational attainment' covers the ISCED 2011 levels 5-8) (levels 5 and 6 of ISCED 1997).

For more information, please see:

http://ec.europa.eu/eurostat/statistics-explained/index.php/International_Standard_Classification_of_Education_(ISCED)

Data source

EU-LFS, yearly

> **Early leavers from education and training**

Definition

Early leavers from education and training refers to persons aged 18 to 24 fulfilling the following two conditions: first, the highest level of education or training attained is ISCED 2011 levels 0-2 (0, 1, 2 or 3c short in ISCED 1997); second, respondents declared not having received any education or training in the four weeks preceding the survey (numerator). The denominator consists of the total population of the same age group, excluding no answers to the questions 'highest level of education or training attained' and 'participation to education and training'. Both the numerators and the denominators come from the EU Labour Force Survey.

Data source

EU-LFS, yearly

4.1.2 Self-reported skills

Competences and skills are measured by the indicators that can proxy general competencies (educational attainment — see above), self-reported skills (e.g. internet and foreign languages) and skills that were assessed in the tests (e.g. in PIAAC).

The ability to use a computer and the command of a foreign language are among the most important competencies, not only for the job market or to take advantage of education, information and cultural opportunities, but also in everyday life activities in our increasingly digital and globalised societies.

➢ **Individuals' level of internet (digital) skills**

Definition

The level of internet skills is measured using a self-assessment approach, where the respondent indicates whether he/she has carried out specific tasks related to internet use, without these skills being assessed, tested or actually observed.

Six internet-related items were used to group the respondents into levels of internet skills: use a search engine to find information; send an email with attached files; post messages to chat rooms, newsgroups or any online discussion forum; use the internet to make telephone calls; use peer-to-peer file sharing for exchanging movies, music etc.; create a web page.

Three levels of basic internet skills were then constructed:
o Low level of basic internet skills: of individuals who have carried out (ticked) 1 or 2 of the 6 internet-related items.
o Medium level of basic internet skills: of individuals who have carried out (ticked) 3 or 4 of the 6 internet-related items.
o High level of basic internet skills: of individuals who have carried out (ticked) 5 or 6 of the 6 internet-related items.
No basic internet skills: Individuals who have not carried out any of 6 internet-related items.

As the questions on skills are addressed only to the individuals who were ever using internet, those who never used computers complete the picture of the whole population.

Data source

Survey on ICT (Information and Communication Technologies) usage in households and by individuals, 2013

Comment: Starting from 2015, new indicators - on digital skills - are proposed from this survey. They are not yet taken into account in this report; they are not comparable with the indicators on internet skills as the components of skills included in the calculations are not the same (and probably will be modified following ICT developments).

➢ **Knowledge of foreign languages**

    a. Percentage of population reporting not to know any foreign language

    b. Level of the best known foreign language

Definition

a. Percentage of population reporting not to know any foreign language
b. Level of knowledge of the language considered as best known (among population that reported to know at least one foreign language).

The following operational description of the level of best known language by a respondent was used in the interview and was addressed to those who reported knowing a foreign language:

- *I can understand and use the most common everyday expressions. I use the language in relation to familiar things and situations — Fair*
- *I can understand the essential of clear language and produce simple text. I can describe experiences and events and communicate fairly fluently — Good*
- *I can understand a wide range of demanding texts and use the language flexibly. I master the language almost completely — Proficient*

Data source

Adult Education Survey 2011, next: 2016

➢ **Individuals' level of literacy skills**

Definition

Mean literacy proficiency score.

The Survey of Adult Skills defines *literacy* as the ability to understand, evaluate, use and engage with written texts to participate in society, achieve one's goals, and develop one's knowledge and potential. In the survey, the term 'literacy' refers to the reading of written texts; it does not involve either the comprehension or production of spoken language or the production of text (writing). In addition, given the growing importance of digital devices and applications as a means of generating, accessing and storing written text, the reading of digital texts is an integral part of literacy measured in the Survey of Adult Skills.

In each of the three domains assessed in the Programme for the International Assessment of Adult Competencies (PIAAC) - literacy, numeracy and problem solving in technology-rich environments, proficiency is considered as a continuum of ability involving the mastery of information-processing tasks of increasing complexity. The results are represented on a 500-point scale. The proficiency scale in each of the domains assessed can be described in relation to the items that are located at the different points on the scale according to their difficulty. The scales have been divided into 'proficiency levels', defined by particular score-point ranges and the level of difficulty of the tasks within these ranges. The covered population is that of age 16-65.

Data source

PIAAC, rounds 2011 and 2014
Results from the first round (24 countries) were published in 2013. Results of the second round (additional 9 countries) were released in 2016.

4.2 Lifelong learning

Participation in lifelong learning activities is a possible way of increasing the level of skills, driven either by professional or personal intellectual needs. Moreover lifelong learning may lead to updating/upgrading qualifications and consequently the chances of better employment, thus this sub-topic provides some information on the dynamics of skills development in general. Through continuous participation in learning activities a person can improve knowledge, skills and competences useful for his or her career.

➢ **Participation rate in adult education or training**

Definition

The percentage of people aged 25 to 64 (excluding people who did not answer the questions on 'participation to education and training') who received education or training in the four weeks preceding the survey.

Population in education or training: This encompasses all education or vocational training whether or not relevant to the respondent's current or future employment. It includes formal and non-formal education (e.g. courses, seminars, distance learning, etc.). It also includes courses followed out of personal interest.

Comment: Lifelong learning statistics cover formal and non-formal education and training, and exclude self-learning activities. For example, evening or language courses at universities, or other institutions, and computer skills courses are measured as lifelong learning. On the other hand, reading a history book, or visiting a science museum, although they belong conceptually to the concept of lifelong learning, are not statistically measured within this indicator.

Data source

EU-LFS, yearly

4.3 Opportunities of education

Early childhood is the stage where education can most effectively influence the development of children and help reverse disadvantage. Thus the *participation rate of children aged 4 years old in ISCED levels 0-1 educational programmes* was selected as an indicator for this topic.

Pre-primary education helps to prepare pupils to enter and succeed in formal schooling. According to the PISA results, fifteen year-old students who attended at least one year of pre-primary education perform better than those who did not, even after accounting for their socioeconomic backgrounds. *(OECD, Education at a Glance 2013).* PISA research also shows that the relationship between pre-primary attendance and performance tends to be greater in school systems with a longer duration of pre-primary education, smaller pupil-to-teacher ratios in pre-primary education, and higher public expenditure per child at the pre‑primary level.

Enrolling pupils in early childhood education can also mitigate social inequalities and promote better student outcomes overall. Many of the inequalities found in education systems are already evident when pupils enter formal schooling and persist as they progress through the school system. Because inequalities tend to grow when schooling is not compulsory, earlier entrance into the school system may reduce these inequalities.

➢ **Participation in education of the children four-year-olds**

Definition

Percentage of children four-year-olds that are enrolled in ISCED level 0 (or ISCED level 1) education programmes.

The age selection for the indicator being somewhat arbitrary, this was chosen as the least problematic taking into account potential coverage of care programmes (in the case of lower age) and the start of compulsory education (in the older age).

In general, ISCED level 0 (early childhood education) is taken into account for this indicator. But in the case where children already enter compulsory primary education at the age of 4 years (like in Northern Ireland in the UK), ISCED level 1 (primary education) should be considered as well.

Data source

UOE (UNESCO, OECD, Eurostat) administrative data collection on education, yearly

5. Leisure and social interactions

Meanwhile, wider community aspects such as social cohesion are seen as important in determining societal outcomes such as government performance and reduced incidence of crime (Stiglitz, Sen & Fittousi, 2009 [1]; Scrivens & Smith, 2013 [8]). The other two sub-dimensions included — activities for people, and social cohesion — are related to this wider community aspect.

These four sub-dimensions, map onto the four interpretations of social capital identified in the recent OECD report on social capital (Scrivens & Smith, 2013 [8]), where they are called personal relationships Leisure and social interactions are two linked aspects of life that are very important to quality of life, but have always been seen as peripheral to policy.

Leisure activities are discretionary activities that people undertake outside their productive activities (either paid or unpaid). They are almost by definition desirable, carried out because of their intrinsic value rather than necessity. In 1930, the economist John Maynard Keynes speculated that economic development would allow his grandchildren to work only 15 hours a week, and have the rest of the time for leisure — the implication being that this would be a sign of societal progress. The UN declaration of human rights includes the 'right to rest and leisure' (Article 24). The importance attributed by modern societies to work-life balance underlines the role leisure plays in quality of life. Recent evidence has confirmed that opportunities for leisure are indeed associated with better self-reported experience of life, (Zganec et al., 2011 [6]).

Leisure has both a quantitative aspect (i.e. the mere availability of time that we can spend on activities we like) and a qualitative one: access to these activities is as important as the time we have to devote to them.

Several European Union policies affect the quality of leisure. The EU seeks to preserve Europe's shared cultural heritage (Article 167 of the Treaty on European Union) — in language, literature, theatre, cinema, dance, broadcasting, art, architecture and handicrafts, and to help make it accessible, with initiatives such as the Culture Programme. To this end, the European Commission has also developed policies on the audiovisual and media market, including the Audiovisual Media Services Directive 2010/13, the Creative Europe framework programme on culture and media, as well as provisions for supporting public service broadcasting (Protocol No 29 of the Treaty on European Union). In 2011, the Commission adopted a strategy to develop the European dimension in sport.

'Social interactions' includes both close personal relationships and wider community relationships. Both are related to experience of life, in particular personal relationships which are often identified as the single strongest determinant of well-being (Diener & Seligman, 2002 [7]). People with better relationships have also been found to have better health outcomes, and are more likely to find a job (Stiglitz, Sen & Fittousi, 2009 [1]; Scrivens & Smith, 2013 [8]). Having someone to rely on in case of need has been identified as an important determinant of quality of life and was a headline indicator in the United Nations World Happiness Report (Helliwell, Layard & Sachs, 2013 [9]).

The experience of 'relatedness', resulting from personal relationships, is indeed often seen as part of well-being itself and a fundamental psychological need.

Two of the sub-dimensions included — activities with people and supportive relationships — can be considered in this category.

Meanwhile, wider community aspects such as social cohesion are seen as important in determining societal outcomes such as government performance and reduced incidence of crime (Stiglitz, Sen & Fittousi, 2009 1; Scrivens & Smith, 2013 8). The other two sub-dimensions included — activities for people, and social cohesion — are related to this wider community aspect.

These four sub-dimensions, map onto the four interpretations of social capital identified in the recent OECD report on social capital (Scrivens & Smith, 2013 8), where they are called personal relationships, social network support, civic engagement, and trust and cooperative norms. Those aspects of social capital that are more related to governance and democratic processes (such as democratic participation and trust in governmental institutions) are not included here but in dimension 7 (governance and public services).

While it may seem that social interactions are beyond the remit of policy, there are many aspects of policy that can affect them directly or indirectly. Wider community outcomes are likely to be influenced by policies related to urban planning and the quality of public spaces, housing affordability, integration of immigrants, labour market mobility. Meanwhile, like leisure, the opportunity to maintain personal relationships is also determined by time availability, which in turn depends on working hours and commuting times.

5.1 Leisure

Three aspects of leisure were proposed to be included in the framework of indicators on quality of life: quantity of leisure including availability of time for it, quality of leisure and access (or lack thereof) to different types of leisure activities.

Non-participation in cultural or sport activities (listed in the survey) reveals the (small) quantity of leisure and in some way, limited access to it (especially, if reasons of non-participation are not asked). EU-SILC ahm 2015 data will provide information about financial obstacles to participation in culture and sport.

Leisure, the time people have outside their productive activities (either paid or unpaid) and how they can and choose to spend it, has a significant impact on their subjective notion of well-being, their happiness and their life satisfaction.

Our subjective perception of well-being, happiness and life satisfaction is fundamentally influenced by our ability to engage in and spend time on the activities we like. The importance attributed by modern societies to work-life balance underlines the role leisure plays in quality of life. It has both a quantitative aspect (i.e. the mere availability of time that we can spend on activities we like) and a qualitative one: access to these activities is as important as the time we have to devote to them.

Indicator on *satisfaction with time use* is a proxy for the availability of discretionary time to carry out leisure activities, free from necessary activities such as work, commuting or household labour. Greater satisfaction implies that the respondent is happier with their work-life balance and is able to pursue the leisure activities they like (without specifying what those activities are). Lower satisfaction implies time constraints on the respondent that prohibit them from engaging in leisure activities. Note that this indicator does not objectively measure actual leisure time, and responses are likely to be informed by expectations about how much leisure time is appropriate.

5.1.1 Quantity of leisure

➢ **Satisfaction with time use**

Definition

The variable refers to the respondent's opinion/feeling. As for other variables from the EU-SILC module, the respondent should have made a broad, reflective appraisal of all areas of his/her time use in a particular point in time (current).

The respondent should not be given clues. By default the things the respondent likes doing are essentially a self-defined and a self-perceived concept.

The response scale used was from 0 to 10, where 0 means not at all satisfied and 10 completely satisfied. The indicator on average satisfaction is the average of the scores.

In addition, the indicator on share of population reporting low satisfaction refers to 0-5 ratings, medium satisfaction refers to 6-8 and high satisfaction to 9-10.

Comment: As the respondents' comprehension of the question — the formulation 'time use' — could be very diverse, it is proposed to modify the variable to 'Satisfaction with the amount of leisure time' for its implementation in future surveys.

Data source

EU-SILC 2013 ad hoc module on well-being; next: EU-SILC ahm 2018

➢ **Non-participation in culture or sport activities**

 Definition

The indicator identifies the proportion of the population that has not participated in any cultural/sport activities (listed in the question) during the last 12 months, i.e. who replied 'no' to all the questions on going to cinema, live performances, visits to cultural sites and live sport events.

Comment: Note that not all leisure activities are taken into account in this indicator — for example this list does not include active participation in sporting activities, reading a book or going to a bar. The list of activities used is a subset of activities for which governments of most countries have policy and often funding.

Data source

EU-SILC ad hoc modules 2006 and 2015 on social and cultural participation

5.1.2 Quality of leisure

To be developed — please see recommendations (p.87)

5.1.3 Access to leisure

➢ **Financial obstacles for leisure**

Definition

Percentage of persons declaring that they did not regularly participate in a leisure activity because they could not afford it.

The term 'regularly' was self-defined by the respondent. But regular participation should imply that leisure activities are done several times per year.

Comment: As the concept of 'regular leisure activities' may be interpreted in different ways and obstacles for participation are not limited to financial aspects, future development of indicators on access to leisure is necessary (please see recommendations, p.97).

Data source

EU-SILC ahm 2015 on social and cultural participation

5.2 Social interactions

Social interactions constitute a 'social capital' for individuals and society as a whole and affect quality of life in a number of different ways. Besides the natural human need for socialising, more numerous and rewarding social interactions are associated with factors that lead to a better quality of life, such as better health and higher likelihood of finding a job. They can even help make life better in the neighbourhood one lives in (by reducing the incidence of crime for example).

The quality of social interactions also encompasses our need to engage in activities with people, the existence of supportive relationships, interpersonal trust, the absence of tensions and social cohesion.

Research has also shown that the subjective well-being of people who have frequent social contact with family, friends and relatives is greater than those of people who do not. Social relationships have also been shown to operate as a buffer against the negative effects of stress on well-being [10].

Regular social interactions have also been found to be positively related with health outcomes.

Social interactions are tackled from the perspective of an individual who can benefit from social interaction as a requester (e.g. 'Ability to ask any relative, friend or neighbour for help') but also as a donor (e.g. 'Participation in informal voluntary activities'). The direct social interactions are assessed by *Frequency of getting together with friends* and subjective indicators on social interactions could be measured by 'Degree of feeling lonely' (indicator not available yet) or *'Satisfaction with personal relationships'.* Given the centrality of personal relationships to quality of life, being satisfied with personal relationships is a key component of having good quality of life.

'*Help from others*' (having someone to rely on in case of need) has been identified as an important determinant of quality of life and was a headline indicator in the analysis in the World Happiness Report. Having people that you can rely on is a core element of social capital — indeed the first use of the term 'social capital' developed by Pierre Bourdieu, referred specifically to this sub-dimension. It has been found to be associated with positive economic and psychological outcomes for the individual (Scrivens & Smith, 2013 [8]).

Having someone to discuss personal matters with specifically taps the more psychological element of this support, whereas the indicator on 'Ability to ask any relative, friend or neighbour for help' captures the more practical economic side.

Informal voluntary activity includes many activities that people consider volunteering but without the formal structures of organisations. Informal voluntary activities include for example cooking for others, taking care of people in hospitals/at home, taking people for a walk, etc. It excludes any activity that a respondent undertakes for his/her household, in his/her work or within voluntary organisations.

Volunteering is a behaviour that many societies, governments and religions value for its contribution to society. In 2011, the European Union celebrated the European Year of Volunteering. Volunteering also has benefits for the individual carrying it out, it contributes to higher subjective well-being (Scrivens & Smith, 2013) [8].

General trust is one of the most commonly used measures of social capital in general and is strongly correlated with experience of life (Scrivens & Smith, 2013 [8]). This indicator reflects trust of respondents in most other people and can be a measure of *generalised social trust.*

Many objective indicators measure social exclusion, in the context of material conditions, education or labour market. However, information on social cohesion also needs a subjective assessment of the personal feeling of inclusion in/exclusion from society. Indicators on *perception of social inclusion*/exclusion require further development.

5.2.1 Relations with people

➢ **Frequency of getting together with friends**

Definition

This indicator is calculated based on the EU-SILC variable: *Frequency of getting together with friends.*

The possible answer categories were: *daily, every week (not every day), several times a month (not every week), once a month, at least once a year (less than once a month), no friends.*

Friends: people the respondent gets together with in his/her spare time (i.e. after working hours, at weekends, or for holidays) and with whom the respondent shares private matters.

To get together means spending time with others at home or elsewhere. It can be talking or doing some kind of activities together. Merely encountering someone by chance is not considered as 'being together'.

Comment: An indicator specifically on friends was chosen, rather than combining with data on frequency of getting together with family, for two reasons. Firstly, interaction with family may be determined by factors such as physical distance to family. Secondly, there may be ambiguity as to when interaction with family is a voluntary or discretionary decision — when it is not voluntary then it is unclear whether it enhances quality of life. Indeed, interaction with friends better predicted subjective well-being than interaction with family (according to analysis performed on the European Quality of Life Survey (EQLS) data).

Data source

EU-SILC ad hoc modules 2006 and 2015 on social and cultural participation

➤ **Satisfaction with personal relationships**

Definition

The variable refers to the respondent's opinion/feeling about the degree of satisfaction with his/her personal relationships. As in other variables from the EU-SILC 2013 module the respondent should make a broad, reflective appraisal of all areas of his/her personal relationships in a particular point in time (these days).

Personal relationships should cover all possible relationships with e.g. relatives, friends, colleagues from work etc.

The response scale used was from 0 to 10, where 0 means not at all satisfied and 10 completely satisfied. The indicator on average satisfaction is the average of the scores.

In addition the indicator on share of population reporting low satisfaction refers to 0-5 ratings, medium satisfaction refers to 6-8 and high satisfaction to 9-10.

Data source

EU-SILC 2013 ad hoc module on well-being; next: EU-SILC ahm 2018

5.2.2 Activities for people

➤ **Participation in formal voluntary work**

Definition

This indicator measures the proportion of people who participated in formal voluntary work during the last 12 months before the survey.

Formal voluntary work includes unpaid non-compulsory work for or through an organisation, a formal group or club (including charitable or religious organisations). Attending meetings connected with these activities is included.

Unpaid non-compulsory work should be understood as volunteer work conducted to help other people, the environment, animals, the wider community, etc.

The reasons for non-participation are also asked: *lack of interest, lack of time, other reason*.

Data source

EU-SILC ad hoc module 2015; it is planned that in the future this variable will be collected within a EU-SILC module on social and cultural participation

Comment: This indicator will be available soon from the EU-SILC ahm 2015. The similar variable but with a narrower scope 'Participation in charitable organisations', was collected in the EU-SILC ahm 2006.

➢ **Participation in informal voluntary activities**

Definition

This indicator measures the proportion of people who participated in informal voluntary activities to help someone outside their household during the last 12 months before the survey.

Informal voluntary activities: refers to activities that take place outside an organisational context and tend to be done on an individual basis. Informal voluntary activities include cooking for others; taking care of people in hospitals/at home; taking people for a walk; shopping, etc. It excludes any activity that a respondent undertakes for his/her household, in his/her work or within voluntary organisations.

Data source

EU-SILC ad hoc module 2006 and 2015; it is planned that in the future this variable will be collected within a EU-SILC module on social and cultural participation

Comment: In EU-SILC ahm 2006, the frequency of such activities was asked, in 2015 ahm — reasons of non-participation (*lack of interest, lack of time, other*).

5.2.3 Social support

➢ **Help from others (having someone to rely on in case of need)**

Definition

The indicator is calculated as a percentage of the answers (*yes, no*) to the question about ability of the respondent to ask any relative, friend or neighbour for help.

The question is about ability regardless of whether the respondent has needed it or not; the potential of getting help regardless of whether the help has actually been received or not. Only relatives and friends (or neighbours) who don't live in the same household as the respondent should be considered.

Relatives are understood in the widest sense, and include father/mother/children, siblings, grandparents, aunts, uncles, cousins, nephews, nieces and families-in-law. *Friends:* people the respondent gets together with in his/her spare time (i.e. after working hours, at weekends, or for holidays) and with whom the respondent shares private matters.

Comment: The distinction of material and other help is important — it is advised for future implementation of this variable in EU-SILC (see recommendations).

Data source

EU-SILC ad hoc modules 2006 and 2015 on social and cultural participation; next: probably EU-SILC ahm 2018

➢ **Having someone to discuss personal matters with**

Definition

The indicator is calculated as a percentage of the answers (*yes, no*) to the question about whether the person has somebody to with whom to discuss personal matters.

Data source

EU-SILC ad hoc modules: 2006 and 2015 on social and cultural participation

5.2.4 Social cohesion

➢ **Trust in others**

Definition

This indicator was constructed based on the answers provided by the respondent to the question about the degree of trust in others. The response scale used was from 0 to 10, where 0 means that in general you do not trust any other person and 10 most people can be trusted.

This indicator on average rating of trust is the average of the scores.

Data source

EU-SILC 2013 ad hoc module on well-being; next: planned for EU-SILC ahm 2018

➢ **Perception of social inclusion**

This indicator will be tested in the EU-SILC ahm 2018.

6. Economic security and physical safety

Insecurity is a source of fears and anxieties that negatively affects the quality of life of the people concerned. Insecurity also implies uncertainty about the future, which decreases the quality of life of risk-averse individuals. Because of these considerations, a long tradition of research has aimed at measuring 'insecurity' (or safety and vulnerability) and to assess its effect on well-being. For the purpose of devising suitable approaches to its measurement, it may be helpful to distinguish between economic and personal (physical) insecurity.

Economic insecurity may be defined as uncertainty about the material conditions that may prevail in the future. This insecurity may generate stress and anxiety in the people concerned, and make it harder for families to invest in education and housing. The United Nations' Universal Declaration of Human Rights refers to the 'right to security in the event of unemployment, sickness, disability, widowhood, old age or other losses of livelihood in circumstances that are beyond the control of each individual'. This 'social right' is generally enforced through the protections attached to jobs and granted through social policies.

The realisation of each risk has negative consequences for the quality of life of the person affected, depending on the severity of the shock, its duration, the stigma associated with it (e.g. being

unemployed) and each individual's risk aversion. Most national statistical systems and international organisations provide some measure of the financial consequences of unemployment and old age (replacement rates) or illness (out-of-pocket expenses). These consequences, however, also depend on the type of protection available and on its cost, dimensions that are rarely considered.

Personal insecurity includes those external factors that put at risk people's physical integrity. The most obvious of these factors are crimes and accidents. While these external factors, in their most severe manifestations, can lead to the death of the person involved, in less extreme forms they affect a much larger number of people in each country.

Beyond their death toll, threats to personal safety affect quality of life even in their less extreme manifestations. The most obvious example is crime. Statistics on crime can be derived from a variety of sources (e.g. administrative records and household surveys). While comparisons of crime statistics based on police records are affected by cross-country differences in reporting practices, greater comparability could be achieved through household surveys specifically designed to assess people's experience with victimisation.

6.1 Economic security

Since economic security is not merely a question of disposable income or available wealth, subjective indicators provide a more accurate picture of a person's or household's level of economic security and resilience or vulnerability in the face of economic risk.

Moreover, selected objective indicators, such as unpaid debts or arrears on loan or rent payments, are proxies of wealth and can also be used to indicate how risk-prone a household is.

There are various aspects of economic security that are measured in the topic: lack of financial assets that in case of unexpected expenses can put a household into problematic situations *(Population unable to face unexpected financial expenses)*, the current *over-indebtedness* (*Population in arrears)* and insecurity over income (*Percentage of employed in the previous year transitioning to unemployment this year).*

There are many risks that may unexpectedly and adversely affect a household's material security. These include losing one's job, worsening health conditions, problems related to aging, and even a sudden deterioration of the economic environment such as has recently happened during the financial crisis.

The indicator on the transition from employment to unemployment shows one side (negative) of the labour transition. It reflects a population that is potentially facing a danger of income decrease that is putting the person/household in an insecure economic situation. The indicator can be interpreted as a proxy of this deterioration as national social protection schemes and labour market characteristics can secure sufficient or comparable financial stability as before the transition happened.

6.1.1 Wealth (assets)

➢ **Population unable to face unexpected financial expenses**

Definition

The indicator reflects the percentage of households that replied 'no' to the following EU-SILC question:

Can your household afford an unexpected required expense and pay through its own resources?
Answer categories*: yes, no*

Own resources means:
− your household does not ask for financial help from anybody
− your account has to be debited within the required period
− your situation regarding potential debts has not deteriorated.
You do not pay through own resources if you pay in instalments (or by taking a loan) expenses that you previously used to pay in cash.

Required expenses
A required expense could be different across countries but examples are surgery, funeral, major repair in the house, replacement of durables like washing machine, car.

Data source

EU-SILC, yearly

6.1.2 Debt

➢ **Population in arrears**

Definition

The indicator reflects the percentage of households that replied 'yes' (regardless of the frequency) to any of the following EU-SILC questions:

HSO11: In the last twelve months, has the household been in arrears, i.e. has it been unable to pay on time due to financial difficulties for: (a) rent, (b) mortgage repayment for the main dwelling?
1 yes, once
2 yes, twice or more
3 no

HS021: In the last twelve months, has the household been in arrears, i.e. has it been unable to pay on time due to financial difficulties for utility bills (heating, electricity, gas, water, etc.) for the main dwelling?
1 yes, once
2 yes, twice or more
3 no

HS031: In the last twelve months, has the household been in arrears on hire purchase instalments or other loan payments, i.e. has it been unable to pay on time due to financial difficulties?
* Please note that mortgage instalments for main dwelling are excluded.
1 yes, once
2 yes, twice or more
3 no

Data source

EU-SILC, yearly

6.1.3 Income insecurity

➢ **Percentage of persons employed in the previous year transitioning to unemployment this year**

Definition

The percentage of persons who have moved from employment into unemployment between two consecutive years.

Comment: As concerns employment and unemployment status, in the EU-SILC the target variable captures the persons' own perception of their main activity at present. It differs from the ILO concept of unemployment. For instance, many people who would regard themselves as full-time students or looking after the family home may be classified as ILO-employed if they have a part-time job.

Similarly, some people who consider themselves 'unemployed' may not meet the strict ILO criteria of taking active steps to find work and being immediately available. The self-declared main activity status is, in principle, the status that most time was spent on, but no criteria have been specified explicitly.

Data source

EU-SILC, yearly

6.2 Physical safety

Aside from economic risks or threats, people may also face risks of violence and crime that threaten their physical safety. Even if such risks do not materialise, the subjective perception of a threat and the resulting feelings of insecurity still undermine quality of life.

Physical safety refers to being protected from any situation that puts a person's physical security at risk, such as crime, accidents or natural disasters. A perceived lack of physical safety may affect subjective well-being more than the actual effects of a physical threat. Homicide causes only a small percentage of all deaths, but its effect on people's emotional lives is very different to the effect of deaths related to medical conditions. Consequently, the effects of those crimes that affect a person's physical safety are socially magnified and affect the quality of life not only of those close to the victim, but also of many others who then feel insecure or afraid.

Physical security can be measured by one objective indicator — on *homicides.* The prevalence of other types of crimes plays a role as well, but such statistics are less harmonised and comparable between countries.

Subjective indicators chosen concern: *perception of crime, violence or vandalism* in the area and *general perception of physical safety.*

The subjective perception of threat and the resulting feelings of insecurity undermine quality of life. However, individual perceptions of crime rates do not always correspond to the actual prevalence of assaults, vandalism and violence. So the subjective indicators are also needed to complement objective ones.

The interaction between perception and prevalence makes it important to measure each independently. Some neighbourhoods may have low prevalence because a high perception of risk led to people modifying their behaviour to reduce their exposure to risk, which in turn reduced

prevalence. For example, people refusing to go out after dark for fear of being mugged may reduce the incidence of mugging.

6.2.1 Crime

> **Homicide rate**

Definition

Homicide rate presents the number of homicides per 100 000 inhabitants.

Homicide is defined as intentional killing of a person, including murder, manslaughter, euthanasia and infanticide. Causing death by dangerous driving is excluded, as is abortion and help with suicide. Attempted (uncompleted) homicide is also excluded. The counting unit for homicide is normally the victim (rather than the case).

Data source

Raw figures are collected by Eurostat on an annual basis for crimes recorded by the police.

> **Perception of crime, violence or vandalism in the living area**

Definition

This subjective indicator concerns the percentage of households that replied yes to the following question (with answer categories: *yes, no*):

Do you have any of the following problems related to the place where you live — crime, violence and vandalism in the local area?
The quality and comparability of the variable should be improved.

The objective is to assess whether the respondent feels 'crime, violence or vandalism' to be a problem for the household. No common standards concerning what is a problem are defined.

A reference to the area (situated close to the place where you live) should be clearly indicated both in the national questionnaires and in the national interviewers' guidelines.

Crime is to be defined as a deviant behaviour that violates prevailing norms, specifically, cultural standards prescribing how humans ought to behave normally. A legalistic approach is not to be used (this is not defined as any blameworthy act or oversight banned by law and penalised by the State).

Data source

EU-SILC, yearly; in the future this variable would be collected within the 3-year rolling module on housing

6.2.2 Perception of physical safety

➢ **Safety feeling**

Definition

This indicator is a percentage of the population feeling safe/unsafe when walking alone in their area after dark.

The indicator presents a distribution of answers - *very safe, fairly safe, a bit unsafe, very unsafe* - to the question of safety feelings when walking alone in the dark in the respondents' area.
The term 'area' refers to the place situated close to the place of residence (where you usually go shopping, go for a walk, go on your way home).

Comment*:* The most remarkable feature of these reports on subjective fears is how little they seem to be related to measures of experienced victimisation. Questions from the same survey about whether people feel unsafe when walking in the street after dark not only show that the share of people fearing crime is significantly higher than the overall victimisation rate, but also that countries where a higher share of people fear crime do not record a higher frequency of victimisation. Also, within countries, older and richer people feel more unsafe than younger and poorer people, despite being less likely to be victims of crime. Changes in experienced victimisation and in fear of crime are also weakly related within individual countries, what suggests that the media plays a large role in amplifying concerns and focusing public opinion on specific domains.

Data source

EU-SILC 2013 ad hoc module on well-being

7. Governance and basic rights

Political voice is an integral dimension of the quality of life. Intrinsically, the ability to participate in society as full citizens, to have a say in the framing of policies, to dissent without fear and to speak up against what one perceives to be wrong are essential freedoms. Instrumentally, political voice can provide a corrective to public policy: it can ensure the accountability of officials and public institutions, reveal what people need and value, and call attention to significant deprivations. Political voice also reduces the potential for conflicts and enhances the prospect of building consensus on key issues, with pay-offs for economic efficiency, social equity, and inclusiveness in public life.

The opportunities for political voice and the degree of responsiveness of the political system depend on the institutional features of each country, such as the presence of a functioning democracy, universal suffrage, free media, and civil society organisations. This also depends on some key aspects of governance, such as legislative guarantees and the rule of law. Legislative guarantees include both constitutional rights and rights provided by general laws that enhance the quality of life of all residents and that reflect the social consensus prevailing in different countries and times. The structure of laws can also affect the investment climate in a country and thus have an impact on market functioning, economic growth, job creation and material welfare. However, to realise their potential, legal guarantees require effective implementation and substantive justice, which depend on how various institutions (e.g. the police, the judiciary and various administrative services) function, whether they are free from corruption, political interference and social prejudice, and whether they can be held accountable for their decisions.

Comparisons based on existing indicators of political voice and governance highlight vast differences between countries, especially between those with a long history of democratic functioning and those that have moved from authoritarian to democratic regimes only more recently.

Even in the developed world, however, low trust in public institutions and declining political participation point to a growing gap between how citizens and political elites perceive the functioning of democratic institutions. There are also systematic differences in how different groups exercise political voice, and with respect to fundamental rights and opportunities for civic participation in these countries, especially between citizens and the growing numbers of immigrants.

Indicators of political voice and governance should help to evaluate the functioning of multiparty democracy and universal suffrage, the level of participation in government decisions at the local level, and the presence of a free media and various freedoms (e.g. to form and join civil organisations, trade unions and professional bodies, or to participate in civic and social activities). Relevant indicators should cover the rights embedded in constitutions, laws (e.g. that promote civil and criminal justice, equality, inclusion, accountability and affirmative action), international covenants on human rights and basic freedoms, as well as the functioning of the judicial system (e.g. its independence from corruption and political influences, the speed with which it delivers justice, and its accessibility to both citizens and residents). Many of these indicators are typically compiled by bodies outside the boundaries of national statistical systems and are based mainly on the opinion of experts. These indicators need to be complemented, and in some cases replaced, by surveys of citizens' own perceptions of how well the political, legal and executive institutions are functioning, the difficulties they face in accessing them, and the trust that they place in them. Such surveys also need to capture inequalities in access to these institutions across socioeconomic groups.

Institutions and public services are evaluated by subjective indicators on trust and satisfaction with their activities, while discrimination by the measurement of the gap in various labour market outcomes between different groups of the population.

7.1 Trust in institutions and public services

Embedding respect for human rights in the constitution and laws is not sufficient if its effective implementation is lacking.

The enhanced level of citizens' trust in institutions (judicial system, political systems and administration, police) is an important indicator of the quality of governance. This trust results from different factors: transparency and access to information, functioning of institutions free of corruption, political interference or prejudice, equal treatment and lack of discrimination, etc.

'*Trust in the legal system*' was chosen as the headline indicator as this indicator is best correlated with the overall trust in institutions.

7.1.2 Trust in institutions

➢ **Trust in** institutions: **legal system, political system, police**

Definition

The indicator was constructed based on the answers provided by the respondent to the question about the degree of trust in particular institutions: legal system, political system, police. The response scale used was from 0 to 10, where 0 means no trust at all and 10 complete trust.

The indicator on average trust is the average of the scores.

The headline indicator chosen for this dimension is that on trust in the legal system. The term *'legal system'* refers to the entire system for interpreting and enforcing the laws and not to a specific legal entity within the country. Trust in the legal system is supposed to measure, for example, opinions and attitudes towards the effectiveness and efficiency of the institutions such as the courts, the fairness of its procedures and decisions, and the extent to which the sentences given out reflect the values and desires of citizens.

The term *'political system'* refers to a complete set of institutions, interest groups (such as political parties, trade unions), the relationships between those institutions and the political norms and rules that govern their functions.

The term 'police' refers to the police as an institution.

Data source

EU-SILC 2013 ad hoc module on well-being; for the future — please see recommendations (p.98)

7.1.2 Satisfaction with public services

To be developed — please see recommendations (p.88)

7.2 Discrimination and equal opportunities

While there are various grounds of discrimination that have an important impact on citizens' quality of life, the proposed indicators relate to two potential reasons for the unequal treatment of people: gender and migrant background, and concerns their situation on the labour market (*employment rate* and earnings).

Eliminating inequalities and promoting equality between women and men has been set as an EU goal since the 1957 Treaty of Rome. Equality is a key factor in meeting the economic, social and demographic challenges the European Union must face up to, and is essential for sustainable growth and the development of a quality society.

Reducing the gender pay gap is an important topic on the European political agenda. Since 1999 it has been part of the European employment strategy. The Spring European Council of March 2003 asked the Commission to report annually on developments towards gender equality and this indicator complies with that request.

The *gender pay gap* indicator (see below) can sometimes be difficult to interpret as it is influenced by many factors — difference between men and women's employment rates, pay levels, educational choices (both in terms of levels and fields), career breaks and aspirations. One important aspect that impacts this indicator is the female employment rate as compared to the one of males. In some countries women with a low level of qualifications are incentivised to stay at home rather than join the labour market. Therefore it is mostly the more qualified women that are employed, and this is reflected in one of the lowest gender pay gaps in the EU, although the female employment rate is much lower than that of men. There is even a small negative correlation (0.28) between the gender pay and employment rate gaps, which suggests the latter is an important contextual indicator for understanding the former.

As concerns an indicator on labour market situation of people by migrant background (variable on citizenship), the *employment rate gap between nationals and non-EU citizens* was chosen as the most relevant and robust.

➤ **Gender employment rate gap**

Definition

This indicator is defined as the difference (in percentage points) between the employment rate of men and women aged 20-64.

Data source

EU-LFS, yearly

➤ **Gender pay gap**

Definition

The unadjusted *gender pay gap (GPG)* represents the difference between average gross hourly earnings of male paid employees and of female paid employees, expressed as a percentage of average gross hourly earnings of male paid employees.

Earnings taken into account in this indicator refer to enterprises with at least 10 employees in the areas of economic activities defined by NACE Rev. 2 sections B to S excluding O (public administration).

Comment: The indicator has been defined as unadjusted (i.e. not adjusted according to individual characteristics that may explain part of the earnings difference) because it should give an overall picture of gender inequalities in terms of pay. The gender pay gap is the consequence of various inequalities (structural differences) in the labour market such as different working patterns, differences in institutional mechanisms and systems of wage setting. Consequently, the pay gap is linked to a number of legal, social and economic factors which go far beyond the single issue of equal pay for equal work.

The average earning is more sensitive to the values of outliers than for instance the median value. However the indicator available and agreed is constructed as an average measure, and therefore as the only available was included in the framework.

Data source

Structure of Earnings Survey, 2010 and 2014, and annual estimates

From reference year 2006 onwards, the new GPG data are based on the methodology of the Structure of Earnings Survey (SES) which is carried out every four years. For the intermediate years countries provide annual estimates which every 4 years are revised, benchmarked on the SES results in the two respective years. Some countries calculate the annual GPG on a yearly SES.

➢ **Gap in employment rates between national population and non-EU citizens**

Definition

This indicator is defined as a difference (in percentage points) between the employment rate of the national population and of non-EU citizens living in the given country (distinction according to the variable 'Citizenship'). The age group covered is 20-64.

Data source

EU-LFS, yearly

7.3 Active citizenship

Active citizenship means people getting involved in their local communities and democracy at all levels, from towns to cities to nationwide activity. Democracy doesn't function properly without it, because effective democracy is more than just placing a mark on a voting slip. Participative democracy requires people to get involved, to play an active role in society, e.g. by taking part in a political organisation or supporting a good cause.

Although political culture and civil society are multifaceted factors of overall civic life, the degree to which citizens exercise their fundamental right of free association to pursue their political interests (such as involvement in political parties and participation in trade unions) is an important indicator of active citizenship.

➢ **Active citizenship**

Definition

This indicator, constructed on the basis of the EU-SILC ahm 2015 variable 'Active citizenship', presents the percentage of people who have answered '*yes*' to the question about *the participation in activities of a political party or local interest group, participation in a public consultation, signing a petition, writing a letter to a politician or to the media, participation in a demonstration*.

Attending meetings connected with these activities is included as well as active participation via internet (e.g. petition, letter, etc.). Voting is not considered as active citizenship.

Data source

EU-SILC ad hoc module 2015 on social and cultural participation

Comment: In EU-SILC ahm 2006 the similar variable (but with the narrower scope) was collected: 'Participation in activities of political parties or trade unions'.

➢ **Voice and accountability**

To be developed (please see recommendations, p.88)

8. Natural and living environment

Environmental conditions are important not only for sustainability but also because of their immediate impact on the quality of people's lives. First, they affect human health both directly (through air and water pollution, hazardous substances and noise) and indirectly (through climate change, transformations in the carbon and water cycles, biodiversity loss and natural disasters that affect the health of ecosystems). Secondly, people benefit from environmental services, such as access to clean water and recreation areas, and their rights in this field (including rights to access environmental information) have been increasingly recognised. Third, people value environmental amenities or disamenities and these valuations affect their actual choices (e.g. of where to live). Lastly, environmental conditions may lead to climatic variations and natural disasters, such as drought and flooding, which damage both the properties and the lives of the affected populations.

Measuring the effects of environmental conditions on people's lives is, however, complex. These effects manifest themselves over different timescales, and their impacts vary depending on people's characteristics (e.g. where they live and work, their metabolic intake).

Further, the strength of these relations is often underestimated because of limits in current scientific understanding and in the extent to which various environmental factors have been subject to systemic investigations.

Much progress has been achieved in the last two decades in terms of measuring environmental conditions (through better environmental data, the regular monitoring of indicators, and accounting tools), understanding their impacts (e.g. evaluation of related morbidity and mortality, labour productivity, the economic stakes associated with climate change, biodiversity change, damage from disasters) and establishing a right of access to environmental information. A range of environmental indicators can be used to measure human pressure on the environment, the responses from administrations, firms and households to environmental degradation, and the actual state of environmental quality.

However, from a quality of life perspective, existing indicators remain limited in important respects. For example, emissions indicators refer mainly to the aggregate quantities of various pollutants, rather than to the share of people exposed to dangerous doses. Existing indicators should hence be supplemented in a number of ways, including the regular monitoring of the number of premature deaths from exposure to air pollution; the number of people who lack access to water services and nature, or who are exposed to dangerous levels of noise and pollution; the damage inflicted by environmental disasters. Survey measures of people's own feelings and evaluations of the environmental conditions of their neighbourhood are also needed. Because many of the effects of environmental conditions on quality of life differ across people, these indicators should refer to people grouped according to various classification criteria.

From the start of the development of the quality of life indicators set, it was made clear that the indicators would be about quality of life or well-being for the current generation. Theoretically one could attempt to consider the quality of life of future generations, and include environmental impacts such as CO_2 emissions as indicators of poor quality of life in the future. However, such indicators would only be a predictor, not a measure, of future quality of life. Without wishing to imply that future quality of life is morally less important, it was decided that it would be conceptually clearer to separate current and future quality of life, the latter dealt with in the environmental indicators Eurostat produce. As such, the only indicators related to the living environment in the framework relate to issues that have an immediate impact on quality of life, such as air pollution and noise pollution.

8.1 Pollution (including noise)

Due to their importance in other contexts, environmental indicators are relatively abundant. However, they are often too specific or focused on the natural environment to be of much use in a quality of life perspective. Nevertheless some provide valuable information, especially when combined with self-reported quality of one's household environment. There is undisputed proof that environmental problems and pollution are associated with both adverse health effects and lower subjective well-being.

Air pollution can affect people's health in a number of ways. Short term effects include upper respiratory infections such as pneumonia and bronchitis, and aggravation of existing conditions such as asthma and emphysema. Air pollution can impact life expectancy, as long-term effects include lung and heart diseases.

Air pollution also has direct and indirect costs on the economy. Prescription charges and healthcare services are direct costs, whereas lower productivity resulting from absenteeism is an indirect cost. Moreover, reduction in life expectancy resulting from air pollution is a loss in human capital. For example, in the UK, it has been estimated that air pollution reduces life expectancy by an average of six months with an estimated equivalent health cost of up to £19 billion a year. It also has a detrimental effect on the ecosystems and vegetation, and is one of the major components of smog.

One objective indicator of *air pollution* was chosen within the Quality of life framework — 'Urban population exposure to air pollution by particulate matter PM10'. It is complemented by the subjective *perception of pollution* and other environment problems.

Noise pollution is formally defined as exposure to ambient sound levels beyond comfort levels. It can have serious direct as well as indirect health effects — hypertension, high stress levels, sleeping disturbances and, in extreme cases, even hearing loss. Stress and hypertension have been reported as the leading causes of a host of health problems. Since levels of ambient noise fluctuate, depending on the specific local conditions and time, *self-reporting of perceived disturbance from noise* in the living environment (i.e. from neighbours or from the street) provides a representative picture of the impact of noise on the quality of life.

➢ **Urban population exposure to air pollution by particulate matter PM10**

Definition

The indicator shows the population-weighted concentration of PM10 to which the urban population is potentially exposed.

Fine particulates (PM10), i.e. particulate matter whose diameter is less than 10 micrometres, can be carried deep into the lungs where they can cause inflammation and a worsening of the condition of people with heart and lung diseases. According to the recommendations of the World Health Organisation, the annual mean concentration is the best indicator for PM-related health effects.

In 1996, the Environment Council adopted Framework Directive 96/62/EC on ambient air quality assessment and management. The first daughter Directive (1999/30/EC) relating to limit values for PM10 and other pollutants in ambient air fixed an annual limit value of 40 micrograms of PM10 per cubic meter. Annual reporting must follow Commission Decision 2004/224/EC of 20 February 2004 laying down arrangements for the submission of information under Council Directive 96/62/EC in relation to limit values for certain pollutants in ambient air. More recently, the Directive 2008/50/EC set a framework to define and establish objectives for ambient air quality and to harmonise methods and criteria among the Member States.

The EU's Air Quality Directive, the Directive on Ambient Air Quality and Cleaner Air for Europe (2008/50/EC) introduce new air quality objectives for PM2.5, which include limiting long-term exposure to PM2.5 through the use of annual standards, along with a reduction of PM2.5 background concentration in urban areas over the period 2010-2012. It also set a framework to harmonise methods and criteria among the Member States.

Data source

European Environment Agency (EEA), yearly

> **<u>Perception of pollution, grime or other environmental problems in the living area</u>**

Definition

This subjective indictor is calculated as a percentage of households that answered '*Yes*' to the following question:
Do you have any of the following problems related to the place where you live: pollution, grime or other environmental problems in the local area such as: smoke, dust, unpleasant smells or polluted water?
Answer categories*: yes, no*

The objective is to assess whether the respondent feels pollution, grime or other environmental problems in the living area. The quality and comparability of this variable should be improved.

Data source

EU-SILC, yearly; in the future this variable would be collected within the 3-year rolling module on housing

> **Noise from neighbours or from the street**

Definition

The indicator is calculated as a percentage of households that answered '*Yes'* to the following question (answer categories: yes, no):
Do you have any of the following problems related to the place where you live: too much noise in your dwelling from neighbours or from outside (traffic, business, factory, etc.)?

Comment: The objective is to assess whether the respondent feels 'noise from neighbours or from outside' to be a problem for the household (not on the fact to be bothered by the problem).

Data source

EU-SILC, yearly; in the future this variable would be collected within the 3-year rolling module on housing

8.2 Access to green and recreation areas

The quality of living environment also includes *green and recreation areas* which give opportunities for rest, alone or with family or friends. Obviously, it is particularly relevant for an urban population, and especially those living in big cities.

> **Satisfaction with recreational and green areas**

The indicator on satisfaction with recreational and green areas was constructed based on the answers provided by the respondent to the question about opinion/feeling about the degree of satisfaction with the recreational or green areas in the place where he/she lives.

The respondent should have made a broad, reflective appraisal of recreational or green areas in a particular point in time (these days).

The term 'place where you live' refers to the place situated close to the place of residence (where you usually go shopping, go for a walk, go on your way home). The term 'recreational or green areas' refers to the places where the respondent can walk, cycle, do some recreational activities, etc.

The response scale used was from 0 to 10, where 0 means not at all satisfied and 10 completely satisfied.

The indicator on average satisfaction is the average of the scores.

In addition, the indicator on the share of the population reporting low satisfaction refers to 0-5 ratings, medium satisfaction refers to 6-8 and high satisfaction to 9-10.

Data source

EU-SILC 2013 ad hoc module on well-being

Comment: For the future it is proposed to take the indicator on 'Satisfaction with living area' which would also include an aspect of recreational/green areas.

8.3 Landscape and built environment

Living environment refers to the place situated close to the place of residence (where the people usually go shopping, go for a walk, go on their way home) and to the access to services (e.g. shops, public transport, etc.), the presence of cinema, museums, theatres, etc. in the places where the respondent lives. It is also the landscape and all built environment which may make life more or less pleasant.

> **Satisfaction with living environment**

The indicator on satisfaction with the living environment was constructed based on the answers provided by the respondent to the question about opinion/feeling about the degree of satisfaction with the quality of his/her living environment. The respondent should make a broad, reflective appraisal of all areas related to living environment in a particular point in time (these days).

The term 'living environment' refers to the access to services (e.g. shops, public transport etc.), the presence of cinema, museums, theatres, etc. in the place where the respondent lives.

The term 'place respondent lives' refers to the place situated close to the place of residence (where you usually go shopping, go for a walk, go on your way home).

The response scale used was from 0 to 10, where 0 means not at all satisfied and 10 completely satisfied.

The indicator on average satisfaction is the average of the scores.

In addition, the indicator on the share of the population reporting low satisfaction refers to 0-5 ratings, medium satisfaction refers to 6-8 and high satisfaction to 9-10.

Data source

EU-SILC 2013 ad hoc module on well-being; next: EU-SILC 3-year rolling module on housing

9. Overall experience of life

This final dimension of the framework of quality of life indicators plays a distinct conceptual role and is an assessment of life overall (and not in any specific domain of life).

There is a large catalogue of evidence showing that experience of life or subjective well-being, as measured by indicators such as life satisfaction, is affected by a wide range of determinants, many of which are included in the Quality of Life indicator set (Dolan et al., 2006 [11]; Stoll et al., 2012 [12]). The OECD Guidelines on Measuring Subjective Well-being state that 'measures of subjective well-being are uniquely placed to provide information on the net impact of changes in social and economic conditions on the perceived well-being of respondents' (OECD, 2013 [13]).

The definition of subjective well-being is relatively broad and could give the impression that it is a hopelessly vague concept. This is not the case. There is, in fact, general agreement among experts on the specific aspects that comprise subjective well-being (Dolan and White, 2007 [14]; Dolan et al., 2011 [15]; OECD, 2013 [13]). In particular, a distinction is commonly made between life evaluations, which involve a cognitive evaluation of the respondent's life as a whole (or aspects of it), and measures of affects which capture the feelings experienced by the respondent at a particular point in time (Diener, 1984 [16]; Kahneman et al., 1999 [17]).

In addition to the distinction between evaluation and affect, a number of researchers argue that there is also a clear eudemonic aspect of subjective well-being, reflecting people's sense of purpose and engagement (Huppert et al., 2009 [18]). The framework used here covers all three concepts of well-being:

- Life evaluation — measured in terms of overall life satisfaction
- Affects — including both negative and positive affects

- Meaning and purpose of life — Eudemonia (psychological 'flourishing')

9.1 Life satisfaction

The indicator on overall life satisfaction is currently the most commonly used subjective well-being measure and often used and recommended as a suitable overall headline summary indicator of subjective well-being. Conceptually, the life satisfaction question has been popular because it asks respondents to consider their life overall, encouraging an overall assessment of life. Much of the research that has been carried out to identify the determinants and the outcomes of subjective well-being has operationalised well-being using life satisfaction or similar measures.

➢ **Overall life satisfaction**

Definition

Life satisfaction represents a report of how a respondent evaluates or appraises his or her life taken as a whole. It is intended to represent a broad, reflective appraisal the person makes of his or her life. The term life is intended here as all areas of a person's life at a particular point in time (these days). The variable therefore refers to the respondent's opinion/feeling about the degree of satisfaction with his/her life.

It focuses on how people are feeling 'these days' rather than specifying a longer or shorter time period. The intent is not to obtain the current emotional state of the respondent but for them to make a reflective judgment on their level of satisfaction.

The response scale used was from 0 to 10, where 0 means not at all satisfied and 10 completely satisfied.

The indicator on average satisfaction is the average of the scores.

In addition the indicator on the share of the population reporting low satisfaction refers to 0-5 ratings, medium satisfaction refers to 6-8 and high satisfaction to 9-10.

Data source

EU-SILC ahm 2013; next: EU-SILC ahm 2018; this variable would become a yearly EU-SILC variable

9.2 Affects

Measures of affects, both positive and negative, have been highlighted as a key sub-dimension of subjective well-being, distinct from evaluative measures such as life satisfaction (Diener, 1984 [16]; Stiglitz, Sen & [1] Fittousi 2009; OECD, 2013 [13]). Affect is about moment to moment emotion — how an individual feels at a given moment in time. *Negative affects* include negative emotions such as sadness, anxiety or depression. One conceptual framework proposes that overall well-being can be understood in terms of the sum of affects over the life course.

In its purest form, affects measurement is online — asking people how they feel at a given moment in time (Larson & Csikszentmihaly, 1983 [19]). This holds an advantage over evaluation measures such as life satisfaction in that it is much simpler to respond to — it does not require respondents to reflect and consider multiple aspects of their life, or recall previous experiences. This means it is less prone to cognitive biases (Kreuger et al., 2009 [20]). Measures such as those used in the Quality of Life indicator set do require some recall and reflection (over the past four weeks), but less than life satisfaction questions, which asks respondents to consider life overall.

From a communication perspective, negative affect offers a suitable balance to the more positive focus of the other experience of life questions. For policy makers, it may feel more comfortable to be tackling a deficit such as a high proportion of a particular sub-population feeling downhearted and depressed, rather than looking at proportions of people feeling happy or calm.

EU-SILC variables on subjective mental well-being have a longer time reference (four weeks) than that needed for reporting moment emotions and therefore should be considered only as a proxy for affects.

9.2.1 Negative affects

➤ **Negative affects**

Definition

The definition of the indicator on negative affects is not yet elaborated.

Negative affect comprises the experience of unpleasant emotional states such as sadness, anger, fear and anxiety. Negative affect is seen as more multidimensional than positive affect (OECD, 2013).

The concept is operationalised in the EU-SILC by three questions, all using the same response scale:
- *How much of the time over the past four weeks have you been very nervous?*
- *How much of the time over the past four weeks have you felt so down in the dumps that nothing could cheer you up?*
- *How much of the time over the past four weeks have you felt downhearted and depressed?*

Response scale for all three: *(All of the time / Most of the time / Some of the time / A little of the time / None of the time)*

Data source

EU-SILC 2013 ad hoc module on well-being; next: EU-SILC 2018 ahm

9.2.2 Positive affects

➤ **Being happy**

Definition

Positive affect captures positive emotions such as the experience of happiness, joy and contentment. It is thought to be largely one-dimensional, in that positive emotions are strongly correlated with each other and therefore can be represented on a single axis of measurement.

The concept is operationalised in the EU-SILC by one question: *How much of the time over the past four weeks have you been happy?*

Response scale is the following: *All of the time / Most of the time / Some of the time / A little of the time / None of the time*

Indicator presents the frequency of being happy (in the last 4 weeks).

Data source

EU-SILC 2013 ad hoc module on well-being; next: EU-SILC 2018 ahm

9.3 Meaning and purpose of life

Meaning in life is a multifaceted construct that has been conceptualised in diverse ways. It refers broadly to the value and purpose of life, important life goals, spirituality.

This indicator is intended to proxy for the sub-dimension of eudemonic well-being or flourishing which has been cited as distinct to evaluative and affect measures (Dolan et al., 2011 [15]; Centre for Well-being [21], 2011; OECD, 2013 [13]). Eudemonic approaches to well-being aim to capture psychological functioning, the fulfilment of human potential, or a 'life worth having' (Camfield and Skevington, 2008 [22]). They measure a range of virtuous outcomes such as meaning and purpose, sense of autonomy, and positive relationships with others. According to the dynamic model of well-being (Thompson & Marks, 2008 [23]), achieving eudemonic well-being, framed in terms of meeting psychological needs, is a pre-requisite for sustained well-being as measured through evaluative and affect measures.

Meaning and purpose is one facet of this eudemonic well-being, and has also been chosen by the UK Office for National Statistics as a proxy measure for eudemonia.

From the policy perspective, this indicator responds differently to well-being determinants than evaluative or affect measures. For example, the effect of having children on life satisfaction is not consistent, and it has a negative impact on positive affect, but a positive effect on meaning and purpose (OECD, 2013 [13]). In direct comparisons based on the UK's Annual Population Survey, this question was positively associated with being self-employed and working in the public sector to a much greater degree than evaluative or affect measures (Abdallah & Shah, 2012 [24]).

> **Assessing whether life is worthwhile**

Definition

The indicator is operationalised in the EU-SILC by a single question:

Overall, to what extent do you feel that the things you do in your life are worthwhile?
Please answer on a scale from 0 to 10, where 0 means not at all worthwhile and 10 means completely worthwhile.

The indicator presents the share of the population rating meaning of life as low (refers to 0-5 ratings of the scale), medium rating refers to 6-8 and high rating to 9-10.

Data source

EU-SILC 2013 ad hoc module on well-being

4 Recommendations of the Expert Group

Recommendations of the Expert Group

The Expert Group report describes the framework of the statistical indicators on quality of life, as elaborated by mid-2016. It includes indicators available at this time and takes into account new harmonised EU data to be available in the near future. But, at the time of completion of this report, not all these indicators were already fully defined. Data from the EU-SILC ahm 2015, European Health Interview Survey 2014 and Time Use Surveys will be available at the end of 2016. The analysis of these results will certainly allow for a better assessment of the quality of indicators on different domains and an updating of recommendations for the future developments.

On the other hand, discussions about future modules forming surveys of the Integrated European Social Statistics are not yet finalised (as of mid-2016). The finalisation of the ongoing work will provide more detailed information about availability of indicators in the future.

Additionally, more research should be done in the coming years regarding some of the dimensions of quality of life as well as methodological work on correlation of indicators or possible elaboration of new synthetic indicators. There is a need as well for work on the assessment of the applied numerical scales used in the measurement of subjective well-being in the context of interpretation and presentation of results.

As a result, the current EG rapport will certainly need some updates in the coming years.

General recommendations

The Expert Group on Quality of life indicators:

- underlines the importance of the Time Use Survey to provide information on several aspects of the quality of life yet to be covered by indicators, concerning in particular leisure time, volunteering, unpaid work and household production, care for children and the elderly, etc.

- It will also be important to regularly include in the Time Use Survey not only questions regarding time use but also on time perception, level of satisfaction with different activities, activities for which more time is desired, perceived time constraints as well as perceived time pressure. Some national Time Use Surveys are including such questions already but it will be necessary to make an effort to achieve international comparability.

- emphasises the need for an harmonised EU victimisation survey in order to cover topics like safety and discrimination.

- calls for taking into account needs for quality of life indicators when planning developments of the EU-SILC and EU-LFS — core surveys and modules (see also point on it below). Moreover, the fact that an indicator is used in the quality of life framework should be an additional motivation for improvement of its quality and comparability.

- underlines the importance of comparability between countries when subjective questions are used. Better translations and concept adaptations, using advanced methods, should be put in place to guarantee more similar understanding for the respondents across countries.

- recognises that values, religion and beliefs, being from an individual point of view an important aspect of life, are not included in the current framework of quality of life indicators, due to cultural differences and traditional, institutional or legal limitations present in the ESS on the issue.

- The eudaimonics self-reported meaning and purpose of life (indicator 9.3) is certainly influenced by person's values.

- suggests, for clarity purposes, the possible modification of the list of the dimensions of the Quality of life framework: the distinction (as separate dimensions) between *Leisure* and *Social interactions* and *Economic security* and *Safety*. Such a modified framework would include then 11 dimensions.

- endorses the possible use of other, non-ESS sources for indicators not available in the European Statistical System and for which the data collections are not planned in the foreseeable future. However, the quality of these data needs to be assessed as high-quality (for example the European Social Survey or surveys run by European agencies).

- underlines the need for future research about the regional or local dimension to be taken into account in the assessment of quality of life.

- The appropriate geographic scale is not discussed explicitly in this report. The indicators are available at varying levels of disaggregation: national, regional or by degree of urbanisation. The elements relevant for quality of life may be distributed fairly uniformly over a territory or be concentrated in some regions, cities or even neighbourhoods. In that respect, the expert group acknowledge that at EU level, such disaggregation is not feasible and should be left to national or local authorities.

Recommendations for improvements and development of specific indicators

2 PRODUCTIVE OR OTHER MAIN ACTIVITY

2.2.5 Work/life balance

The variables on working time arrangements should be included in the EU-LFS modules (on work organisation and on reconciliation of work and family life). The following additional indicator is proposed: usage of teleworking.

Commuting is an important aspect of daily life — it should be covered not only by Time Use Survey but also by EU-LFS and/or EU-SILC modules. Two aspects ideally could be investigated: the (quantity of) time commuting and its quality.

2.2.6 Assessment of the job quality

A variable on job satisfaction is considered to be included in future survey modules that measure the quality or quantity of employment, in order to help identify the factors that affect it most.

However, job satisfaction is related to factors that can interact with each other, therefore it is important to continually improve the choice of the key dimensions ([2]) of job quality for measurement and reporting.

Indicators on autonomy, relationships with the supervisor and colleagues as well as on the pressure in work are recommended by the Expert Group. Indicators on the following elements of job quality are expected from the next EU-LFS 2019 module:

– autonomy to influence content and order of tasks,

– work under pressure/stress.

2.3.2 Unpaid work

Information on the percentage and characteristics of persons doing unpaid work can be made available in the results of the Time Use Survey. This topic includes housework, childcare, care for ill or old persons, voluntary work.

Some elements of such information come from data on childcare collected in the specific modules of the EU-SILC and EU-LFS or from data on voluntary work gattered in the EU-SILC modules.

3. HEALTH

3.1.2 Health status

The improvement of the quality and comparability of the indicator 'Healthy life years' is under discussion. In the future this indicator could replace the indicator 'Life expectancy' as a headline figure for this topic.

4. EDUCATION

4.1.3 Assessed skills

Indicators on adult skills can be found in the PIAAC results but the continuity of this survey is not ensured and it has coverage (of countries) issues. In the context of a renewed agenda for skills in Europe, some additional indicators on skills could become available.

5. LEISURE AND SOCIAL INTERACTIONS

5.1.1 Quantity of leisure

As the question on 'satisfaction with time use' can be interpreted in different ways, it is proposed to reformulate it in the future surveys as 'Satisfaction with amount of leisure time'.

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[2] These dimensions include earnings (partially covered in 2.2.1), job and career prospects, working time quality (partially addressed by 2.2.5), and intrinsic job quality, as has been extensively explored in the European Working Conditions Survey, see Eurofound (2012), *Trends in job quality in Europe*, Publications Office of the European Union, Luxembourg; Eurofound (forthcoming 2016), *Sixth European Working Conditions Survey – Overview report*, Publications Office of the European Union, Luxembourg.

5.1.2 Quality of leisure

Indicators on this topic should be developed, especially from the Time Use Survey data (assessment of the quality of leisure). A question about the quality of leisure can also be included in the EU-SILC specific module.

5.1.3 Access to leisure

Information about obstacles to leisure and recreational activities should be more detailed than the current one coming from the EU-SILC ahm 2015 on social and cultural participation, for taking into account not only the financial aspect but also the availability of leisure infrastructure, etc.

5.2.1 Relations with people

More work should be done on how to capture loneliness. Loneliness is the main psychological outcome of poor social relationships. It has a serious impact on other outcomes, particularly health. It is planned to test this variable in the EU-SILC ahm 2018.

5.2.3 Social support

In the indicator 'Help from others' the distinction between material and other types of help is important and it is recommended for future implementations of this variable in EU-SILC (next opportunity — ahm 2018).

5.2.4 Social cohesion

It is recommended to include the indicator 'Trust in others' in the core EU-SILC.

Perception of social inclusion — the testing of a variable on this topic in EU-SILC ahm 2018 is recommended.

Measures of a sense of belonging as well as community or civic pride could be proposed as new variables to collect in the EU-SILC modules.

Indicators on perceived tensions and inequalities in society would also be potential candidates for future developments.

6. ECONOMIC SECURITY AND PHYSICAL SAFETY

6.1.3 Income insecurity

Transition from employment to unemployment — currently, this indicator is calculated using EU-SILC data. However, as the EU-LFS is the main EU source of data on labour market, the possibility of calculating an indicator with data coming from this survey should be further investigated.

6.2.1 Crime

Indicator(s) on prevalence rates for different crimes could be calculated from a victimisation survey. These indicators can also better contextualise information on feelings of safety.

7. GOVERNANCE AND BASIC RIGHTS

7.1.1 Trust in institutions

The topic of trust in institutions needs more research. There are many types of institutions relevant for this measurement (including central/regional/local dimensions) but the possibility of asking about all of them in the survey is limited (excessive burden on the respondents). The way of formulating the questions and explanatory notes are important. The conclusions of the OECD study on the measurement of trust (expected for 2017) will be very useful in this respect.

An indicator on (perceived) corruption could also be investigated further.

7.1.2 Satisfaction with public services

Indicators on satisfaction with public services should be further developed. Questions on this topic should be included in the future EU-SILC modules. There are two aspects of this issue: access to public services (including obstacles) and satisfaction with the services provided. Regarding access, variables on unmet needs for childcare services, medical care, home care and formal education are envisaged for the EU-SILC six-year rolling module on access to services. Regarding satisfaction, the analysis of the EQLS 2016 new module on quality of public services (data expected in 2017) could help in selecting the future indicators.

7.2.1 Discrimination

This topic requires future developments. The variables possibly to be included in future surveys would concern perceived and/or experienced discrimination. The Violence Against Women survey (2014) conducted by the EU Agency for Fundamental Rights could provide information in this context, as well as the planned EU survey on gender violence victimisation.

7.3 Active citizenship

The variable on active citizenship, as proposed in the EU-SILC ahm 2015 on social and cultural participation, should be more detailed in future data collections, allowing distinctions between different forms of active citizenship (participation in activities of political parties, signing petitions, etc.)

Indicators on 'Voice and accountability' should be developed. But, for example, the questions of voting or freedom of expression or media are difficult for official statistics to approach.

8 NATURAL AND LIVING ENVIRONMENT

8.1 Pollution

For the assessment of the quality of life, refined indicators on pollution and other environmental problems at regional/local level are crucially needed.

9. OVERALL EXPERIENCE OF LIFE

9.1 Life satisfaction

It is recommended to collect the variable 'Overall life satisfaction' in the EU-SILC on yearly basis.

9.2 Affects

Indicator(s) on negative affects need more elaboration — as concerns the relevance and formulation of the categories (being very nervous/anxious/worry; feeling down in the dumps; feeling downhearted or depressed) as well as the construction (or not) of the synthetic indicator.

9.3 Meaning and purpose of life

Within this topic, perception of the way society is evolving could be investigated.

Subjective well-being variables recommended to be collected in the EU-SILC

Variables in the core SILC

The Expert Group is in favour of covering elements of social relations and trust in the core survey, rather than better coverage of the three sub-dimensions of overall life experience or domain satisfactions. Social support is considered as a very relevant topic for the core survey, although the exact operationalisation has not yet been decided. The group has also proposed other elements belonging to the social relations area (generalised trust in others, feelings of loneliness, frequency of contacts with friends) as potential candidates for inclusion in the nucleus. Satisfaction with time use (as one of the few satisfaction items that is not correlated with income, displays quite specific patterns and may be used to evaluate work-life balance policies) is also on the short list.

Only a very limited number of these variables will eventually be included in the yearly SILC, alongside life satisfaction. It was proposed to move the rest to the Quality of life 6-yearly module.

Variables in the rolling modules (3-yearly) on specific topics

The Expert Group generally supported the approach of including domain specific satisfactions in the (3-yearly) rotating modules on the topic, whenever possible. Satisfaction with accommodation and with living area (provided that the concept is better operationalised to refer to the dwelling, the area around the household and the facilities it offers) have been agreed by the EG to be included in the Housing module. The Expert Group supports the inclusion of job and commuting time satisfaction in the Labour module. Collecting more objective information about commuting time instead of satisfaction with it could also be an option.

Variables in the module on quality of life/social and cultural participation repeated every 6 years

The Expert Group agreed to dropping the variable 'Having someone to discuss with on personal matters' from the initial draft list as it is relatively related to the other items on social support and less

conceptually relevant but elements of it may be kept as part of social support in the nucleus (for example, loneliness feelings was considered as measuring a similar concept).

It is proposed to delete one of the two items regarding satisfaction with the living area (living environment or green and recreational areas), while the other will be included in the 3-yearly Housing module. The Expert Group recommends a better operationalised 'Satisfaction with the living area' item (see above).

The Expert Group recommends further research on how to measure trust in institutions. The EG is looking forward to seeing the results of the OECD study on the measurement of trust. The conclusions of this study should be used for the future EU-SILC modules including the variable(s) on trust in institutions.

On mental well-being, different scales were discussed as alternatives for measuring the mental well-being concept: MHI5 (included in the EU-SILC ahm 2013), WHO5 (all items formulated positively, more broad), PHQ2/ PHQ4 (more clinical/mental health focus), using the 3 items measuring mental health and vitality in the SF12 instrument, and even the WHOQUOL-BREV item 'Negative feelings'. Despite difficulties with the current implementation of the MHI5, it was decided that the first option is to keep this scale, with the possibility of deleting the problematic item 'down in the dumps' if a satisfactory implementation is not found.

For the social and cultural participation part of the module, the fact that the data from the EU-SILC ahm 2015 on social and cultural participation are not yet available made the discussion preliminary. Of the 13 variables that are not identical to the one in the EU-SILC ahm 2013 on well-being, one could be moved to the yearly data collection (frequency of getting together with friends, relevant in the context of social support and social exclusion, as described above) and one or two deleted.

Conclusions

The Expert Group realised that although many indicators on quality of life are available, there are dimensions where the lack of data is significant. It made suggestions on how to cover these domains but it recognised as well that not all these proposals can be taken into account in the current settings.

The Expert Group proposes prioritising the recommendations in relation to other policy needs at EU level, like for instance the skills agenda, and underlines that a general social survey could bring a very significant enrichment of the indicators on the quality of life of EU citizens.

Annex: Quality of life indicators - similar initiatives at the national or international level

Austria:

"How's Austria?" - Indicator set on wealth and progress by Statistics Austria ([3])

The project "How's Austria?" was initiated by Statistics Austria in 2011, supervised by the Director General and implemented by a team of experts from different departments under the coordination of the analysis unit. A newly developed set of indicators provides information on three areas – material wealth, quality of life and environment. The goal of the project "How's Austria?" was to focus on a limited number of key indicators with high relevance to society to assure their communicability. In order to lose as little information as possible and to meet the complexity of the topic, the limited number of key indicators was complemented with further statistical data and sub-indicators at a second layer.

The key indicators were selected in accordance with the recommendations of the Stiglitz-Sen-Fitoussi-Report, and in particular those of the Eurostat Sponsorship Reports. Further defined indicators at the EU level (e.g. Europe 2020 Indicators) have also entered the set of indicators. In several round tables and discussion groups, scientific institutions, interest groups and stakeholders were involved in the project in order to gather a high degree of support and ownership on the choice of indicators at the national level. The feedback of these discussion groups drove the selection of indicators, the final decision on the indicator set, however, was taken under the responsibility of Statistics Austria.

As there is a trade-off between comprehensive coverage of all the three areas by detailed indicators and the communicability of the indicator set, the number of key indicators was restricted to 31 (BIP plus 30). Only on a sub-level an unrestricted amount of additional statistical information and indicators is allowed.

For the second pillar quality of life, the aim was to depict the quality of life as comprehensible and as concise as possible. Objective as well as subjective aspects of well-being were included in ten key dimensions, which shall also depict inequalities to a greater extent than usually provided. As recommended by the Stiglitz-Sen-Fitoussi-Report and the report of the Sponsorship Group, life satisfaction is covered along the following nine dimensions: Material living conditions, productive and valued activities, health, education, social participation, leisure time, physical insecurity, governance and social rights, natural and living environment, and subjective well-being. Statistics Austria defined key indicators and sub-indicators for each of the nine dimensions (see the following overview for the selected key indicators). There is a special focus on highly relevant indicators, which are used for political monitoring and international key objectives (e.g. Europe 2020). Furthermore, Statistics Austria took into account the objective stated by the Task Force 3 to provide information on the quality of life of important sub-populations, such as women, children, immigrants, elderly persons, and young persons.

The central goal of establishing an indicator set that encompasses GDP as the measure for material wellbeing is that policy makers, business leaders, and interested parties in the wider public can rely

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[3] http://www.statistik.at/web_en/statistics/------/hows_austria/index.html

on a well-specified set of measures that draws a comprehensive picture of the socio-economic progress of a country. Together with the assessment of these indicators by identified experts and independent research institutes, it is possible to quickly receive an impression on the development of the country in areas which are particularly relevant for the well-being and welfare in a country. The assessment for "How's Austria?" is carried out by a group of external experts and independent research institutes (IHS, WIFO, WU Wien und SERI) every year.

A main part of the project is to find, use, and elaborate further on the communication and dissemination of the contents. Besides the yearly publication in print format, the key indicators and the sub-indicators can be downloaded on the webpage of Statistics Austria together with graphs, meta-information on the indicators, and important background materials regarding the project. The publication of the report is accompanied by press releases and there are regular dialogues with the media. Furthermore, "How's Austria?" was presented at the World Environment Day and at many other events.

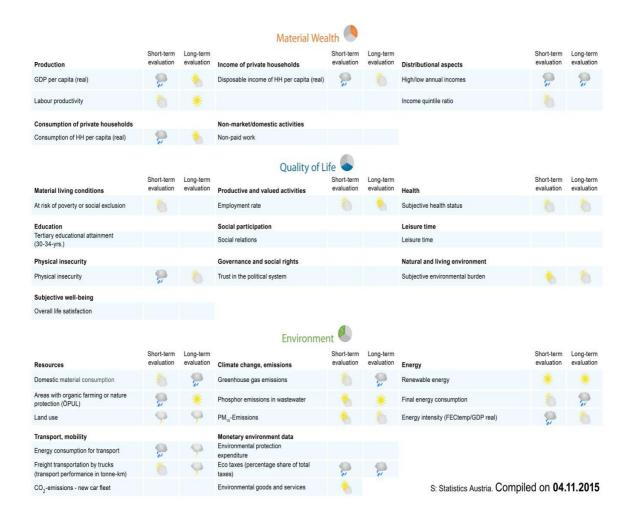An overview on the indicators used and their assessment is contained in the attached Figure.

Figure 1: Indicators used in the project "How's Austria"

Denmark:

Quality of Life in Danish Municipalities

Inspired by international initiatives, Statistics Denmark started developing a set of Quality of Life indicators in 2014. A grant has been given by the private foundation TrygFonden to co-fund a project including both register data and a survey to be carried out in 2015/2016 with dissemination of the results in the autumn of 2016. The original project covered 20 out of 98 Danish municipalities. In summer 2015 a partnership with the Region of Southern Denmark was established raising the number to 38 municipalities.

The main focus of the project is comparison of both objective and subjective quality of life measures across municipalities and across subgroups within the municipalities. At the local level we get close to what people experience in their daily lives and the factors that influence their well-being. This can provide information to policy makers on which policy areas need improvements.

Statistics Denmark has register data covering the whole country, which is used to create a number of indicators of objective well-being. To make indicators of subjective well-being, Statistics Denmark has conducted a survey in the fall 2015/beginning 2016 with more than 40 000 interviews. Stratification has been done to make the survey representative for the participating municipalities. Around 1 000 interviews have been conducted per municipality. An additional 2 000 interviews have been made covering the remaining parts of Denmark making it possible to calculate a total for the country.

Statistics on quality of life will be of interest to the public as well as NGOs, politicians and researchers. To involve these different stakeholders in the project, Statistics Denmark has appointed a national advisory board, which is invited to discuss issues of the project. The board consists of social scientists from Danish universities and research centres, NGO representatives, a mayor from one of the selected municipalities, TrygFonden's research director and a chief analyst from the Region of Southern Denmark.

The project counts 15 objective and 38 subjective indicators. To reach a broad audience the dissemination of results will use different platforms. All of the indicators can be found in StatBank Denmark. Micro level data will be made available for researchers and analyses will be published. To target the general public an interactive infographic is going to visualise a selection of indicators. Here the user can find their own municipality and compare it to the other municipalities as well as to a total for Denmark.

The dimensions and indicators shown in the infographic are:

1. Life satisfaction
   - Life satisfaction these days
   - Expected life satisfaction in 5 years

2. Health
   - Self-rated health
   - Life expectancy (years)

3. Safety
   - Feeling of safety in local area after dark
   - Reported crimes of violence (per 1 000 inhabitants)

4. Education
   - Confidence that one can get a (new) job that fits one's education
   - Education qualifying for the labour market, 30-59-year-olds (per cent)

5. Work
   - Job satisfaction
   - Employment rate, 30-59-year-olds (per cent)

6. Financial situation
   - Satisfaction with financial situation
   - Personal disposable income (median DKK/year)

7. Social relations
   - Satisfaction with family life
   - Divorces (per 1 000 married)

8. Housing
   - Satisfaction with housing situation
   - Square metres dwelling area (per person)

9. Governance
   - Trust in local politicians
   - Electoral participation at the last municipal election (per cent)

France:

Measurement of quality of life and well-being

(Surveys conducted by the French Statistical Institute for exploring the drivers of subjective well-being)

Ever since the publication of the Stiglitz-Sen-Fitoussi Report, France has been heavily involved in the measurement of Well-Being. The French Statistical Institute (INSEE) has expanded the scope of its existing surveys and launched in 2011 an innovative Quality of life experimental survey.

Many objective indicators that belong to the multidimensional framework recommended by the Stiglitz-Sen-Fitoussi Report can be calculated with data from the European Statistics on Income and Living Conditions (EU-SILC). Since 2010, INSEE has added a five-question module to SRCV, the French version of the EU-SILC panel[4]. These questions aim at assessing global satisfaction on a scale from 0 (not at all satisfied) to 10 (very satisfied) and relate to the following five items: dwellings, job security (if employed), leisure, relations with close relatives, global satisfaction drawn from current life. More than 10,000 adults answered the question on satisfaction at several consecutive interviews. A self-reporting questionnaire on paper or by internet (since 2012) for a subset of households has also been introduced on subjective well-being. It provides information on feelings about the future, attitudes toward risk and comparisons with other people. It also presents short imaginary scenarios to calibrate the responses and to better understand people's opinions. More than 3,500 adults answered the self-reporting questionnaire each year. In the analysis, an individual approach has been adopted so that any difficulties borne by the household (housing quality, financial difficulties, consumption restriction) have been imputed to every adult aged 16 or over. The originality of this survey is twofold: links between perceived well-being and quality of life (QoL) indicators over and above income can be measured and heterogeneity between individuals can be taken into account thanks to longitudinal data.

To also measure affects as recommended by the Stiglitz-Sen-Fitoussi Commission, questions were introduced in the 2009 French Time Use Survey, for a subset of 1000 households. They asked to grade the quality of time spent on each activity of the respondent's ten-minute interval diary, on a scale from -3 to +3 ([5]). Respondents had to indicate if the time spent was enjoyable or not, taking into account the activity itself but also the context. Questions were posed about the use of time in order to understand whether people are short of time and thus need to reduce their sleeping time, or on the contrary have free time and do not know what to do with it. 1600 individuals were interviewed and 2600 diaries were filled. For each time-interval, the evaluation is global, taking into account primary and secondary activities (like cooking dinner and minding children). In fact, the consideration of the context in which an activity is carried out is a crucial element in its appraisal. This method implemented for the first time in France by the official statistical system in the 2009 French Time Use Survey to collect instantaneous information on affects is recommended by the OECD Guidelines on the measurement of Subjective Well-being (OECD 2013).

In addition, in 2011 INSEE also launched an innovative experimental survey which aims at exploring, within a single statistical source, the different dimensions of both objective and subjective QoL as highlighted in the Stiglitz-Sen-Fitoussi Report[6]. 10,000 people aged 18 or over were contacted by

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4   Godefroy P.(2011) "Life satisfaction: French people give themselves an average score of 7 out of 10", France Portrait Social, INSEE Références 2011

5   Ricroch L. "The enjoyable moments of day to day life", INSEE Premiere, n° 1378, 2011

6   Amiel M.H., Godefroy P.and S. Lollivier S. « Low income city-dwellers accumulate the most difficulties in terms of quality of life », France Portrait Social, INSEE Références, 2012

email and asked to respond to an online questionnaire, or if preferred, a paper questionnaire. The response rate was 38%, fairly high for this type of data collection. For the first time in a single statistical source, this new survey allows statisticians to study, at the individual level, the key components of quality of life highlighted in the Stiglitz-Sen-Fitoussi Report, in order to examine correlations between these components and flag up any populations who were cumulating a range of disadvantages. Another innovation for public statistics is the introduction of a series of questions relating to psychosocial risks at work. A first set of questions follows the proposals made in 2011 by the college of experts on psycho-social risks at work formed at the request of the French Minister for Labour, Employment and Health. The questions are representative of work intensity, working time, emotional demands, social relations at work, ethical suffering and insecurity in the working environment, and balance between work and family life. More importantly, this survey not only provides an interesting measure of the level of quality of life but also facilitates a better understanding of the links between objective determinants of Quality of Life (such as health, education or marital status) and subjective well-being. This information is of paramount importance for policy makers, which can act only on the drivers of well-being.

The module on subjective well-being implemented by Eurostat for the first time in the 2013 European survey on living conditions (EU-SILC) has some similarities with the pioneering French initiatives. It will enable European statisticians to further examine links between perceived well-being and quality of life (QoL) indicators and to publish harmonized European-wide statistics on subjective well-being as recommended by the Stiglitz-Sen-Fitoussi Report.

Finally, overall life satisfaction is one of the 10 new wealth indicators that the French government will release annually from 2015[7], in accordance with the Eva Sas Law (2015-411 13 April 2015). This dataset should provide information on the quality of growth for an annual debate in Parliament and with the civil society. These indicators, selected with the participation of numerous non-governmental bodies, comprise three dimensions of well-being – material well-being, social and inclusive well-being and environmental well-being, following the "here and now/later /elsewhere" analytical framework adopted by the Conference of European Statisticians. These indicators are consistent with the EU2020 strategy.

An evaluation of quality of life in territories has been proposed, with indicators available at territorial level[8].

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(7)   http://www.gouvernement.fr/sites/default/files/liseuse/5711/master/index.htm

(8)   An approach to quality of life in territories Reynard and Vialette (2014)

Germany:

W³ Indicators and the political strategy 'Gut Leben in Deutschland — was uns wichtig ist'

The indicator set of the parliamentary Study Commission on, Growth, Well-Being and Quality of Life was delivered in 2013 by the Bundestag as a suggestion to the Federal Government. In its current political strategy Good Life in Germany — what matters to us 'Gut Leben in Deutschland — was uns wichtig ist' the German Government took up the work of the Commission and during April to November 2015conducted a broad discussion with civil society about what the relevant values of a good life are.([9]) The public consultation included more than 200 workshops with participation (in some 50 of them) of the Chancellor or of one of the Cabinet Ministers as well as the possibility to participate online or sending comments via postcard. Many Comments reached the Federal Government, there were more than 8 500 participants in the workshops, and over 7 000 answers (online or using postcards). The next step will be to analyse this information taking into account previous work done in this context. With this objective, a scientific commission has been set up. Some results are planned to be published in 2016, in particular a report on quality of life in Germany, a set of indicators of quality of life as well as an action plan.

The prior W^3 Indicators, endorsed by the Bundestag, comprising three dimensions of well-being and ten key variables, is one example on how to monitor the state of well-being and quality of life in Germany. Besides the dimension of material well-being, their purpose is to draw attention to its social, inclusiveness and environmental dimensions.

Material well-being and its sustainability are mirrored by per capita GDP, income distribution and sovereign debt. The social and inclusion dimension is measured by the indicators for employment, education, health and freedom, and the environmental aspect is portrayed by the variables for greenhouse gases, the nitrogen balance and biodiversity

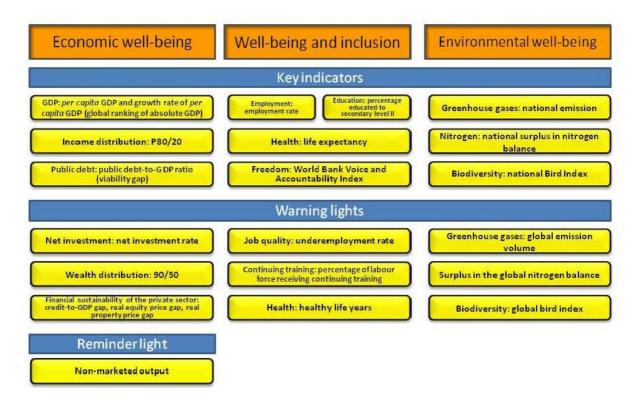Detailed information on the indicators is contained in the attached Figure 2.

The ten key indicators are the main building blocks of the new measurement of well-being. In addition, there are background indicators, the so-called warning lights. These indicators stand for additional important information in the relevant areas of well-being. They supplement the key indicators but appear and are analysed only if they signal an adverse trend or cross particular limits. In this way, attention will be focused on unwanted developments which the key indicators do not adequately reflect or which are liable to reverse favourable trends in the key indicators.

Warning lights are assigned to the following groups of indicators: in the area of material well-being, there are warning lights for net investment, the distribution of wealth and the financial sustainability of the private sector. In the area of social well-being and inclusion, they are underemployment, further training and healthy life years. The environmental warning lights relate to global emissions of greenhouse gases, the global nitrogen balance and global biodiversity.

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[9] www.gut-leben-in-deutschland.de.

Two main questions focused the consultation: What, in your opinion, is important in life? And what, in your opinion, are the most important factors affecting quality of life in Germany?.

Figure 2: Details of the W³ set of indicators with warning lights

Economic well-being	Well-being and inclusion	Environmental well-being
Key indicators		
GDP: *per capita* GDP and growth rate of *per capita* GDP (global ranking of absolute GDP)	Employment: employment rate — Education: percentage educated to secondary level II	Greenhouse gases: national emission
Income distribution: P80/20	Health: life expectancy	Nitrogen: national surplus in nitrogen balance
Public debt: public debt-to-GDP ratio (viability gap)	Freedom: World Bank Voice and Accountability Index	Biodiversity: national Bird Index
Warning lights		
Net investment: net investment rate	Job quality: underemployment rate	Greenhouse gases: global emission volume
Wealth distribution: 90/50	Continuing training: percentage of labour force receiving continuing training	Surplus in the global nitrogen balance
Financial sustainability of the private sector: credit-to-GDP gap, real equity price gap, real property price gap	Health: healthy life years	Biodiversity: global bird index
Reminder light		
Non-marketed output		

Italy:

Equitable and sustainable wellbeing (Bes) initiative carried out by ISTAT([10])

What do we mean when we refer to societal well-being? The concept of well-being changes according to historical periods, places and cultures and cannot therefore be defined simply according to a theoretical format. Moreover, scientific research in this field shows us that, at the moment, no single statistical indicator is capable to fully represent a society's state of well-being, leaving us to refer to a range of measures. This is why the choice of the main dimensions of well-being to which a society should refer, and therefore the indicators chosen to represent them, requires the direct involvement of the various components of the society. If well organized, this process provides an important democratic legitimization for the measures chosen to represent the concept of well-being, something which is essential if they are to be used to identify possible priorities for political action.

Following these considerations and recommendations made at the international level, a process was initiated in Italy to identify a shared measurement of well-being at the national level, to become a reference point for public debate and to be used to guide important democratic choices for the country's future. In order to define the essential elements of well-being in Italy, Cnel and ISTAT set up a "Steering Committee for the measurement of progress in the Italian society" composed of representatives from social partners and the civil society. Furthermore, ISTAT established a large and qualified Scientific Commission of experts from the various domains of societal well-being.
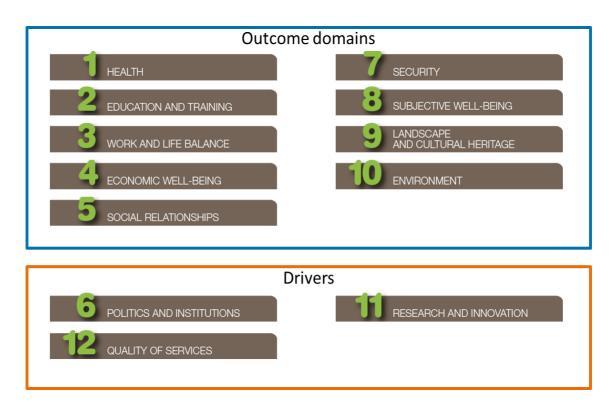
This organizational approach stemmed from the consideration that there are two essential elements for measuring progress: the first, strictly political, relates to the contents of the concept of well-being; the second, of a technical-scientific nature, concerns the measurement of the relevant concepts. As a result, Cnel, a constitutional body representing the civil society (its members include representatives from associations, trade unions and the third sector) and ISTAT, an institution where experts operate in the measurement of the various economic, social and environmental phenomena, combined their forces to reach a joint definition of a shared set of indicators to be used to define the state and progress of our country. This organization allowed to involve not only of some of the major experts in the various aspects which contribute to well-being (health, environment, employment, economic conditions, etc.), but also of the Italian society itself, through discussions and exchange of views with thousands of citizens, along with meetings held with institutions, social partners and NGOs.

The framework for the "Equitable and Sustainable Well-being" agreed during the consultation process is based on 12 domains: 9 domains of outcome and 3 domains of drivers of wellbeing. The Bes aims at analyzing the levels, time trends and distribution of its various components, in order to identify the strengths and weaknesses, as well as particular territorial imbalances or advantaged/disadvantaged social groups, considering them from an inter-generational point of view (sustainability).

The Bes project is a work in progress constantly looking for improvement. In 2015 for the first time ISTAT published composite indexes for the nine domains of outcome with the aim of giving clear and easy information on the evolution of the single domains. Moreover to measure the wellbeing at local level ISTAT launched two initiatives that extend the availability of wellbeing indicators to both provincial and metropolitan levels. In the near future one of the challenges is to compare the Bes framework with the sustainable development goals in order to reach a harmonized framework that takes into account the UN targets without losing the Bes specificity.

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[10] http://www.istat.it/en/well-being-and-sustainability/well-being-measures

Figure 3: Bes framework

Outcome domains

1 HEALTH

2 EDUCATION AND TRAINING

3 WORK AND LIFE BALANCE

4 ECONOMIC WELL-BEING

5 SOCIAL RELATIONSHIPS

7 SECURITY

8 SUBJECTIVE WELL-BEING

9 LANDSCAPE AND CULTURAL HERITAGE

10 ENVIRONMENT

Drivers

6 POLITICS AND INSTITUTIONS

11 RESEARCH AND INNOVATION

12 QUALITY OF SERVICES

Moreover the inclusion of indicators of Bes in the Italian budget law (Legge di bilancio) represent an important result that allows Bes at becoming a sort of "Statistical Constitution", providing a constant and shared point of reference for the Italian society, capable of leading the way to achieve the progress which the society itself is looking for. The use of Bes indicators in the Italian budget law will result in the need to increase the speed with which information is made available. The prospect of permanent census, the processes of modernization and integration of administrative data and samples, the integration of new data sources (such as Big Data) will play an important role in increasing detail and the speed with which information is produced and released. The need to make forecasts on the main Bes indicators will require the ambitious goal of integrating these indicators in the statistical and economic models of ISTAT. This is a difficult task but necessary to evaluate the policies not only in their economic but also in the social and environmental dimension.

Luxembourg:

The "PIBien-être Project"

In the last two decades, research on the causes and consequences of human welfare and well-being has gained relevance in the political and academic debate. Many European countries are undertaking significant efforts to measure and monitor the quality of life of their citizens. The intense effort to overcome the limitations of traditional economic measures of welfare dates back to the early 2000s, when European Institutions started developing a new agenda for a more encompassing evaluation of people's quality of life. Luxembourg has been among the first countries to engage in the development of measures of national quality of life.

In 2009, the government of Luxembourg demanded social and economic consulting bodies to develop a framework to monitor the quality of life of the country's residents. This was intended to complement existing measures of social and economic progress such as GDP. This commitment resulted in the establishment of a joint commission led by the Conseil économique et social, the Conseil supérieur pour un développement durable and the Observatoire de la Compétitivité to study the setup of a system of indicators of quality of life. In 2013, the conclusions of the commission were summarised in a document titled "Projet PIBien-être", which identified 64 indicators belonging to 11 different domains to assess quality of life. The domains identified by the commission were as follows: 1) Income and Wealth; 2) Occupation; 3) Housing; 4) Health; 5) Private and working life balance; 6) Education and skills; 7) social relationships; 8) Governance; 9) Environment; 10) safety and physical integrity; 11) Subjective well-being.

The mission of the Statistical Office of Luxembourg is to implement the so-called "PIBien-être Project". Specifically, the project has three aims: 1) to collect and evaluate the quality of existing data; 2) to provide a report on the quality of life in Luxembourg based on existing statistical sources; 3) to study the relationship between the indicators of quality of life and economic outcomes. The project started in 2015 and it intends to deliver timely reports informing about the quality of life in Luxembourg. The final report for the project will be released in 2017.

Data are drawn from various sources, including major international surveys – e.g. EU-SILC, EU-LFS, EVS, Eurobarometer, etc. – as well as administrative data available at STATEC. Wherever possible, STATEC uses individual level data to inform about the whole distribution of an indicator across socio-demographic characteristics. The characteristics retained for the breakdowns include: age, gender, education, income, activity status, family status and nationality.

In December 2015, STATEC presented a preliminary analysis of 5 out of the 11 domains. This analysis used the "Luxembourgish Index of Well-being" (LIW), a first proposal of synthetic indicator summarising the information coming from the various domains. This preliminary analysis suggests a reduction of quality of life in Luxembourg by 2.2% between 2009 and 2013. This reduction seems to be associated to the increase of poverty rate for low skilled workers, a worsening of health indicators for people aged between 50 and 64, the increase of long-term unemployment rate for people with primary and tertiary education, and worsening work-life balance for people in the lowest quintile. The improvement in Housing conditions slightly moderates the negative effect of previous domains on quality of life. Additionally, available figures suggest that quality of life in Luxembourg declined especially for people aged 36 and 65, who are educated and high-skilled. Figure 1 shows the trend of LIW and of its current 5 components.

These otherwise preliminary findings provide an example of how the data collected in the context of the "PIBien-être Project" can be used to analyse the progress of Luxembourgish society.
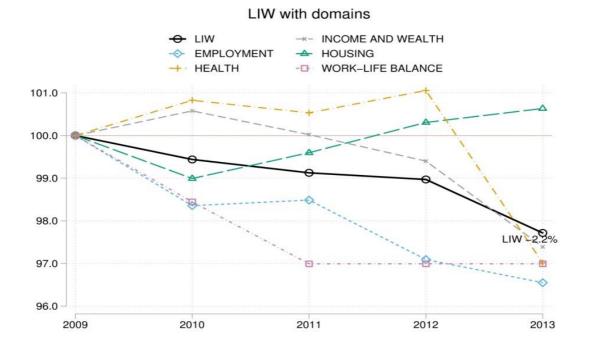
Figure 4: Trends of Luxembourgish Index of Well-being and of its current 5 components

Poland:

Work on Quality of Life measurement conducted by CSO Poland

The concept of quality of life measurement adopted by CSO of Poland refers to international recommendations as well as to the rich tradition of Polish surveys in this field. These aimed to establish a basis for conducting multidimensional analysis of different quality of life aspects. The basic condition for carrying out the multidimensional assessment of the quality of life (i.e. its level, determinants and consequences) is integration of knowledge regarding different life dimensions. This aim can be achieved in two ways:

- by carrying out a multidimensional quality of life survey;

- by combining information based on different data sources: surveys, census, statistical reports as well as administrative records.

Taking into consideration strengths and weaknesses of each solution, CSO has implemented both approaches.

Currently, irrespective of the surveys conducted within the European Statistical System (ESS), one of the main sources of information on quality of life in Poland is the periodic Social Cohesion Survey. This survey was first conducted in 2011 and was linked to the multidimensional survey on living conditions that had been conducted 10 years before. The thematic scope of the Social Cohesion Survey covers such aspects such as: poverty, social capital, social integration as well as subjective well-being. The results of the survey make it possible to conduct the comprehensive analysis of the quality of life, understood as a multidimensional phenomenon. A detailed methodological-analytical report from the survey has been published as 'Quality of life, social capital, poverty and social exclusion in Poland'. Its English version is available online at the CSO of Poland website.[11]

The second Social Cohesion Survey was conducted in the first half of 2015. In comparison to the first edition it has been extended with additional issues relating primarily to the subjective quality of life. In particular, the survey refers to all of the quality of life domains which have been adopted at the ESS level. It includes aspects which so far have not been considered in the official European statistics, but are very significant for the quality of life, such as: value system, sense of affiliation with locality, sense of being discriminated against and religiousness.

The results of the Social Cohesion Survey have been published successively. The first results of the survey were presented in two papers and three thematic folders devoted to: subjective well-being, values and social trust as well as religiousness in Poland.[12] Furthermore, in 2016, a broad methodological-analytical report from the survey is planned to be published at the CSO website. A publication on the territorial diversity of the quality of life in Poland will be also prepared.

Quality of life in Poland is also monitored through other household surveys. Of these, the most important are: the Household Budget Survey (mainly devoted to the material situation of households) and the EU-SILC survey. For national use, starting from 2015, a fixed set of questions regarding subjective well-being and social trust have been included in the EU-SILC. This will provide basic information on this field on an annual basis.

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[11] The elaboration is available online at: http://stat.gov.pl/en/topics/living-conditions/living-conditions/quality-of-life-social-capital-poverty-and-social-exclusion-in-poland,4.1.html .

[12] Folders in English are available online: 'Values and social trust in Poland in 2015' at: http://stat.gov.pl/en/topics/living-conditions/living-conditions/values-and-social-trust-in-poland-folder,8.1.html; 'Subjective well-being in Poland in 2015' at: http://stat.gov.pl/en/topics/living-conditions/living-conditions/subjective-wellbeing-in-poland-folder,7.1.html.

Moreover, quality of life analysis has been conducted on a basis of surveys which are not specifically devoted to this field, but make it possible to obtain some information linked to different quality of life aspects. Among this kind of surveys, a very important data source is a periodic Time Use Survey (carried our approx. every 10 years). The last edition of the Time Use Survey, conducted in 2013, included a set of questions on the subjective aspects of time use linked to satisfaction with the activities undertaken by respondents[13].

Apart from a broad system of social surveys, CSO carries out many conceptual works aimed at enabling the permanent monitoring of the quality of life in Poland on the basis of a set of indicators from different available sources. In 2013 there a specialised group on the quality of life measurement was set up. Its task is to work out the set of basic as well as complementary quality of life indicators. As a result of work by the group, in 2014 CSO published the first edition of a folder 'Quality of life in Poland.' This presents the most important indicators used for monitoring the quality of life in Poland in an accessible way. The folder includes a set of basic indicators and is planned to be published annually. The most recent, second edition of the publication (2015) is available online in English at the CSO of Poland website.(14)

CSO of Poland adopted an integrated approach to quality of life measurement, based on a permanent dialogue with the data users. In recent years (July 2013, November 2014), two conferences were organised dedicated to quality of life measurement. These brought together a number of representatives of public institutions and science. During the conferences many discussions were held regarding the development of quality of life measurement as well as expectations and recommendations for future work.

This comprehensive approach to the concept of quality of life and the permanent dialogue with the data users enable continuous development and improvement of the research methods and the ways of presenting data implemented by CSO of Poland.

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[13] See the publication: *Time use survey 2013 – part II* (including the first part) available at: http://stat.gov.pl/en/topics/living-conditions/living-conditions/time-use-survey-2013-the-second-part-including-the-first-part,6,3.html .

[14] The publication is available online at: http://stat.gov.pl/en/topics/living-conditions/living-conditions/quality-of-life-in-poland-2015-edition,5.2.html.

The United Kingdom:

UK Measuring National Well-being programme

The UK Office for National Statistics (ONS) incorporates quality of life considerations as part of its' Measuring National Well-being (MNW) programme. The MNW programme was launched by the then UK Prime Minister, David Cameron in November 2010, who stated that, 'you've got to take practical steps to make sure government is properly focused on our quality of life as well as economic growth….this information will help government work out, with evidence, the best ways of helping to improve people's well-being'.

National well-being is defined as, 'how we are doing, as individuals, as communities and as a nation and how sustainable this is for the future'. Taking its lead from the report from the Commission on the Measurement for Economic Performance and Social Progress (the Stiglitz, Sen and Fitoussi report), the UK programme is structured according to three main areas including:

• Providing a fuller understanding of the economy
• Enabling a better understanding of society
• Promoting sustainable development and monitoring the environment.

To **provide a fuller understanding of the economy**, ONS includes measures such as median household income and households with less than 60 % of median income as part of its suite of measures. It has also developed measures of 'economic well-being' which recognises the economy from the household and individual perspective[15]. Measures of economic well-being were first published alongside the UK quarterly national accounts in December 2014 and are updated every quarter from now on.

To **enable a better understanding of society**, the MNW programme began with a 6 month national debate asking citizens, 'what matters'. The debate included events around the UK and generated 35 000 responses. The findings and other research were used to determine 41 measures of national well-being across 10 domains, for example, Personal Well-being, Personal Finance, Where we live and the Natural Environment, which have been presented in a 'Well-being Wheel'[16] (see Figure 5). Both objective and subjective measures are included. Data are updated every 6 months and reported on annually in a 'Life in the UK' report[17]. An interactive online version of the Wheel is also available[18] which provides time series charts and links to underlying data.

Data for the measures were taken from existing sources, with the exception of 4 questions on personal well-being which were developed with subject specialists and added to the UK's largest household survey, the Annual Population Survey. The questions capture long-term feelings of life satisfaction, the extent to which people feel the things they do in life are worthwhile and daily experience of positive and negative feelings such as happiness and anxiety. The data are analysed by a wide range of geographical breakdowns, personal characteristics and circumstances in an annual publication, 'Personal well-being in the UK'[19] .

Analysis of the personal well-being questions has also been undertaken and highlighted that factors most strongly associated with personal well-being are self-assessed health, employment status and relationships. Other analysis has looked at how well-being is associated with commuting to work; household income and expenditure; and the place where we live.

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[15]
http://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/bulletins/economicwellbeing/quarter1jantomar2016

[16] http://neighbourhood.statistics.gov.uk/HTMLDocs/dvc146/Wellbeing-Wheel-March2016-Web.pdf

[17] http://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/measuringnationalwellbeing/2016

[18] https://www.neighbourhood.statistics.gov.uk/HTMLDocs/dvc146/wrapper.html

[19] http://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/measuringnationalwellbeing/2015to2016

To **promote sustainable development**, the UK MNW programme includes data on the natural environment as part of its suite of measures; has developed Environmental Accounts[20] and has developed and published work on natural capital[21] (sub-soil assets, woodlands and ecosystems), human capital[22] (education and skills) and social capital[23] (personal relationships, support networks, civic engagement and trust). Capturing stocks in this way helps ensure we are conscious of their current status and their decline or sustainability for future generations. Work in these areas will continue as part of examining the potential for developing a comprehensive wealth account for the UK.

In addition, the UK is also heavily engaged in the development and measurability of the Post 2015 Sustainable Development Goals (SDGs)[24].

Impacts of the Measuring National Well-being programme

Considerable success has been achieved in the take-up of well-being by other government departments as well as external agencies. Well-being is considered by every major UK Government department and ONS well-being questions have been added to a number of surveys including the Crime Survey for England and Wales, Taking Part Survey and Living Costs and Food Survey. Evidence has been used to examine how low well-being impacts on a job seekers interview confidence and whether there is a role for mental health intervention to help overcome barriers; and assessing the well-being benefits of the social action scheme targeted at 16 year olds. In addition, the UK Department for Transport now ensures wider social impacts are included in business cases for major transport schemes and the Government has published a 'Green Book' discussion paper on how to assess the social cost and benefit of activities such as sport and adult learning.

Outside Government, UK housing developer Berkeley Homes has recognised well-being in its drive to build 'sustainable places' and understanding what makes a place thrive and function as a community. The British Red Cross has also used the well-being questions before and after interventions with refugees to help improve their quality of life.

The UK Measuring National Well-being programme is very much in its infancy and is widely regarded as a long-term development programme.

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[20] https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/ukenvironmentalaccounts/2016

[21] https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/methodologies/naturalcapital

[22] https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/humancapitalestimates/2015

[23] https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/socialcapitalacrosstheuk/2011to2012

[24] https://www.ons.gov.uk/aboutus/whatwedo/programmesandprojects/sustainabledevelopmentgoals
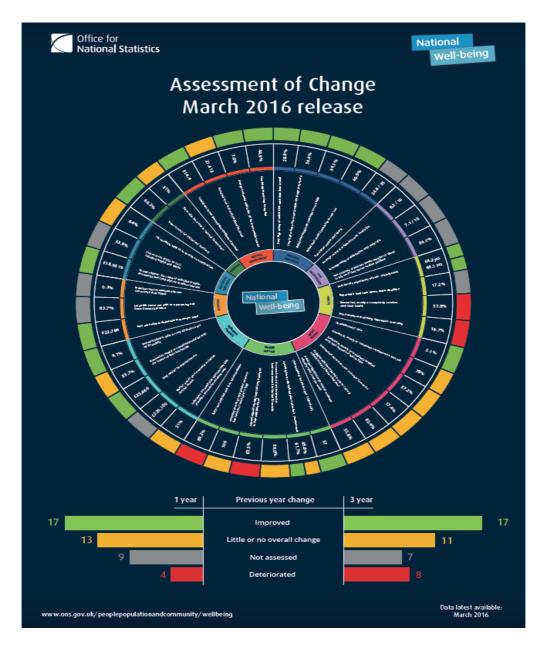
Figure 5: UK National Well-being Wheel of Measures

The OECD

For more than 10 years, the OECD has been looking beyond the functioning of the economic system to consider the diverse experiences and living conditions of people and households. Measuring the well-being of people and the progress of societies is a key priority for the OECD, which is pursuing it through methodological research, dissemination of existing data via the **OECD Better Life Initiative,** and key events such as the **OECD World Forum** on 'Statistics, Knowledge and Policy'. The OECD's overarching mission is indeed to promote 'Better Policies for Better Lives'.

The OECD Better Life Initiative

The **OECD Better Life Initiative** (www.oecd.org/betterlifeinitiative), launched in May 2011 on the occasion of the OECD's 50th Anniversary, focuses on developing statistics that can better capture those aspects of life that matter to people and that, taken together, shape the quality of their lives. Two important elements of this initiative are the *How's Life?* report and the *Your Better Life Index*. *How's Life?*, published every two years, provides a comprehensive picture of well-being in OECD countries and other major economies, by looking at people's material conditions and quality of life across the population. The *Your Better Life Index* is an interactive web-based tool that allows citizens to compare well-being across OECD countries and beyond based on their own view on the importance of different dimensions. It has been created to involve people in the discussion on well-being and, through this process, to learn what matters the most to them.

The OECD Framework for Measuring Well-being and Progress

Based on the recommendations made in 2009 by the Commission on the Measurement of Economic Performance and Social Progress –also known as the Stiglitz-Sen-Fitoussi Commission- and building on consultations with international experts and National Statistical Offices represented in the OECD Committee on Statistics, the **OECD Framework for Measuring Well-being and Progress** (see picture below) distinguishes between current and future well-being. Current well-being is measured in terms of outcomes achieved in the two broad domains: material living conditions (income and wealth, jobs and earnings, housing conditions) and quality of life (health status, work-life balance, education and skills, social connections, civic engagement and governance, environmental quality, personal security and subjective well-being). Future well-being is assessed by looking at some of the key resources that drive well-being and are persistently affected by today's actions (i.e. sustainability is measured through the 'capital' approach).

Figure 6: OECD Framework for Measuring Well-being and Progress

From a normative perspective, the OECD well-being framework builds on the capabilities approach proposed by Sen in 1985. This approach is based on a multidimensional definition of well-being, where functioning and capabilities matter to the same degree, recognising the importance of individual agency and freedom in choosing the life one wants to live.[25] While the well-being of each person can be described in terms of a number of separate outcomes, the assessment of the conditions for the society as a whole requires aggregating these outcomes for broader communities, considering both population averages and inequalities, based on the preferences and value judgments of each community.

Methodological projects on measuring well-being

The OECD Better Life Initiative also encompasses a range of research and methodological projects on measuring well-being. This work can be grouped under the three conceptual pillars of:

- Material conditions. Methodological work in this area includes measuring disparities in national accounts; measuring services produced by households for their own use; exploring the differences between growth in real GDP per capita and in real household income per capita; the integrated analysis of micro data on household income, expenditures and wealth

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[25] From a conceptual perspective, the OECD approach is similar to that developed by the UNDP for its Human Development, but it expands the scope as it encompasses additional dimensions to the three considered by the UNDP (i.e. income, health and education).

- with the publication of two manuals: 'Framework for statistics on the distribution of household income, consumption, and wealth' and 'Guidelines for micro statistics on household wealth'.

- Quality of life. Methodological work under this heading includes the development of 'Guidelines on measuring subjective well-being'; contributions to international process to improve the measurement of time use, victimisation and job quality; work to improve the measurement of people's trust in public institutions; an ongoing review of the content and structure of countries' general household surveys, in the perspective of providing recommendations to improve content and comparability.

- Sustainability. Methodological work under this heading includes initiatives to favour the implementation of the SEEA, through the collection of a set of core tables on emission to air and natural resources; work on social capital, which leads to the release of a taxonomy of dimensions (and databank of survey questions) that are used by some NSOs as a basis of their national consultations; experimental measures of the stock of human capital based on the life-time income approach.

Main related initiatives

The OECD-wide projects on New Approaches to Economic Challenges and Inclusive growth represent major initiatives to mainstream a well-being perspective throughout the Organisation. The Inclusive growth project, in particular, builds on a multidimensional and distributive-sensitive framework (and an associated monetary measure of 'multidimensional living standards') as a basis to allowing discussion of how policies can address trade-off and leverage synergies among different policy objectives.

The OECD is continuing the dialogue with developing and emerging countries through the OECD World Fora on 'Statistics, Knowledge and Policy'. These events aim to deepen ongoing reflection on how to measure well-being and the progress of societies and establish frameworks for future work. The next Forum is planned in Guadalajara, Mexico, on 13-15 October 2015.

Wikiprogress (www.wikiprogress.org) is a global platform for sharing information in order to evaluate social, environmental and economic progress. The core mission of Wikiprogress is to connect worldwide organisations and individuals wishing to develop new and smarter measures of progress.

The OECD is a partner of other international initiatives, such as the EU-supported 'e-Frame' (concluded) and 'webcosi' (ongoing) projects.

European Quality of Life Survey

The European Quality of Life Survey (EQLS) is carried out by Eurofound[26] and is a key part of its activities around the monitoring and analysis of living conditions and quality of life in Europe. The monitoring strategy in this subject area stems from a conceptual framework[27] that combines the focus on both objective conditions and subjective assessments, on both individual living conditions and societal characteristics, and has been a part of the research and public debate that contributed to the development of *Beyond GDP* agenda.

The EQLS is a representative, questionnaire-based interview survey that covers adult (18+) population. It was carried out in 2003, 2007, 2011, with the next round taking place in 2016. It covers all the EU Member States by default and also includes some Candidate Countries as well as other European countries.

In international context, the EQLS provides a distinctive contribution thanks to coverage of *all* the EU states, *multifaceted* information in one data set, coverage of *both* the working and non-working population — a comparison which attracts more and more attention when designing social protection, assessing relevance of activation measures, and facing challenges related to disengagement of citizens.

The EQLS also serves as a source for assessing *trends* over time. This has been of high relevance regarding developments during the crisis (with the third EQLS): the survey-based reports helped to reveal how the impact of crisis was uneven and concentrated a lot in the vulnerable parts of society, such as disadvantaged families.

The survey results confirm that (un)employment, health, work-life balance, quality of social contacts and the societal environment are the main factors shaping people's quality of life and well-being. More specifically, the survey contains over 20 variables on subjective well-being, the WHO-5 scale of mental well-being, an Index of perceived social exclusion, information on social contacts and participation, volunteering, trust and societal tensions, as well as information on household composition, economic situation, housing and local environment, and work-life balance. For the next survey round in 2016, indicators on accessibility and quality of public services are extended, especially regarding healthcare, long-term care and childcare.

The EQLS data and reports help in identifying factors that may be amenable to policy measures, and they have been broadly used in research and by the European Union bodies, e.g. for analysing social impacts of the economic crisis, poverty and social services, or health inequalities, as well as for specific issues such as informal debts or work preferences of the older people.[28]

The EQLS data are also a part of the following international monitoring initiatives:

- ○ <u>Active Aging Index</u> (2013 and 2014, supported by European Commission and the United Nations Economic Commission for Europe)

- ○ <u>Social Cohesion Radar</u> (2013 and 2014) by Bertelsmann Foundation.

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[26] European Foundation for the Improvement of Living and Working Conditions, an EU agency.

[27] Eurofound (2003): *Monitoring quality of life in Europe* (http://www.eurofound.europa.eu/publications/report/2003/quality-of-life/monitoring-quality-of-life-in-europe-report).

[28] For a set of the resent EQLS reports by Eurofound, please see: https://www.eurofound.europa.eu/surveys/european-quality-of-life-surveys/european-quality-of-life-survey-2012

Additional notes:

The microdatasets of all Eurofound surveys are freely available via the UK Data Service.

The EU Member States are given an opportunity to top-up samples in an agreement with Eurofound. By default the sample sizes are set at minimum 1000 of achieved interviews, but for the seven largest EU countries the minimum is higher to improve the precision of European level estimates. For more information, please contact Eurofound.

Links to the national websites devoted to quality of life indicators

Spain

http://www.ine.es/ss/Satellite?param1=PYSDetalleGratuitas&c=INEPublicacion_C&p=125473511067 2&param4=Ocultar&pagename=ProductosYServicios%2FPYSLayout&cid=1259937499084&L=1

Lithuania

http://www.osp.stat.gov.lt/documents/10180/483818/Quality_of_life_indicators.pdf

Portugal

https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_destaques&DESTAQUESdest_boui=1557044 66&DESTAQUESmodo=2&xlang=en

Finland

http://www.findikaattori.fi/en/hyvinvointi

Switzerland

http://www.bfs.admin.ch/bfs/portal/en/index/themen/20/03/blank/key/09/08.html
https://www.bfs.admin.ch/bfs/en/home/statistics/economic-social-situation-population/economic-and-social-situation-of-the-population.html
https://www.bfs.admin.ch/bfs/fr/home/statistiques/themes-transversaux/mesure-bien-etre.html
https://www.bfs.admin.ch/bfs/en/home/statistics/cross-sectional-topics/quality-life-cities.html

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[8] Scrivens, K. and C. Smith (2013), 'Four Interpretations of Social Capital: An Agenda for Measurement', OECD Statistics Working Papers, 2013/06, OECD Publishing

[9] Helliwell J, Layard R & Sachs J eds (2013) *World Happiness Report 2013* (New York: UN Sustainable Development Solutions Network)

[10] Abdallah, S. and Stoll, L. (2012), Review of individual-level drivers of subjective well-being, produced as part of the contract 'Analysis, implementation and dissemination of well-being indicators', Eurostat

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[13] OECD (2013) *Guidelines on Measuring Subjective Well-being* (Paris, OECD Publishing)

[14] Dolan, P. & White, M. P. (2007), How can measures of subjective well-being be used to inform public policy? *Perspectives on Psychological Science, 2*, 71-85.

[15] Dolan P, Layard R & Metcalfe R (2011) *Measuring subjective well-being for public policy* (Office for National Statistics)

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Final report of
the expert group
on quality of life indicators

This publication presents the final report of the Expert Group on Quality of life indicators, endorsed by the Directors of Social Statistics in October 2016.

A comprehensive framework of quality of life indicators is encompassing nine dimensions: material living conditions, productive or other main activity, health, education, leisure and social interactions, economic security and physical safety, governance and basic rights, natural and living environment and overall experience of life. 17 indicators coming from all these dimensions were chosen as headline indicators.

The report includes also recommendations of the Expert Group on the future work in this area of statistics. The report provides as well information about the initiatives on quality of life indicators existing at national and international level.

For more information
http://ec.europa.eu/eurostat/