The future of the OECD Well-being Dashboard:

Discussion paper

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This discussion paper summarises proposed changes to the dashboard of indicators used to populate the OECD Well-being Framework, and invites feedback on these proposals. The conclusions of this review process will inform future OECD statistical work on well-being, including the next editions of *How's Life?* and the *Better Life Index*.
For an in-depth explanation of proposed indicator changes, please refer to the complementary Annex A.

The work is based on inputs prepared by various team members of the OECD Statistics and Data Directorate: Anil Alpman, Carlotta Balestra, Carrie Exton, Lara Fleischer, Chris Jacobi, Hae Ryun Kim, Joshua Monje-Jelfs, Elena Tosetto and Leonardo Zanobetti. We are grateful for the comments of Marco Mira D'Ercole and Martine Durand, as well as informal feedback provided by colleagues throughout the OECD. All errors remain our own.

Call for feedback

We invite feedback on the findings of this review process, and in particular the five proposals outlined in the Executive Summary. We are especially interested in input on:

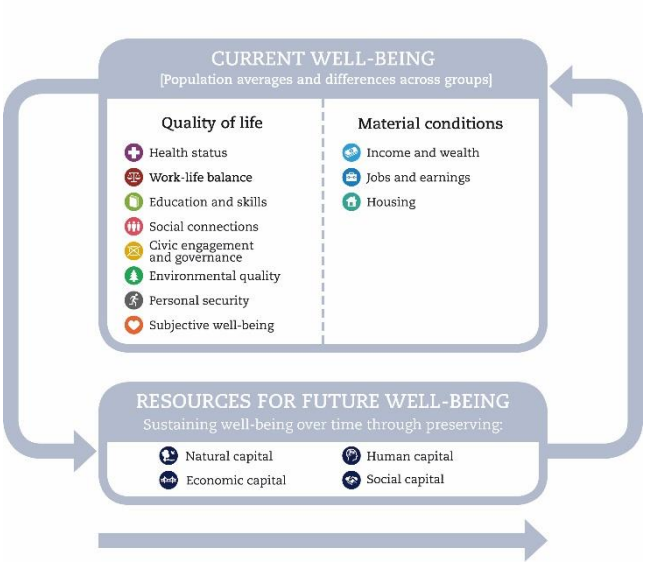
- your own experiences of communicating well-being initiatives, and whether our proposals (Actions 1-3) represent a move the in the right direction for OECD work
- the proposed updates to the dashboard of indicators (Action 4)
- the proposed headline indicator sets, their size, and the methodology for their selection (Action 5)

You are invited to send comments to carrie.exton@oecd.org before 2 September 2019.

Table of contents

1 Executive summary

1. Since its inception in 2011, the OECD Well-being Framework has been a successful tool to guide analysis of countries' well-being and spur methodological research (OECD, 2011[1]; OECD, 2013[2]; OECD, 2015[3]; OECD, 2017[4]). The OECD conducts periodic reviews to assess the quality of its statistical activities, and this discussion paper was initially prompted by need to review the dashboard of indicators that populates the Well-being Framework in the OECD's *How's Life?* publication, and the *Better Life Index* website. At the same time, the wider context of OECD work on well-being, and the policy demand for such measures, has also been evolving rapidly. Nearly ten years since the OECD's first dashboard of well-being indicators was developed, it is a good time to take stock of how international measurement practice has progressed.



2. Well-being data availability has generally improved since 2011. In some areas, new measurement standards have been published (such as the System of Environmental-Economic accounts) (United Nations, 2019[5]) while in other areas the OECD has produced measurement guidelines – for example, on wealth inequality, trust, quality of the working environment and subjective well-being (OECD, 2013[6]; OECD, 2013[7]; OECD, 2017[8]; OECD, 2017[9]; OECD, 2013[10]). There have also been advances in how to conceptualise and measure economic insecurity, inequality of opportunities and sustainability (Stiglitz, Fitoussi and Durand, 2018[11]). The United Nations Sustainable Development Goals (SDGs) have provided new impetus for measurement efforts "beyond GDP" (United Nations General Assembly, 2015[12]; United Nations Department of Economic and Social Affairs Statistics Division, 2019[13]). And, perhaps most importantly, many OECD members have developed their own national well-being frameworks, providing a rich set of country experiences to draw from. Several countries are now experimenting with applying such measures directly to policy (Durand and Exton, 2019[14]; Exton and Shinwell, 2018[15]).

3. This discussion paper reflects on the dashboard of indicators used to populate the OECD's Well-being Framework in publications such as *How's Life?*, as well as the *Better Life Index* website. It also considers the content dashboard and how it is communicated to ensure that it continues to resonate with internal and external users. While the indicator set has evolved over the years as new and better evidence has become available, this is an opportunity to evaluate the dashboard as a whole, including its more conceptual features.

4. The exercise has involved looking at our own experience with *How's Life?*, examining other national and international initiatives, and reviewing the statistical quality of existing and potential alternative

measures. Resulting changes will inform the next edition of *How's Life?* (anticipated in 2020) and associated well-being work, including future editions of the OECD *Better Life Index*.

5. One of the main takeaways from this review is that the Well-being Framework "works". It has stood the test of time well, and closely corresponds to well-being measurement practice across OECD countries. It has also informed the development of several more recent country initiatives, such as New Zealand's Living Standards Framework or Israel's Well-being, Sustainability and National Resilience Indicators (New Zealand Treasury, 2018[16]; Central Bureau of Statistics Israel, 2016[17]). Major changes that would limit consistency with international practice, and with what stakeholders have become familiar with, are not desirable. Nevertheless, five actions to further improve measurement quality and effective communication of the indicator dashboard are put forward (see Table 1):

1. Rename and reshape some dimensions
2. Reduce indicator overlap
3. Introduce a trio of current well-being categories
4. Update the indicator dashboard (now referred to as the "diagnostic dashboard")
5. Select headline indicators

Table 1. Key findings and proposed actions

	Key finding	Action
1. Rename some dimensions	While names for most dimensions of current well-being are straightforward to understand, the full scope of several dimensions is not immediately clear, particularly to non-experts.	**Rename and reshape some dimensions to emphasise their intended scope, including the statistical agenda ahead.** 'Education and Skills' is changed to 'Knowledge and Skills', 'Personal security' to 'Safety', 'Civic Engagement and Governance' to 'Voice', and 'Jobs and Earnings' to 'Work and Job Quality' and 'Housing' should be renamed 'Housing and Amenities'. 'Work-life Balance' should be reshaped into "Leisure and Culture" (with the job quality element of work-life balance - i.e. long working hours from paid work - moving across to "Work and Job Quality"). This enables the framework to more visibly acknowledge recent OECD work on the measurement of job quality, offers some conceptual clarity, and reflects increasing interest in the role of culture in people's well-being.
2. Reduce indicator overlap	Conceptually, current well-being and resources for well-being overlap in certain areas - since knowledge, skills, health and wealth affect people's lives today, but are also drivers of future well-being prospects. This means that seven indicators appear twice in the *How's Life? 2017* dashboard. For example, cognitive skills at age 15 are listed both under "Education" (current well-being) and "Human Capital" (resources for future well-being). The multiple listing of measures has been a challenge for communication and has reduced the overall clarity of the Framework.	**Reduce the overlap of indicators between current and future well-being to aid communication and interpretability.** In the new dashboard proposals (below) double listing at the indicator level has been eliminated. This has meant removing household net wealth from Economic Capital (retaining it only in Income and Wealth); removing life expectancy from Human Capital (retaining it only in Health); removing cognitive skills at 15, and adult skills from Human Capital (retaining them only in Knowledge and Skills); removing educational attainment from Knowledge and Skills (retaining it only in Human Capital); removing long-term unemployment from Human Capital (retaining it only in Work and Job Quality); and removing air pollution in Natural Capital (retaining it only in Environmental Quality).

3. Introduce a trio of well-being categories	To aid the communication and memorability of the 11 dimensions of current well-being, it is appealing to group them into subcategories. However, the current distinction between 'Material conditions' and 'Quality of life' is unbalanced (with an eclectic mix of 70% of all dimensions in the latter). Relational aspects of well-being (e.g. social connections, civic engagement, personal security) could meanwhile be given greater visibility.	**Regroup current well-being into a trio of sub-categories**. Three categories are easy to remember and communicate. We therefore propose to group the 11 dimensions into: • '**Doing well**' - reflecting material and household living conditions through the dimensions of: Income and Wealth, Housing and Amenities, Work and Job Quality, and Environmental Quality • '**Being well'** – reflecting individual-level states through the dimensions: Health, Knowledge and Skills, Leisure and Culture, and Subjective Well-being • '**Relating well**' – reflecting relational aspects of well-being and how people interact through the dimensions: Social Connections, Voice, Safety
4. Update the diagnostic dashboard	An assessment of the existing (*How's Life? 2017*) dashboard against statistical quality criteria confirms that the current indicator set works well and largely reflects the best available evidence. However, there remains a substantial statistical agenda ahead in order to capture the full scope of the dimensions in the Framework with high-quality data. Recent changes in data availability and/or themes that have been increasingly recognised in international well-being measurement practice (e.g. time use, unpaid work, social connections, culture, mental health, digitalisation) should be better reflected in the indicator set.	**Update the *How's Life?* dashboard to arrive at a more comprehensive set.** Some additional indicators, and some refinements to existing measures, are proposed, to better capture the full scope of the dimensions in the Framework. This will bring the complete dashboard to 77 indicators (vs. 57 currently), and will now be referred to as the "diagnostic dashboard" to distinguish it from the proposed headline indicators (Action 5), below. Additional new indicators proposed are: financial insecurity, income poverty, inability to make ends meet, housing cost overburden, broadband access, youths and young adults not in employment, education or training, deaths due to suicide, alcohol and drug use, self-reported depression, the gender gap in total working hours (considering both paid and unpaid work), long unpaid working hours, satisfaction with time use, cultural participation, access to green space, loneliness, time spent in social activities, satisfaction with social relationships, voter turnout (of the total population eligible to vote), road fatalities, cyber security, negative affect balance, labour market underutilisation, premature mortality, built-up area land cover, soil quality, renewable energy, material footprint, recycling rate, women in politics, and corruption. Refinements proposed to existing measures are: adopting the housing overcrowding rate (in place of rooms per person), basic sanitation of poor households (rather than the total population), exposure to outdoor air pollution above WHO threshold level (in place of mean average exposure), water stress (in place of separate measures of freshwater resources and abstractions), natural and semi-natural land cover (in place of forest area per capita), the IUCN Red List Index as a measure of biodiversity (in place of threatened mammals, birds and plants). Indicators suggested for removal are: satisfaction with water quality, educational attainment (working age population) and educational expectancy. For the detailed rationale for all changes, see Annex A.

5. Select headline indicators	While comprehensive dashboards are necessary to provide a more complete picture of living conditions, they can be too complex to communicate priority findings to decision makers and the public. The fact that several policy-oriented national well-being initiatives tend to feature more concise dashboards is reflective of their need to communicate with broader audiences.	**Adopt smaller, complementary dashboards of headline indicators for communication with wider audiences**. Three concise headline sets of 12 indicators each are proposed for current well-being levels, current well-being inequalities and resources for future well-being. These are drawn from the diagnostic dashboard, and have been selected to reflect a balance across the components of the Framework, indicators' relevance as summary outcomes, frequency and timeliness, and country coverage.

6. **For details of the updated diagnostic dashboard, see Table 8 on page 27. The proposed headline set is presented in Table 2, below.**

Table 2. Action 5: Headline indicator set for feedback

12 headline indicators – Levels of current well-being

	Dimension	12 headline levels
DOING WELL (Material and household living conditions)	**Income and Wealth**	Household income
		Household wealth
	Housing and Amenities	Housing affordability (disposable income after housing costs, % of total)
	Work and Job Quality	Employment rate
	Environmental Quality	Access to green space
BEING WELL (Individual states)	**Knowledge and Skills**	Student skills (mean score reading, maths, science)
	Health	Life expectancy
	Leisure and Culture	Leisure and personal care time
	Subjective Well-being	Life satisfaction
RELATING WELL (Relational aspects)	**Social Connections**	Time spent in social activities
	Voice	Voter turnout (as a share of the total population)
	Safety	Homicides

12 headline indicators – Inequalities in current well-being

	Dimension	12 headline inequalities	Type of inequality		
			Vertical	Horizontal	Deprivation
DOING WELL (Material and household living conditions)	**Income and Wealth**	Financial insecurity			✓
	Housing and Amenities	Overcrowding			✓
	Work and Job Quality	Gender wage gap		✓	
		Long working hours (paid)			✓
	Environmental Quality	Exposure to outdoor air pollution (> WHO threshold)			✓
BEING WELL (Individual states)	**Knowledge and Skills**	Students below baseline skill levels (below PISA level 2 in either reading, maths, or science)			✓
	Health	Regional gap in life expectancy		✓	
	Leisure and Culture	Gender gap in total working hours (both paid and unpaid)		✓	
	Subjective Well-being	S80/20 life satisfaction distribution	✓		
RELATING WELL (Relational aspects)	**Social Connections**	No social support			✓
	Voice	Having no say in government			✓
	Safety	Gender gap in feeling safe at night		✓	

12 headline indicators – Resources for future well-being

Capital	12 headline resources for future well-being	Type of capital			
		Stock	Flow	Risk factor	Resilience factor
Natural Capital	Greenhouse gas emissions (domestic production)		✓		
	Biodiversity (IUCN Red List Index)	✓			
	Natural and semi-natural vegetated land cover	✓			
Economic Capital	Gross fixed capital formation		✓		
	Financial net worth of the total economy	✓			
	Household debt			✓	
Human Capital	Educational attainment (young adults)	✓			
	Labour market underutilization			✓	
	Premature mortality		✓		
Social Capital	Trust in others	✓			
	Trust in the national government	✓			
	Women in politics				✓

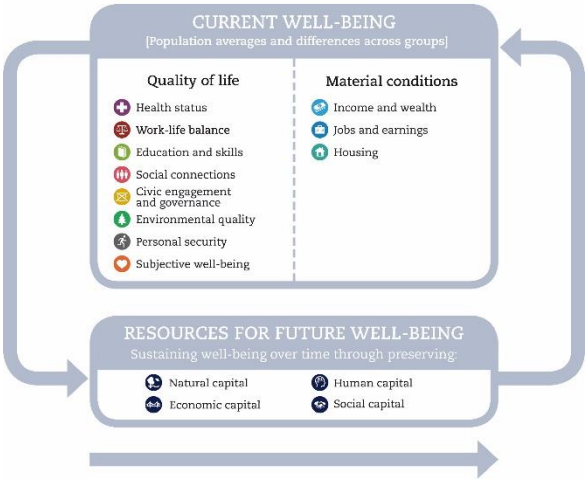
2 The development of the OECD Well-being Framework and indicator set

7. The OECD first created its Framework for Measuring Well-being in 2011, as part of its broader *Better Life Initiative*. This represented the culmination of longstanding work both inside and outside the organisation. The OECD had already been collecting several relevant social, environmental and economic statistics over the previous decades, and held various World Forums on Statistics, Knowledge and Policy that called for better ways to assess societal progress. Important strides to "go beyond GDP" had been made with UNDP's Human Development Index and the work on multidimensional poverty by the Oxford Poverty and Human Development Initiative. And the Framework also drew on rich academic literatures in welfare economics and capability theory, the recommendations of the *Commission on the Measurement of Economic Performance and Social Progress* (Stiglitz, Sen and Fitoussi, 2009[18]), and pre-existing well-being and sustainable development measurement practice in several OECD member countries.

8. Since its development, the Framework has been used to guide the OECD's statistical work on well-being – for example, the *How's Life*? series of reports (OECD, 2019[19]; OECD, 2011[1]; OECD, 2013[2]; OECD, 2015[3]; OECD, 2017[4]), and the Better Life Index (OECD, 2019[20]). It has prompted the development of several measurement guidelines (OECD, 2017[9]; OECD, 2017[8]; OECD, 2013[10]; OECD, 2013[6]; OECD, 2013[7]). OECD policy advice has also begun mainstreaming the Framework and associated indicator set, for example through a well-being analysis included in Economic Surveys from the Economics Directorate; the Development Centre's Multidimensional Country Reviews; work on skills for social progress by the Education Directorate (OECD, 2015[21]), on government procurement by the Public Governance Directorate (OECD, 2019[22]), on indigenous well-being by the Centre for Entrepreneurship, SMEs, Regions and Cities (OECD, 2019[23]), and on climate change mitigation through a well-being lens by the Environment Directorate (OECD, forthcoming[24]). The Well-being Framework also connects to a variety of other OECD measurement initiatives, such as those on regional disparities in well-being (OECD, 2014[25]), Green Growth (OECD, 2017[26]), the Inclusive Growth Framework for Policy Action (OECD, 2018[27]), the Child Well-Being Data Portal (OECD, 2019[28]), and the report on Measuring Distance to the SDG Targets (OECD, 2019[29]).

9. The OECD Framework (Figure 1) is built around two conceptual domains: First, **current well-being**, which contains outcomes (achievements) at the individual, household and community level that matter to people's quality and experience of life here and now. Current well-being in the OECD Framework features 11 distinct dimensions. A small number of these dimensions are described as "material conditions" (e.g. income, jobs and earnings), while all other aspects have been grouped under a broad "quality of life" heading (e.g. health status, social connections, environmental quality). The **resources needed to sustain well-being over time,** are expressed as four types of capitals (economic, natural, human, social) and often captured at the system-wide level (e.g. characteristics of the economy, ecosystems, or institutions). The rationale for this separate reporting is to help assess whether maximising current well-being comes at the cost of running down resources for future well-being. Distinct dashboards clarify that there can be intertemporal trade-offs, and emphasise the intergenerational character of well-being (UNECE, 2014[30]; UNU-IHDP and UNEP, 2014[31]; OECD, 2011[1]).

Figure 1. The OECD Well-being Framework (2011-17 edition)



The evolution of the indicator set over time

10. The *How's Life? 2017* dashboard measures the full Well-being Framework through 25 indicators of current well-being, and 32 indicators of resources for future well-being[1]. This creates a set of 57 indicators in total, of which only 50 are unique, since 7 measures feature in both current well-being and resources for future well-being. Relative to the set of well-being indicators presented in the first editions of *How's Life?* this reflects several new developments. Most notably, the 2011 and 2013 editions' indicator sets focused solely on current well-being. Resources for future well-being were conceptually introduced in 2013, and then operationalised with indicators in subsequent editions (OECD, 2015[3]; OECD, 2017[4])

11. The approach to measuring current well-being in *How's Life?* has been shaped by a set of guiding principles: (1) an emphasis on people and households as the unit of analysis, (2) a focus on final summary outcomes, (3) complementing objective data with a limited number of subjective measures (e.g. life satisfaction) to take into account how people themselves experience their lives, and (4) reporting not only averages, but also change over time and inequalities to account for disparities across population groups. Existing work on well-being inequalities was enhanced and explicitly emphasised in 2017 through a framework based on the concepts of vertical inequalities (i.e. differences in achievements within a population), horizontal inequalities (i.e. differences in mean outcomes across groups of the population based on age, gender, education, geographical location) and deprivations (i.e. people or households falling below a given threshold) (Figure 2). Each of these three types of inequalities are computed, to the extent possible in the available data, for the entire current well-being indicator set.

12. Measurement of resources for future well-being has been guided by the capital approach to measuring sustainability, and focused on capital stocks, flows and risk/resilience factors. Conceptually, stocks are stores of value that generate a stream of benefits to society over time; flows reflect investment in and the depletion of those stocks; and risk/resilience factors can moderate relationships between capital stocks and the streams of value that they might generate in the future.[2] Through the accumulation or depletion of capital stocks, the choices made by one generation can influence the opportunities available

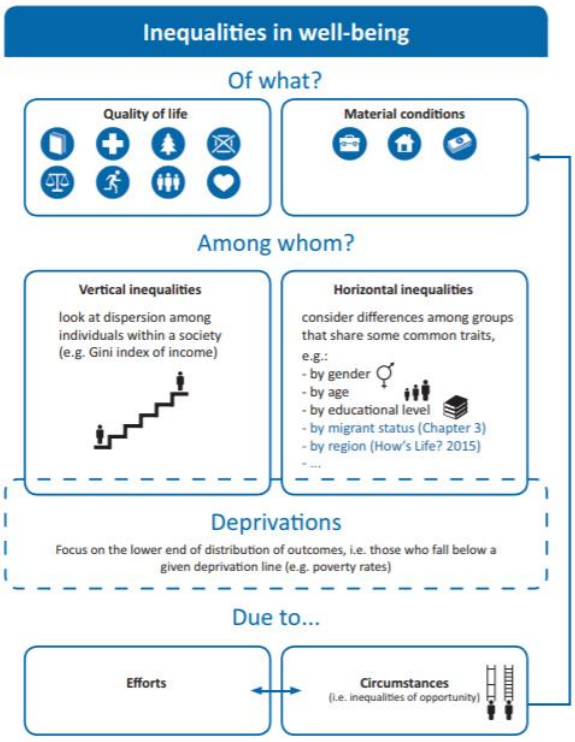
[1] See Tables 5.1 through 5.5 in pages 200-206 of (OECD, 2017[4]) for details.

[2] For example, smoking and obesity are considered risk factors to Human Capital, because (in terms of both length of life and quality of life) they might affect the future stream of benefits that people might draw from the stock of Human Capital that exists today. In turn, regular exercise might be viewed as a resilience factor.

to the next. While some aspects of capital (and particularly Economic Capital) are owned and transferable between owners, others refer to common public goods that are shared and not rival (such as clean air or water under Natural Capital), or broad societal characteristics (such as trust under Social Capital).

13. Jointly, these measurement principles have shaped changes in the indicator dashboard over the past years, and continue to be reflected in the proposals presented in this discussion paper.

Figure 2. Measuring inequalities in current well-being outcomes



Source: (OECD, 2017[4])

3 Review methodology and evidence

14. The OECD conducts periodic reviews to assess the quality of its statistical activities, and this discussion paper was initially prompted by need to review the *Better Life Initiative* statistics. As such, the review process involved a technical assessment of the *How's Life?* dashboard, and a stocktake of the broader landscape of well-being measurement and application across the OECD and beyond.

Detailed quality review of the *How's Life?* indicator dashboard

15. All indicators were assessed according to a set of standardised quality assessment criteria (Table 3). These criteria offer a customised version of the Quality Framework for OECD Statistical Activities (OECD, 2011[32])[3], tailored for well-being measurement, and took into account the original indicator selection criteria set out in the first edition of *How's Life?* (OECD, 2011[1]). Each quality criterion (relevance, accuracy, credibility and comparability, timeliness and frequency, interpretability, working constraints) received an aggregate score (meets the overall quality dimension substantially/ partially/ not at all or to a limited extend) based on relevant sub-components. For example, "timeliness and frequency" evaluates whether a time series exists, how far back it goes, with what frequency the data are compiled, the delay between data collection and publication, and whether there is likely to be regular data collection in the future. Meanwhile, "interpretability" takes into account whether change in an indicator can be unambiguously interpreted as good or bad, whether the measure broadly summarises the well-being concept of interest (e.g. "health") and whether its construction can be easily understood.

16. While assessments of some quality criteria are relatively easy to quantify and compare (e.g. country coverage, the possibility to compute inequalities), others involve a degree of judgement (e.g. is this indicator policy amenable? How well-established is the instrument?). Different assessors reviewed the indicators, with the two main authors of this review looking across the full set to ensure a degree of consistency across the board. Table 4 illustrates an example of final standardised scores for the indicators of the Income and Wealth dimension (for detailed scoring for all dimensions, see the Annex A). It should be noted that an indicator did not necessarily need to meet all criteria in order to be recommended for inclusion in the *How's Life?* dashboard. Indeed, some suggested indicators scored below average on several criteria (e.g. feeling of safety in the Safety dimension, or social support in Social Connections, which are both drawn from the Gallup World Poll). They nonetheless reflect important aspects of well-being that should be represented in the Framework. Consistent with previous practice in *How's Life*?, these indicators act as "placeholders" - meaning that until better data becomes available, they remain the best possible internationally comparable option.

[3] This Quality Framework is itself currently under revision.

Table 3. Quality assessment criteria

Relevance *Value for measuring and monitoring well-being*	**Inequalities** *Inequalities can be computed*	**Accuracy** *Indicator correctly reflects the underlying concept that it is intended to capture*	**Credibility + Comparability** *Statistics are produced under high quality standards and comparable across countries*	**Timeliness + Frequency** *Speed and frequency of data availability*	**Interpretability** *Ease with which users can understand and properly use and analyse the data*	**Working constraints** *Practical requirements to produce comparable and affordable well-being statistics*
Policy amenable outcome	Inequalities (horizontal, vertical, deprivations) can be computed	Validity	Source and sample quality	Recurrent data production going forward	Unambiguous interpretation	Country coverage and diversity
For current well-being: Unit of analysis: individual/ household level For capitals: Stock/flow/risk/ resilience factor		Reliability	Comparable definition across countries	Consistent time series going back	Broad summary outcome of concept	Additional burden of collection to data producer
			Well-established instrument collected	Length of time between collection and publication	Transparency of construction/ simplicity	

Table 4. Example of quality assessment scores - Income and Wealth indicators

	Relevance	Inequalities	Accuracy	Credibility + Comparability	Timeliness + Frequency	Interpretability	Working constraints
Household income	✓	x	✓	✓	✓	✓	✓
Household net wealth	✓	✓	✓	✓/~	~	✓	~
Economic insecurity	✓	✓/~	✓/~	✓	~	✓	~
Income poverty	✓	✓/~	✓	✓	✓/~	✓	✓
Inability to make ends meet	✓	✓/~	~	~	✓	~	x

Note: A ✓ shows that an indicator substantially meets the overall quality dimension shown in the table; a ~ shows that an indicator partially meets the quality dimension, an x shows that the indicator does not meet the quality dimensions or it meets it only to a limited extent.

Scanning the broader field of well-being measurement

17. Missing themes in the scope of dimensions and possible alternative indicators were evaluated, drawing from other international and national well-being frameworks and dashboards, as well as from internal OECD applications of the Well-being Framework.

18. Evidence considered included:

- A detailed mapping of national well-being initiatives against the OECD framework to identify possible gaps (see below)
- Collation of the main insights from public citizen consultations that have accompanied many national efforts
- The Sustainable Development Goals and UN Inter-Agency and Expert Group global list of indicators (United Nations General Assembly, 2015[12]; United Nations Department of Economic and Social Affairs Statistics Division, 2019[13]).
- Recent academic guidance on well-being measurement, most notably the 2018 reports on "Beyond GDP: Measuring what counts for economic and social performance" and "For Good Measure: Advancing Research on Well-Being Metrics Beyond GDP" by the High-Level Expert Group on the Measurement of Economic Performance and Social Progress (Stiglitz, Fitoussi and Durand, 2018[11]; 2018[33]).
- Priorities for the statistical agenda ahead from previous *How's Life?* editions
- Comments submitted by users of the *OECD Better Life Index* website and to the OECD Well-being email account
- Other OECD measurement initiatives (e.g. Green Growth Indicators, the Inclusive Growth Framework for Policy Action, *How's Life in Your Region*
- Insights from OECD colleagues that act as data managers for many of the indicators (e.g. in education, environment, health, housing, national accounts) and those who have applied and adapted the Well-being Framework to more policy-oriented areas of work (see Section 2)

The current OECD Framework is already in line with an emerging international consensus on well-being, with some exceptions

19. As mentioned above, a major piece of evidence of this review stems from well-being initiatives that have been developed at the national level across OECD countries. Indeed, several national statistical offices (NSOs), government departments and international organisations have been collecting and disseminating a variety of social, environmental and economic data for many years. Increasingly, specific initiatives have grouped these indicators together, often explicitly under the banner of measuring well-being or going "beyond GDP" (Exton and Shinwell, 2018[15]) to provide a more holistic picture of societal progress. A selection of these initiatives is shown in Table 5, distinguishing between those squarely focused on measurement, monitoring and reporting (often, but not exclusively, led by NSOs), and those developed to support more direct policy applications (often led by Ministries of Finance or other policy ministries). The relationship between the OECD Well-being Framework and national well-being efforts always been mutually informative: some initiatives (e.g. the 2018 Living Standards Dashboard in New Zealand or Israel's Well-being, Sustainability and National Resilience Indicators) were directly informed by the OECD Framework, which in turn has been inspired the work of others in its original conception.

Table 5. National well-being frameworks across the OECD, selected countries

	Lead body	Launch year	Public consultation	Number of dimensions	Number of indicators
OECD Well-being Framework	OECD	2011		15	57

Well-being measurement, monitoring and reporting					
Measures of Australia's Progress	Australian Bureau of Statistics	2002	✓	26	147
Australia's Welfare	Australian Institute of Health and Welfare	2015		19	61
How's Austria?	Statistics Austria	2012		3	21
Belgium Complementary Indicators to GDP	National Accounts Institute + Federal Planning Bureau	2016		13	67
Belgium Sustainable Development Indicators	Federal Planning Bureau	2019		17	70
Finland Findicators	Statistics Finland	2009		12	97
Well-being in Germany	Federal Chancellery	2016	✓	11	48
Italy Measures of Equitable and Sustainable Well-being (full set)	National Institute of Statistics + National Council for the Economy and Labour	2013	✓	12	129
Israel Well-being, Sustainability and National Resilience Indicators	Central Bureau of Statistics	2015	✓	11	88
Korea Quality of Life Indicators	Statistics Korea	2014		11	71
Luxembourg Index of Well-being	Statec, Economic and Social Council + the Higher Council for Sustainable Development	2017	✓	11	63
Indicators Aotearoa New Zealand	Stats NZ	2019	✓	24	99
Norway - How We Are Doing	Statistics Norway	2017		10	41
Indicators of Well-being in Slovenia	Institute of Macroeconomic Analysis and Development, Statistics Slovenia, Slovenian Environment Agency + National Institute of Public Health	2015	✓	20	90
United Kingdom Measures of National Well-being	The UK Office for National Statistics	2011	✓	10	43
Well-being policy application					
Australian Treasury's Well-being Framework	Treasury	2004		5	N/A
Canadian Federal Sustainable Development Strategy	Minister of Environment and Climate Change	2008	✓	13	25
Finland Strategic Government Programme Indicators	Prime Minister's Office	2015		5	29
France New Indicators of Wealth	Prime Minister's Office	2015	✓	3	10
Italy Measures of Equitable and Sustainable Well-being (short set)	Ministry of Economics and Finance	2016	✓	8	12
Latvia 2030	Cross-Sectoral Coordination Centre, under the authority of the Prime Minister	2010	✓	7	55
Netherlands Monitor of Well-being	Netherlands Cabinet + Statistics Netherlands	2017		15	47
New Zealand Living Standards Framework Dashboard	Treasury	2011/18	✓	16	55
Northern Ireland Outcomes Delivery Plan	Northern Ireland Executive Office	2018		12	54
Poland Responsible Development Index	Polish Economic Institute	2019		3	8
Scotland National Performance Framework	Scottish Government	2007	✓	11	81

Slovenia National Development Strategy 2030	Slovenian Government	2017	✓	12	30
Sweden New Measures of Well-being	Ministry of Finance	2017		15	15
United Kingdom Personal and Economic Well-being bulletin	Office for National Statistics	2019		2	12
Well-being of Wales	National Assembly for Wales + Welsh Government Chief Statistician	2015	✓	7	46

Note: Launch time refers to the actual release of a framework, rather than the commissioning of its development. Number of indicators refers to the dashboards as of May 2019. Measures of Australia's Progress was discontinued in 2013, and the Australian Treasury's Well-being Framework in 2016. Australia's Welfare reports have been published since 1993. The Canadian Federal Sustainable Development Strategy refers to the 2016-19 version. The Scottish Government's National Performance Framework was first launched in 2007; the number of dimensions and indicators refers to the refreshed 2018 edition.
Source: Exton and Shinwell (2018), OECD Economic Survey of New Zealand (2019) and responses to a mini-questionnaire on well-being frameworks and policy uses submitted to the OECD's Economic Development Review Committee in April 2019.

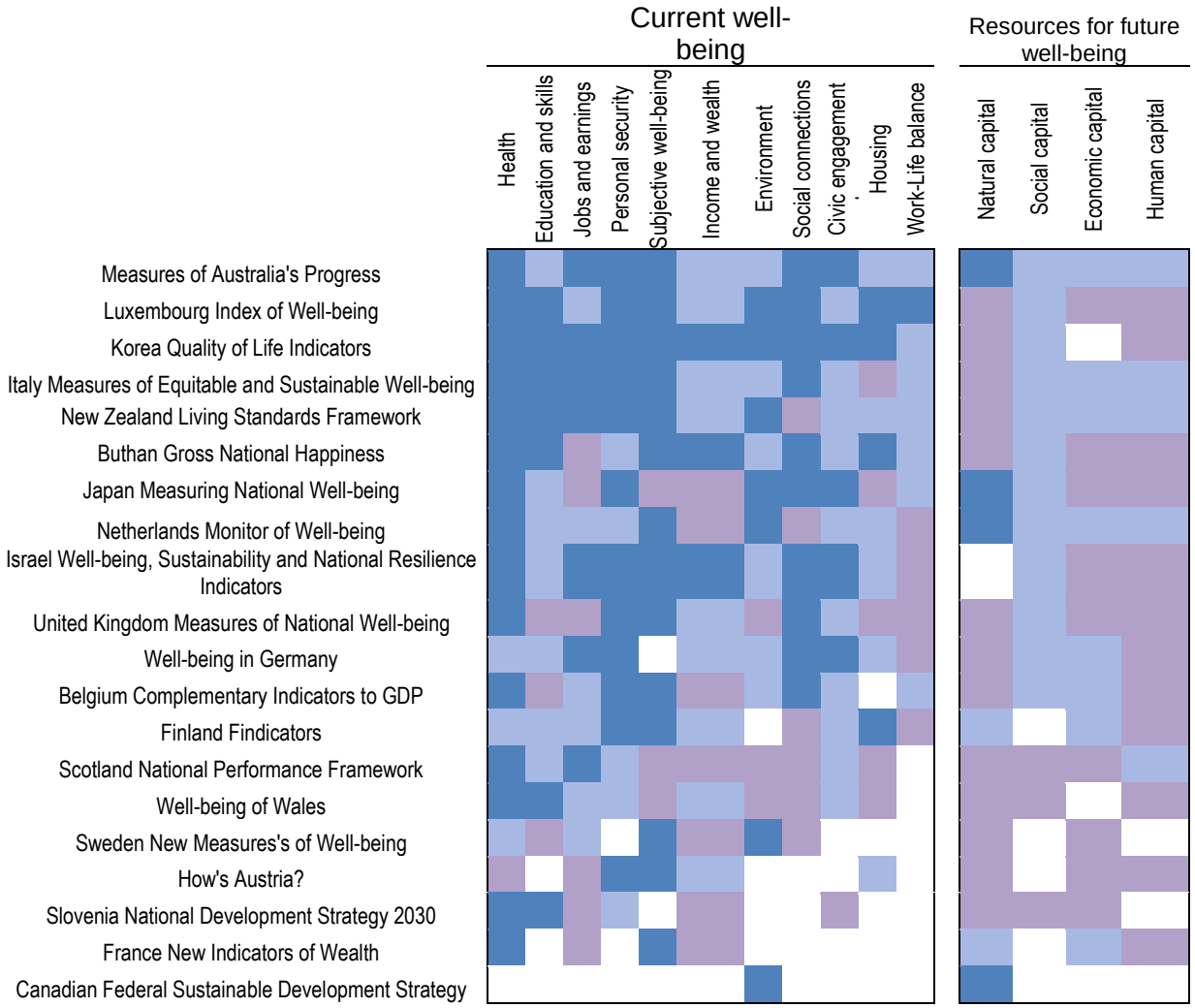
20. A key takeaway from reviewing these initiatives is that there is much common understanding of the conceptual underpinnings of well-being measurement, and the OECD Framework aligns very much with these principles. All initiatives understand well-being as a multidimensional construct, and take into account both objective and subjective aspects of people's outcomes across diverse areas (e.g. income, jobs, health, housing, education and skills, environment, social connections and subjective well-being). A large share of frameworks include elements of the capital stocks (human, social, economic and natural capital) within their indicator sets – although only four other initiatives (Belgium's Complementary Indicators to GDP, Treasury New Zealand's Living Standards Framework, Stats NZ's Indicators Indicators Aotearoa New Zealand, and the Netherland's Well-being Monitor) make an explicit conceptual distinction between current well-being and resources for future well-being. Some dashboards (notably the Dutch Well-being Monitor and Stats NZ's Indicators Aotearoa New Zealand) also explicitly recognise transboundary effects – i.e. the impact that countries have on well-being in other countries.

21. The current OECD Well-being Framework and the *How's Life?* dashboard also overlap significantly with international measurement practice at the indicator level (Figure 3). This is particularly encouraging since several of the other frameworks were accompanied by large-scale public consultations. and suggests that there is an emerging international consensus on the main "ingredients" of well-being and what it means to live a good life. The OECD Well-being dimensions with the greatest indicator-level overlap with other initiatives are Health, Education and Skills, Jobs and Earnings, as well as Natural and Social Capital. On the other hand, overlap is less strong for Civic Engagement, Housing and Work-life Balance, reflecting lower international consensus about measurement in these areas.

22. Given the already strong alignment of the OECD Well-being Framework with other approaches, major changes that would limit consistency with international practice, and with what stakeholders have become familiar with, are not desirable. A few gaps warrant a closer examination: some 'missing' indicators are frequently featured in national well-being initiatives (Table 6). These span across all dimensions and resources, and include young people who are not in employment, education or training (NEET), homelessness, psychological distress, participation in cultural activities, access to green space, experiences of victimisation and discrimination. In some cases, these themes had been considered for inclusion in the first *How's Life?* edition in 2011, but either no credible measurement standards existed, or no comparable indicators were available internationally. They have been reassessed for this review.

Figure 3. How does the OECD Framework compare against other well-being frameworks?

Comparison at the indicator level per OECD Well-being Framework dimension



Note: A dark blue shade indicates that 50% or more of the indicators included in the respective OECD dimensions are contained in the other well-being dashboard. A light blue shade indicates less than 50% (and more than 0) of the indicators included in the respective OECD dimension are contained in the other well-being dashboard. A purple shade indicates that a dashboard includes the concept envisioned by the respective OECD dimension, but covers it in a very different way and with no comparable indicators. A white shade indicates that the OECD dimension is not covered. Coverage might mean that an indicator is officially classified as belonging to a different dimension in the other well-being framework. Only fully developed and available indicators as of December 2018 have been considered.

Table 6. Indicators commonly included in national well-being frameworks

Selected indicators not featured in the OECD Framework

Corresponding dimension of OECD Framework (2011-17 version)	Theme	# Frameworks featuring a relevant indicator	Framework details
Income and wealth	Household consumption	11	Austria, Belgium (Complementary Indicators to GDP + Sustainable Development Indicators), Finland (Findicators), Israel, Korea, Luxembourg, Netherlands, New Zealand (LSF), Slovenia (Measures of Well-being), Poland
	Satisfaction with economic situation	8	Belgium (Sustainable Development Indicators), Finland (Findicators), Israel, Japan, Korea, Luxembourg, Sweden, UK (Measures of National Well-being)
Jobs and earnings	Young people who are not in employment, education or training (NEET)	9	Belgium (Complementary Indicators to GDP + Sustainable Development Indicators), Italy, Israel, Japan, New Zealand (Indicators Aotearoa) UK (Measures of National Well-being), Slovenia (Indicators of Well-being), Wales
	Job satisfaction	9	Belgium (Complementary Indicators to GDP + Sustainable Development Indicators), Italy, Israel, Japan, New Zealand (Indicators Aotearoa) UK (Measures of National Well-being), Slovenia (Indicators of Well-being), Wales
Housing	Housing quality (e.g. mould, dampness, repairs needed)	8	Belgium (Sustainable Development Indicators), Italy, Korea, Luxembourg, Netherlands, New Zealand (LSF + Indicators Aotearoa), Slovenia
	Satisfaction with housing and local area	5	Israel, Korea, Scotland, UK (Measures of National Well-being), Wales
	Housing cost overburden	5	Austria, Italy, Israel, New Zealand (LSF), Slovenia
	Homelessness	3	Australia (MAP + Welfare), Wales
Health	Prevalence of depression and anxiety, psychological distress)	15	Australia (Measures of Australia's Progress + Australia's Welfare), Belgium (Complementary Indicators to GDP + Sustainable Development Indicators), Italy, Israel, Japan, Luxembourg, New Zealand (LSF + Indicators Aotearoa), Northern Ireland, Scotland, UK (Measures of National Well-being + Well-being Bulletin), Wales
	Healthy life expectancy	13	Belgium (Sustainable Development Indicators), France, Italy. Israel, Netherlands, New Zealand (LSF + Indicators Aotearoa), Northern Ireland, Scotland, Slovenia (Measures of Well-being + National Development Strategy), UK (Measures of National Well-being), Wales
	Suicide rate	6	Finland (Findicators), Japan, Korea, Luxembourg, New Zealand (LSF + Indicators Aotearoa)
Work-life balance	Participation in cultural activities	12	Australia (MAP), Finland (Findicators), Israel, Korea, Latvia, New Zealand (Indicators Aotearoa), Northern Ireland, Scotland, Slovenia (Indicators of Well-being + National Development Strategy), UK (Measures of National Well-being), Wales
	Satisfaction with time use	8	Italy, Israel, Korea, Luxembourg, Netherlands, New Zealand (Indicators Aotearoa), Slovenia (Indicators of Well-being), UK (Measures of National Well-being)

	Commuting time	6	Finland, Germany, Italy, Korea, Luxembourg, the Netherlands
Social connections	Loneliness	8	Israel, Japan, Korea, New Zealand (LSF + Indicators Aotearoa), Scotland, UK (Measures of National Well-being), Wales
	Discrimination	8	Israel, Japan, Luxembourg, the Netherlands, New Zealand (LSF + Indicators Aotearoa), Slovenia (Indicators of Well-being), Wales
	Frequency of social contact	4	Belgium, Luxembourg, Netherlands, Slovenia (Indicators of Well-being)
Environmental quality	Access and visits to green/ blue spaces	8	Australia (Measures of Australia's Progress), Canada, Italy, Japan, Korea, New Zealand (LSF), Scotland, UK (Measures of National Well-being
Personal security	Victimisation rate	10	Australia (Measures of Australia's Progress + Australia's Welfare), Belgium (Complementary Indicators to GDP), Finland (Findicators), Israel, Korea, Netherlands, New Zealand (Indicators Aotearoa), Scotland, Slovenia (Indicators of Well-being)
	Road accidents/ fatalities	7	Belgium (Complementary Indicators to GDP + Sustainable Development Indicators), Finland, Italy, Israel, Korea, Slovenia (Indicators of Well-being)
	Intimate partner violence	5	Australia, Italy, Israel, New Zealand (LSF + Indicators Aotearoa)
Natural capital	Waste management	16	Australia (Measures of Australia's Progress), Belgium (Complementary Indicators to GDP + Sustainable Development Indicators), Finland (Findicators), Italy, Israel, Japan, Korea, Luxembourg, New Zealand (LSF + Indicators Aotearoa) Northern Ireland, Scotland, UK, Wales
	Protected areas	10	Australia (Measures of Australia's Progress), Belgium (Complementary Indicators to GDP), Canada, Italy, Latvia, the Netherlands, Northern Ireland, Scotland, Sweden, UK (Measures of National Well-being
	Renewable energy	12	Austria, Belgium (Complementary Indicators to GDP + Sustainable Development Indicators), Canada, Finland (Findicators), Luxembourg, the Netherlands, Slovenia (Indicators of Well-being + National Development Strategy), Scotland, UK, Wales
Economic capital	Productivity	8	Australia (Measures of Australia's Progress), Austria, Japan, Latvia, New Zealand (LSF + Indicators Aotearoa), Scotland, Wales
Human capital	Early school leavers	11	Austria, Belgium (Complementary Indicators to GDP + Sustainable Development Indicators), France, Germany, Italy, Korea, Latvia, Luxembourg, Northern Ireland, Slovenia (Indicators of Well-being)
Social capital	Corruption	3	Korea, New Zealand (LSF + Indicators Aotearoa)

Note: A reoccurring theme does not necessarily imply that countries are using similar indicators: Whereas some concepts, such as NEET, are well-defined and follow international measurement standards, areas such as loneliness or discrimination are recognised as important in many frameworks but measured very differently and in not comparable ways.

4 Key proposals on concepts and indicators

Action 1: Rename and reshape some dimensions

Key finding	Action
While most dimension names of current well-being are straightforward to understand, the full scope of several dimensions is not immediately clear, particularly to non-experts.	**Rename and reshape some dimensions to emphasise their intended scope, including the statistical agenda ahead.**

23. Overall, most dimension names for current well-being communicate their content clearly and are straightforward to understand. Reviewing the intended scope of dimensions has, however, pointed to instances where this scope can be emphasised more comprehensively and directly, and where certain elements of dimensions should be regrouped:

- **'Jobs and Earnings' is renamed 'Work and Job Quality', and 'Work-life Balance' is reshaped into 'Leisure and Culture'**

  The dimension name Work and Job Quality helps to highlight synergies with the OECD Job Quality Framework, and reflects the broader scope of work (including self-employment and unpaid work) relative to being a paid employee. We also propose to correct the anomaly that one aspect of job quality – i.e. long working hours – has so far been included in the separate Work-life Balance dimension, rather than with other job characteristics. Moving long working hours into Work and Job Quality will mirror the OECD Job Quality Framework, which emphasises earnings quality, labour market security and the quality of the working environment, including hours worked (Cazes, Hijzen and Saint-Martin, 2015[34]; OECD, 2016[35]).

  With this move, Work-life Balance is reshaped as Leisure and Culture. This new dimension highlights that leisure time, including engagement in cultural activities, is relevant for the entire population and not just for people engaging in paid work. The role of culture in shaping people's well-being has been increasingly acknowledged in national well-being frameworks. Including culture in the dimension title, even in the absence of a suite of high-quality statistics to capture culture in all aspects, sets the future scope of the OECD Well-being Framework in greater alignment with emerging practice.

  One drawback of this proposal is the removal of any explicit reference to work-life balance at the dimension level - even if the respective indicators are retained across other dimensions. This change will require careful communication to avoid the impression that work-life balance is being disregarded completely.

- **'Education and Skills' is renamed 'Knowledge and Skills'**

  The dimension is renamed Knowledge and skills, to better acknowledge that many competencies are not necessarily acquired through formal education, and also continue to develop over the life-course, through self-driven learning, on-the-job learning and other means. Further, education is

about the school system of a country, which is just a delivery vehicle of knowledge and skills (the final outcomes of interest for well-being). This preference for a broader knowledge and skills framing is reflected in the practice of several national initiatives, such as the New Zealand Living Standards Framework, or the Slovenian Development Strategy 2030.

- **'Personal Security' is renamed 'Safety'**

  This acknowledges the individual condition of being free from risk and harm, rather than the (security) measures taken to ensure it. Furthermore, the term "personal security" echoes conceptually different concepts such "job security", "labour market insecurity" and "economic insecurity" that are dealt with in other parts of the OECD Framework. As a further source of confusion, the Personal Security dimension is called Safety in the OECD *Better Life Index.* Renaming the dimension would help the harmonisation with *How's Life?*

- **'Civic Engagement and Governance' is reshaped into 'Voice'**

  Civic Engagement and Governance is an abstract term that is difficult to communicate to non-specialists. Moreover, most indicators related to quality of governance (e.g. stakeholder engagement, trust in institutions, corruption) are considered as part of Social Capital. The indicators in the dimension at hand – i.e. voter turnout and having a say in what the government does - strongly relate to the ability of individuals to feel able to and act on expressing their voice in the political process.

- **'Housing' is renamed 'Housing and Amenities'**

  This change signifies the intended scope of the dimension, and emphasises important aspect of people's living spaces beyond those directly connected to housing space and quality. These include access to services in the broader residential setting (e.g. transport, schools, hospitals, supermarkets), which have been highlighted by the Sustainable Development Goals, and are the focus of upcoming work on regional well-being by the OECD Centre for Entrepreneurship, SMEs, Regions and Cities, as well as being featured in existing regional well-being work (OECD, 2014[25]).

Action 2: Reduce indicator overlap between current and future well-being

Key finding	Action
Conceptually, current well-being and resources for well-being overlap in certain areas - since knowledge, skills, health and wealth affect people's lives today, but are also drivers of future well-being prospects. This means that seven indicators appear twice in the *How's Life?* dashboard. For example, cognitive skills at age 15 are listed both under "Education" (current well-being) and "Human Capital" (resources for future well-being). The multiple listing of measures has been a challenge for communication and reduces the overall clarity of the Framework.	**Reduce the overlap of indicators between current and future well-being to aid communication and interpretability.**

24. In the 2017 edition of the *How's Life?* dashboard, seven indicators are listed both under current well-being and resources for future well-being. This double listing was a conscious decision when the indicators for resources for future well-being were operationalised in 2015, since knowledge, health and wealth are clearly both intrinsically valuable to people, but also determine well-being outcomes later in life and for society as a whole.

25. However, the multiple listing of indicators has proven to be challenging when communicating the logic of the Framework to stakeholders. In order to improve its overall clarity and interpretability, this review proposes reducing the overlap of indicators as much as possible while maintaining the spirit and integrity of the well-being dimensions and capitals.

26. The following changes are proposed:

- **Household net wealth**

  Household net wealth has been listed under both Income and Wealth and Economic Capital, since it forms the basis of a household's economic resources later in life and inter-generationally, but also influences consumption possibilities and risk perceptions today. This review recommends retaining this indicator solely under Income and Wealth. This acknowledges that income and wealth jointly shape people's consumption possibilities, and preserves their side-by-side comparison. Household debt, as a systemic risk factor for both households and the wider economy, remains under Economic Capital.

- **Long-term unemployment**

  Long-term unemployment has been listed under both Jobs and Earnings and Human Capital, since prolonged unemployment has detrimental effects on a person's current well-being, but can also result in skills loss and scarring that affects future job opportunities and the sustainability of well-being over a much longer time period. This review proposes retaining long-term unemployment solely under the newly created Work and Job Quality dimension. Under Human Capital, a new indicator taken from the OECD Job Strategy, broad labour underutilisation, is added to the diagnostic dashboard instead (see Action 3). Broad labour underutilisation refers to the share of inactive, unemployed or involuntary part-timers in the population (excluding youth in education or training), and is thus a broader way of conceptualising risk factors for a country's human capital.[4]

[4] Some labour market inactivity might contribute to others' well-being (e.g. when caring for dependents or performing other unpaid work), and could be associated with skills gains rather than losses. Nevertheless, the broad measure of labour market underutilisation is cast here as a risk factor for future well-being, to the extent that it might be associated with a loss or stagnation of professional skills during time away from paid work. It is particularly important for capturing discouraged workers, who do not meet the narrow definition of unemployment.

- **Skills of adults and youth**

Cognitive skills of adults and (15 year old) youth are important for well-being today and drive outcomes tomorrow, and have so far been featured under both the Education dimension of current well-being and Human Capital. As these are competencies that are intrinsically valuable to people (i.e. what they know and can do), this review proposes retaining them only in the renamed Knowledge and Skills dimension. Human Capital continues to feature a (future-oriented) measure of education through its educational attainment of young adults indicator.

- **Exposure to air pollution**

Mean population exposure to outdoor air pollution (by fine particulate matter, or $PM_{2.5}$) has been part of Environmental Quality as well as Natural Capital. The quality of air is relevant for both, since pollution affects health and what people can do today, but accumulated exposure also puts long-term health and well-being at risk. This review proposes refocusing the indicator for Environmental Quality on the population exposed to unhealthy levels of pollution (10 µg/m3 of $PM_{2.5}$ as specified by the WHO Air Quality Guidelines), and retaining it only in the Environmental Quality dimension of current well-being, which would significantly shrink in size if this indicator was taken out.

- **Life expectancy**

Life expectancy at birth is a reflection of the population's current health status, and since it directly addresses how long people live it is intrinsically bound up with prospects for future well-being. As a result, it has been featured under both Health and Human Capital. In this case, it has been especially difficult to find a solution to reduce the indicator overlap: on the one hand, virtually all conceptual frameworks consider life expectancy an essential component of human capital (OECD, 2013[2]; OECD, 2015[3]). On the other hand, life expectancy is the only objective measure of general health status in the Health dimension, and would severely diminish that dimension's content if taken out. This review thus proposes to retain life expectancy in the Health dimension. Under Human Capital, a measure of premature mortality (potential year of life lost) is added instead.

- **Voter turnout**

Voter turnout is currently listed under both Civic Engagement and Governance and Social Capital. It captures people's opportunities for expressing their voices, which is of value to current well-being. But, voting is also an investment in future well-being by citizens, i.e. they vote to affect government's actions in ways that are meaningful to them. This review proposes to retain voter turnout solely within the renamed Voice dimension. This unique listing makes a cleaner distinction between indicators that relate to people's direct participation in the political process (under current well-being) and those that refer to quality and perception of governance and institutions at a broader level (under Social Capital).

Action 3: Introduce a trio of current well-being categories

Key finding	Action
To aid the communication and memorability of the 11 dimensions of current well-being, it is appealing to group them into subcategories. However, the current distinction between 'Material conditions' and 'Quality of life' is unbalanced (with an eclectic mix of 70% of all dimensions in the latter). Relational aspects of well-being (e.g. social connections, civic engagement, personal security) could meanwhile be given greater visibility.	**Regroup current well-being into a trio of sub-categories**.

27. The current diagram of the OECD Well-being Framework (Figure 1, above) depicts the 11 dimensions of current well-being as divided into the sub-categories of 'material conditions' and 'quality of

life'. This has helped to emphasise that there is more to societal progress than the more traditional economic statistics used to assess material living standards. Dividing the dimensions into sub-categories is also useful for communicating the framework and making it more memorable. However, the current division is both unbalanced (only three of the 11 dimensions are considered to be material) and can be misinterpreted, since material conditions are separated from all the other things that make for good lives, as though they do not themselves directly contribute to people's quality of life. Relational aspects of well-being are also not very visible within this structure.

28. Different groupings of the OECD's current well-being dimensions could be considered. For example, to offer a common framework under which all different well-being initiatives could be nested, McGregor has proposed three "universal dimensions": material (the material conditions of the person), subjective (the meaning that the person attaches to their life and how they evaluate it) and relational (the relations that the person has with others in society) (McGregor, 2018[36]; McGregor and Sumner, 2010[37]). Featuring each of these universal dimensions in some form is essential for an initiative to be characterised as a well-being approach, but different initiatives can then choose to cover them in more or less depth. Identifying universal dimensions is significant because it might imply that an analysis of well-being impacts (for example, in a policy context) should, at a minimum, consider information drawn from each dimension. This helps to clarify the difference that a holistic well-being approach makes, relative to any other form of multidimensional analysis, but under manageable constraints.[5] McGregor's simplification is also appealing from a communications perspective. However, it remains unbalanced when applied to the OECD's current well-being dimensions, since five dimensions fall under material, five under relational, and only one under subjective (McGregor, 2018[36]).[6] A further downside is that the role of the environment is less visible, even though environmental quality remains a consistent theme across the well-being initiatives seen in OECD countries.

29. At the other end of the complexity spectrum, the UN Sustainable Development Goals (SDGs) cluster 244 indicators under 169 Targets, which are in turn nested under 17 Goals (United Nations Department of Economic and Social Affairs Statistics Division, 2019[13]). This can be overwhelming when it comes to practical implementation (Kanbur, Patel and Stiglitz, 2018[38]) but reflects the highly consultative and political process that shaped the development of the SDGs, rather than being driven by a conceptual framework. In OECD work and elsewhere, the SDGs have been informally grouped into "5Ps": people, planet, prosperity, peace and partnership (OECD, 2019[29]). Harmonising the structure of the approach to both well-being and the SDGs would have some advantages, but the "5Ps" would again result in a very unbalanced distribution of the OECD's current well-being dimensions. More problematically, it would also cut across current well-being and the four capitals (natural, human, social and economic). The separation of current well-being and the capitals remains an important conceptual distinction within the OECD Framework, since separate indicator dashboards are needed to assess whether maximising current well-being comes at the cost of running down resources for future well-being.

30. To complement the simplicity and memorability of the four capitals within the OECD Well-Being Framework, one option is to cluster the dimensions of current well-being under the trio shown in Table 7.

[5] For example, an analysis that focused on both Income and Wealth, and Jobs and Earnings would be 'multidimensional' but would not qualify as sufficiently broad or holistic to be considered as a well-being analysis.

[6] Applying this directly to the OECD Well-being Framework, McGregor suggests that *material* would encompass Income and Wealth, Housing, Jobs and Earnings, Work-Life Balance, and Environmental Quality; *subjective* would encompass Subjective Well-being; and *relational* would encompass Personal Security, Civic Engagement, Social connections, Education, and Health.

Table 7. Regrouping of the current well-being dimensions into a trio

Doing well	Being well	Relating well
Income and Wealth	Health	Social Connections
Housing and Amenities	Knowledge and Skills	Voice
Work and Job Quality	Leisure and Culture	Safety
Environmental Quality	Subjective Well-being	

31. This regrouping divides the dimensions into baskets that logically link back to their measurement characteristics:

- "**Doing well**" mostly refers to material and living conditions, typically shared at the household level. For example, indicators in the Income and Wealth dimension are typically captured at the household level (even if they might be distributed unequally within the household), as are all indicators in the Housing and Amenities dimension. Environmental Quality is a characteristic of the household unit, since both air pollution and the new access to green space measure are captured spatially. The obvious exception is Work and Job Quality, which is typically measured at the individual level. Nevertheless, one individual's experiences in this dimension usually has direct material consequences for the wider household, including in particular the distribution of earnings and of total work (paid and unpaid) within the household.
- "**Being well**" generally relates to conditions directly experienced by individuals. While these can also have consequences for other people within a household or community (e.g. the care burden in the case of poor health; the impact of others' suffering on a person's own subjective well-being) the states themselves are experienced and measured at the level of the individual person, and cannot usually be directly transferred to others. Thus, Health as currently measured is a characteristic of a person; Knowledge and Skills refer to attributes of the individual; and Subjective Well-being refers to the inner states experienced by an individual. Leisure and Culture is a more tenuous fit: the indicators in this dimension might in some cases include activities done with others that reinforce social ties and cultural values. However, since they are captured and experienced at the individual level, and they do have an important individual component (e.g. having sufficient leisure time) they are for now proposed for inclusion under "being well".
- "**Relating well**" highlights the importance of relational aspects for people's well-being, and dimensions in this category generally refer to interactions between people and with wider society. While it can be argued that all dimensions of well-being include relational elements or have direct consequences for other household and community members (see above), this category specifically focuses on dimensions that are inherently and intrinsically relational. Social Connections address how connected and supported people feel and the time spent investing in relationships; Safety reflects how people treat one another and the risks people are exposed to as a result of others' actions; and Voice relates to how engaged and listened to people feel within larger social institutions (and in particular the government, at least within the current indicator set). Job Quality could also be argued to have strong relational elements (since it is directly concerned with how employers treat their employees, as well as with the social safety net in the case of labour market insecurity) but since it is attached to the wider Work and Job Quality dimension, it has been retained under "doing well".

32. It should be stressed that these subcategories mainly serve to facilitate communication. A more rigid structure to guide analysis would require greater theoretical development and a process of wider consensus-building. Like McGregor's trio, "doing well, being well, relating well" risks downplaying the role of the environment in current well-being, yet within the wider OECD Well-Being Framework this is counterbalanced by the emphasis on Natural Capital. Similarly, the focus on experiences at the individual and household level in current well-being is complemented by system- and society-wide characteristics when it comes to measuring the capitals. This again underscores the importance of considering both

current well-being and resources for future well-being alongside one another, to provide a more complete picture.

Action 4: Update the How's Life? dashboard

Key finding	Action
An assessment of the existing (*How's Life? 2017*) dashboard against statistical quality criteria confirms that the current indicator set works well and largely reflects the best available evidence. However, there remains a substantial statistical agenda ahead in order to capture the full scope of the dimensions in the Framework with high-quality data.	**Update the *How's Life?* dashboard to arrive at a more comprehensive set.** Some additional indicators, and some refinements to existing measures, are proposed, to better capture the full scope of the dimensions in the Framework. This will bring the complete dashboard to 77 indicators (vs. 57 currently), and will now be referred to as the "**diagnostic dashboard**" to distinguish it from the proposed headline indicators (see Action 5), below.

33. The performance of the existing *How's Life? 2017* indicators against statistical quality criteria confirms that the current dashboard works well, and largely reflects the best available internationally comparable evidence (see Annex A).

34. This review has identified several completely new indicators, as well as some refinements to existing indicators, that will help to provide a more comprehensive dashboard for future editions of *How's Life?* These new indicators cover themes that have been recognised as important in shaping people's lives and for which comparable data has been developed and become available at least some OECD countries. For example, the Income and Wealth dimension previously included information on household income and household net wealth, and has now been expanded to feature financial insecurity (individuals without sufficient financial resources to protect against a three-month loss of income), income poverty, and self-reported inability to make ends meet. The Environmental Quality dimension now includes an indicator that draws on satellite data to assess access to green space at a granular level. In the Health dimension, two indicators (deaths due to suicide, alcohol and drug use, and self-reported depression) have been added to capture mental health, an aspect so far missing from the Framework. Information from time use surveys is now mobilised in various ways, e.g. by looking at time spent in social activities in the Social Connections dimension, or through measuring long unpaid working hours under Leisure and Culture. Other new indicators relate to housing affordability, land cover, loneliness, culture, governance and the digital transformation. Refinements to existing indicators include rooms per person under Housing and Amenities, which has been reshaped to focus on the overcrowding rate, as a better indicator of the adequacy of living space, and which also takes into differing needs according to the different composition of households.

35. Table 8 presents the extended dashboard after incorporating Actions 1, 2 and 3. Together, these result in a comprehensive set of 77 indicators, grouped under 11 dimensions of current well-being, and four capitals under resources for future well-being. The table also details into which type(s) of inequality (vertical, horizontal, deprivation) each indicator of current well-being can be disaggregated into, and whether an indicator of resources for future well-being represents a stock, a flow, a risk factor, or a resilience factor.

36. Only three indicators – i.e. satisfaction with water quality, educational expectancy, and educational attainment (for the working age population) - were suggested for removal, either because they did not satisfy the quality criteria to a sufficient degree, or because other available measures fit the dashboard as a whole better. For example, although satisfaction with water quality from the Gallup World Poll has a relatively simple construction (i.e. the share of the population satisfied with the quality of their local water) the precise meaning of the questionnaire item behind this indicator is in some doubt (e.g. does it refer to tap water, or the quality of local bodies of water?), and overall, it has not been possible to gather sufficient evidence on its accuracy, credibility and comparability across countries. Educational expectancy is

dropped since a regular time series is no longer compiled by the OECD, and its estimates regarding years spent in education can be misleading in countries where inequalities are high and where access to education is limited. Educational attainment for the working age population has also been removed to reduce overlap between Knowledge and Skills and Human Capital (where a measure of upper secondary educational attainment for young adults has been retained).

37. Extending the *How's Life?* indicator set into a larger diagnostic dashboard is consistent with practice in many national statistical offices, where well-being data sets typically range between 40 and 130 indicators (Figure 4). It also more fully captures the true scope of the OECD Well-being Framework, which is important for validity and credibility. At the same time, extending the dashboard will make it more difficult to communicate with wider (non-specialist) audiences, and necessarily means that indicators with quite different quality characteristics (particularly in terms of their frequency, timeliness, and country coverage) will be presented side-by-side. It is therefore proposed that, in addition to extending the *How's Life?* diagnostic dashboard, **smaller sets of headline indicators** should be selected for broader communications purposes (Action 5).

Table 8. The extended How's Life? diagnostic dashboard

CURRENT WELL-BEING					
Income and Wealth					
Label	Indicator	Unit of Measurement	Inequalities		
			Vertical	Horizontal	Deprivation
Household income	Household net adjusted disposable income	USD at current PPPs, average per capita (for the latest available year); and USD at 2010 PPPs, average per capita (for time series)	✓*	✓*	✓*
Household net wealth	Household net wealth	USD at current PPPs, average per household	✓	✓	✓
Financial insecurity	Individuals without sufficient financial resources to protect against a three-month loss of income	Share of individuals with equivalised liquid financial wealth below 25% of the income poverty line		✓	n/a
Income poverty	Relative income poverty rate	Share of individuals with equivalised income below 50% of the median income		✓	n/a
Inability to make ends meet	Self-reported ability to make ends meet	Share of the population reporting they are "having great difficulty or difficulty to make their ends meet"		✓	n/a
Housing and Amenities					
Label	Indicator	Unit of Measurement	Inequalities		
			Vertical	Horizontal	Deprivation
Overcrowding	Overcrowding rate	Share of households living in overcrowded conditions (EU-agreed definition)		✓	n/a
Housing affordability	Disposable income after housing costs	Percentage of household gross adjusted disposable income remaining, after deductions for housing rent and maintenance			✓
Housing cost overburden	Housing cost overburden	Share of households in the bottom 40% of the income distribution spending more than 40% of their disposable income on total housing costs		✓	n/a
Basic sanitation	Poor households without access to basic sanitary facilities	Share of households below 50% of median equivalised disposable household income without indoor flushing toilet for the sole use of their household		✓	n/a

Broadband access	Households with Internet access at home	Share of households with Broadband Internet access at home		✓	✓

Work and Job Quality					
Label	Indicator	Unit of Measurement	Inequalities		
			Vertical	Horizontal	Deprivation
Employment	Employment rate	Employed aged 25-64, as a percentage of the population aged 25-64		✓	✓
Long-term unemployment	Long-term unemployment rate	Percentage of the labour force unemployed for one year or more		✓	
NEET	Youth not in employment, education or training	NEET share, as percentage of the population aged 15-24		✓	
Gender gap in total hours worked	Gender gap in the total hours worked per week for both paid and unpaid work	Hours of paid and unpaid work per week, working age population, by gender	n/a	n/a	n/a
Earnings	Average annual gross earnings per full-time employee	USD at the PPPs for the latest available year	✓*	✓*	✓*
Labour market insecurity	Labour market insecurity due to to unemployment	Average expected earnings loss associated with unemployment as a share of previous earnings		✓	
Long working hours (paid)	Employees working very long (paid) hours	Percentage of employees who usually work 50 hours or more per week	✓	✓	n/a
Job strain	Incidence of job strain	Proportion of employees who experience a number of job demands that exceeds the number of job resources		✓	

Environmental Quality					
Label	Indicator	Unit of Measurement	Inequalities		
			Vertical	Horizontal	Deprivation
Air pollution	Population exposure to outdoor air pollution by fine particulate matter above WHO Guidelines	Population share exposed to more than 10 µg/m3 of PM 2.5			n/a
Access to green space	Access to green space	Population share with green urban areas in their neighbourhood			✓

Knowledge and Skills					
Label	Indicator	Unit of Measurement	Inequalities		
			Vertical	Horizontal	Deprivation
Adult skills (literacy)	Literacy competencies of the adult population aged 16-65	Mean proficiency in literacy	✓	✓	✓
Adult skills (numeracy)	Numeracy competencies of the adult population aged 16-65	Mean proficiency in numeracy	✓	✓	✓
Student skills (reading)	Cognitive skills of 15-year-old students in reading	Mean score for reading	✓	✓	✓
Student skills (maths)	Cognitive skills of 15-year-old students in maths	Mean score for maths	✓	✓	✓
Student skills (science)	Cognitive skills of 15-year-old students in science	Mean score for science	✓	✓	✓

Health					
Label	Indicator	Unit of Measurement	Inequalities		
			Vertical	Horizontal	Deprivation
Life expectancy	Life expectancy at birth	Number of years that a newborn can expect to live		✓*	
Perceived health	Perceived health status	Percentage of adults reporting “good” or “very good” health		✓	✓

Suicide, alcohol and drug use deaths	Deaths from alcohol and drug use disorder and suicide	Deaths from alcohol and drug use disorder and suicide, per 100 000 population (age-standardised to the 2010 OECD population)		✓	
Self-reported depression	Self-reported chronic depression	Share of respondents reporting having chronic depression in the past 12 months		✓	

Leisure and Culture

Label	Indicator	Unit of Measurement	Inequalities		
			Vertical	Horizontal	Deprivation
Leisure and personal care time	Time devoted to leisure and personal care	Hours per day, people in full-time employment	✓	✓	
Long unpaid working hours	Individuals working long unpaid hours	Percentage of total working age population (aged 15-64) who usually work more than 60 hours per week, of which at least 30 involve unpaid work	✓	✓	n/a
Satisfaction with time use	Satisfaction with time use	Mean values on an 11-point scale, with responses ranging from 0 (not at all satisfied) to 10 (fully satisfied)		✓	✓
Cultural participation	Participation in cultural activities	Share of respondents stating that they have attended set of cultural activities (cinema, live performances, cultural sites visits) "at most three times" or "more than three times" in the last 12 months		✓	✓

Subjective well-being

Label	Indicator	Unit of Measurement	Inequalities		
			Vertical	Horizontal	Deprivation
Life satisfaction	Life satisfaction	Mean values on an 11-point scale, with responses ranging from 0 (not at all satisfied) to 10 (completely satisfied)	✓	✓	✓
Negative states	Negative affect balance	The share of the population who reported more negative than positive states and emotions yesterday (constructed from a battery of items)		✓	

Social Connections

Label	Indicator	Unit of Measurement	Inequalities		
			Vertical	Horizontal	Deprivation
Time spent in social activities	Time spent in social activities	Average minutes/ day spent in social activities	✓	✓	✓
Satisfaction with personal relationships	Satisfaction with personal relationships	Mean values on an 11-point scale, with responses ranging from 0 (not at all satisfied) to 10 (fully satisfied)		✓	✓
Social support	Social support	Share of people who report having friends or relatives whom they can count on in times of trouble		✓	✓
Loneliness	Loneliness	Share of individuals reporting being lonely "all of the time" and "most of the time'		✓	

Voice

Label	Indicator	Unit of Measurement	Inequalities		
			Vertical	Horizontal	Deprivation
Voter turnout (population)	Voter turnout (population)	Share of votes cast among the population of voting age		✓*	
Voter turnout (registered)	Voter turnout (registered)	Share of votes cast among the population registered to vote		✓*	

Having a say in government	Having a say in what the government does	Share of people aged 16-65 who feel they have a say in what the government does		✓	✓

Safety					
Label	Indicator	Unit of Measurement	Inequalities		
			Vertical	Horizontal	Deprivation
Feeling safe at night	Feelings of safety when walking alone at night	Percentage of people declaring that they feel safe when walking alone at night in the city or area where they live		✓	✓
Homicides	Deaths due to assault	Age-standardised rate, per 100 000 population		✓	
Road fatalities	Deaths due to road accidents	Deaths by road accidents, per hundred thousand population		✓	
Cybersecurity	Experience of online security incidents	Percentage of individuals who report having experienced security incidents in the last 3 months.		✓	

RESOURCES FOR FUTURE WELL-BEING

Natural Capital						
Label	Indicator	Unit of Measurement	Type of capital			
			Stock	Flow	Risk factor	Resilience factor
Greenhouse gas emissions from domestic production	Greenhouse gas emissions from production	Tonnes per capita, CO_2 equivalent		✓		
Carbon footprint	Carbon dioxide emissions embodied in domestic final demand	Tonnes per capita		✓		
Natural and semi-natural land cover	Natural and semi-natural vegetated land (tree-covered area, grassland, wetland, shrubland and sparse vegetation)	Natural and semi-natural vegetated land cover as a % of total land area	✓			
Built-up area	Built-up area land cover	Buildings as a % of total land area	✓			
Water stress (internal resources)	Water stress (internal resources)	Gross abstractions as a % of internal resources			✓	
Water stress (total renewable resources)	Water stress (total renewable resources)	Gross abstractions as a % of total renewable resources			✓	
Soil nutrient balance	Nutrient surplus (nitrogen) in agricultural land	Nutrient surplus (nitrogen), kilograms per hectare of agricultural land			✓	
Biodiversity	Red List Index (RLI) – combined indicator of extinction risk for birds, mammals, amphibians, cycads and corals	An RLI value of 1.0 equates to all species qualifying as Least Concern (i.e., not expected to become Extinct in the near future). An RLI value of 0 equates to all species having gone Extinct.	✓			
Renewable energy	Renewable energy share of the total electricity generated	Renewable energy share of the total electricity generated				✓
Material footprint per capita	Global allocation of used raw material extracted to meet the final demand of the economy	Tonnes per capita		✓		
Recycling rate	Recycling and composting	Municipal waste recycled or composted as a % of treated waste				✓

Economic Capital						
Label	Indicator	Unit of Measurement	Type of capital			
			Stock	Flow	Risk factor	Resilience factor
Produced fixed assets	Produced fixed assets	USD per capita, at 2010 PPPs	✓			

Gross fixed capital formation	Gross fixed capital formation	Annual growth rates		✓		
Financial net worth of the total economy	Financial net worth of the total economy	USD per capita, at current PPPs	✓			
Intellectual property assets	Intellectual property assets	USD per capita, at 2010 PPPs	✓			
Investment in R&D	Investment in R&D	As a percentage of GDP		✓		
Household debt	Household debt	Percentage of net household disposable income			✓	
Financial net worth of government	Adjusted financial net worth of general government	As a percentage of GDP	✓			
Banking sector leverage	Leverage of the banking sector	Ratio of selected assets to banks' own equity			✓	

Human Capital

Label	Indicator	Unit of Measurement	Type of capital			
			Stock	Flow	Risk factor	Resilience factor
Educational attainment (young adults)	Upper secondary educational attainment, people aged 25-34	Percentage of people who have attained at least an upper secondary education	✓			
Labour market underutilization	Broad labour market underutilization	Share of inactive, unemployed or involuntary part-timers (15-64) in population (%), excluding youth (15-29) in education and not in employment			✓	
Premature mortality	Potential year of life lost (PYLL)	Years lost per 100 000 inhabitants		✓		
Smoking prevalence	Prevalence of daily smoking	Percentage of people aged 15 and over who report smoking every day			✓	
Obesity prevalence	Obesity prevalence	Percentage of the population aged 15 and older			✓	

Social Capital

Label	Indicator	Unit of Measurement	Type of capital			
			Stock	Flow	Risk factor	Resilience factor
Trust in others	Interpersonal trust	Mean average, on a scale from 0 (you do not trust any other person) to 10 (most people can be trusted)	✓			
Volunteering through organisations	Participation in formal volunteering	Percentage of the working-age population who declared having volunteered through an organisation at least once a month, over the preceding year		✓		
Trust in the police	Trust in the police	Mean average, on a scale from 0 (no trust at all) to 10 (complete trust)	✓			
Trust in the national government	Trust in the national government	Proportion of the population responding "yes" to a question about confidence in the national government	✓			
Women in politics	Women parliamentarians	Share of women in the national lower or single houses of parliament				✓
Government stakeholder engagement	Government stakeholder engagement when developing primary laws and subordinate regulations	0-4 scale, based on OECD review of country responses to the 2014 OECD Regulatory Indicators Survey				✓
Corruption	Corruption Perception Index (CPI)	CPI score on a scale of 0 (highly corrupt) to 100 (very clean)			✓	

Note: A * indicates that a different source than the one of the level indicator is used to compute inequalities. Sources for the level indicators are detailed in Annex A. Inequalities for household income are calculated from the OECD Income Distribution Database, for earnings from the OECD Income Distribution Database, for life expectancy from (Murtin et al., 2017[39]), and for the voter turnout rate from the Comparative Study of Electoral Systems (CSES). For the full overview of inequality definitions, see (OECD, 2017[4])

Action 5. Select headline indicators

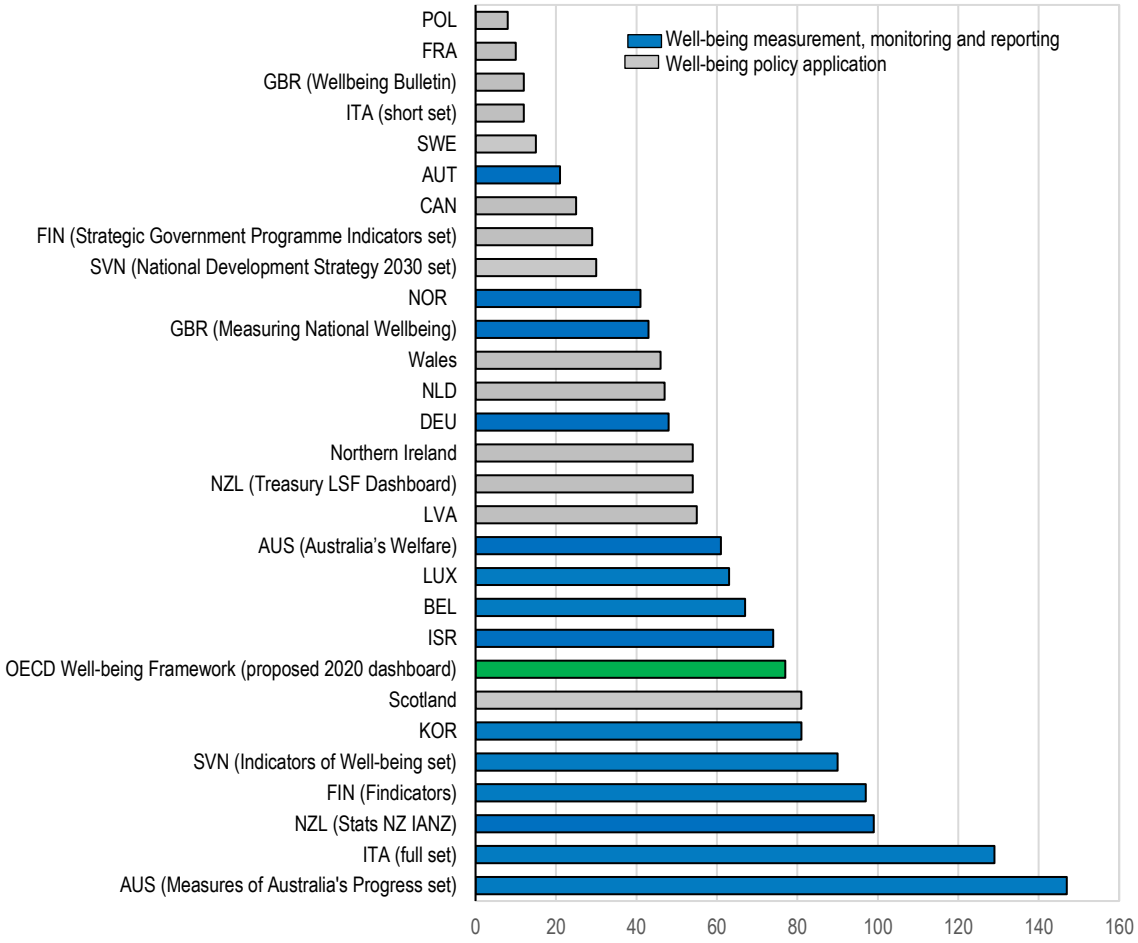
Key finding	Action
While comprehensive dashboards are necessary to provide a more complete picture of living conditions, they can be too complex to communicate priority findings to decision makers and the public. The fact that several policy-oriented national well-being initiatives tend to feature more concise dashboards is reflective of their need to communicate with broader audiences.	**Adopt smaller, complementary dashboard of headline indicators for communication with wider audiences**.

38. Frameworks focused on monitoring and reporting well-being need to draw on a large evidence base to provide a comprehensive account of how life is going for people, including trends over time and inequalities among population groups. This diagnostic exercise necessitates a large indicator set that allows for going into detail and identifying areas of a country's well-being strength and weaknesses. Indeed, the national well-being initiatives across the OECD that are typically NSO-led and focus on measurement, monitoring and reporting typically feature dashboards of well over 60 indicators (Figure 4). Some initiatives, such as Finland's Findicators and StatsNZ's Indicators Aotearoa are closer to 100 indicators, and Italy's Measures of Equitable and Sustainable Well-being is close to 130 measures. With 77 indicators, the expanded *How's Life?* dashboard falls right in the middle of these diagnostic datasets (Action 3). In addition to presenting averages, however, the need to capture inequalities in its various forms (vertical, horizontal and deprivations – see *How's Life? 2017*) effectively significantly increases the number of statistics to be presented.

39. Comprehensive dashboards necessarily involve a large array of numbers that require careful curation. They can be too unwieldy and complex to succinctly communicate priority findings to stakeholders. Diagnostic dashboards also involve mixing together indicators with quite different quality characteristics (particularly in terms of frequency, timeliness and country coverage) and sometimes drill down to relatively narrow aspects of people's experiences. To capture the attention of leaders, politicians, media and the wider public, a smaller set with selected headline measures can be a valuable addition (Jeffrey and Michaelson, 2015[40]; Kanbur, Patel and Stiglitz, 2018[41]; Scott and Boyd, 2017[42]; Stiglitz, Fitoussi and Durand, 2018[33]). The national well-being initiatives that are more focused on specific policy applications typically feature much more concise indicator sets that help to communicate with wider audiences, e.g. during the budgetary discussions by Parliamentarians in France, Italy and Sweden. Nevertheless, these smaller, more policy-oriented sets rarely stand alone, and are usually underpinned by the larger diagnostic dashboards collected by NSOs (e.g. Finland, Italy, the United Kingdom, New Zealand and Slovenia).

Figure 4. The size of the 2020 *How's Life?* dashboard is in line with other diagnostic frameworks

Number of indicators per well-being framework



Note: The number of indicators refers to unique indicators as of May 2019.
Source: (OECD, 2019[43])

40. The provisional headline indicators proposed (below) have been selected to jointly satisfy a range of selection criteria to the best possible extent. These include:

- **Balance across all Framework components**

  The headline indicators should ideally represent all dimensions of current well-being, well-being inequalities and the resources for future well-being.

  If an important motive for well-being reporting is to go beyond the traditional economic indicators that tend to dominate policy-making, then a headline indicator set needs to reflect the diversity of things that matter to well-being, both within and beyond the economic sphere. In addition, encouraging a longer-term and intergenerational perspective also implies strong communication on resources for future well-being. Hence, at least one headline indicator for each dimension of current well-being and three indicators for each type of capital have been selected.

  A further long-standing objective has been to make our work on well-being inequalities more visible throughout our communications. Accordingly, one inequality indicator for each dimension of

current well-being has been chosen for the headline set. This selection should not be interpreted as implying that some types of inequalities are more important than others. Indeed, *How's Life? 2017* made a strong case that inequalities cut across all well-being outcomes and are themselves multidimensional, and should thus be applied to the entire indicator set. Nevertheless, some aspects of inequality, depending on the dimension, are particularly salient in policy discussions. The selection of headline inequalities also reflects a balance of the various types of inequalities: vertical inequalities (e.g. S20/80 life satisfaction distribution), horizontal gaps between different groups (e.g. gender gap in total hours worked, regional life expectancy gaps) and deprivations (e.g. financial insecurity, housing cost overburden), are all represented.

- **Adherence to statistical quality criteria**

  In order to be credible, headline indictors need to perform strongly on the statistical quality criteria that this review applied to the entire indicator set (see Annex A). Frequency of data collection and timeliness of publication are essential to provide wider audiences with up-to-date information and to capture changes in indicators on a regular basis. Being effective as a broad summary indicator of well-being is also important. Further, adequate country coverage across the diverse OECD membership matters: hence ideally only indicators that are available for a large majority of OECD countries would be included in the headline set.

  However, much better data is available for some dimensions than for others. Making data availability, frequency and timeliness the main criteria for inclusion in the headline set simply serves to reinforce the status quo: it is largely the economic aspects of well-being that would meet these criteria. For instance, since the Work and Job Quality dimension draws mainly on indicators from labour force surveys, data is typically available with minimal delay and on an annual basis. On the other hand, data on Social Connections and Leisure and Culture tends to come from time surveys that are only collected every 5-10 years. The final headline indicator set proposed thus represents a balance between statistical quality and ensuring that all Framework components (dimensions and capitals) are somehow reflected.

- **Appearance in national well-being initiatives and OECD strategic priorities**

  The frequency with which an indicator is listed among the larger dashboards of different national level well-being initiatives and the degree to which it mirrors the strategic priorities emerging from other OECD policy work (e.g. work on job quality, climate change mitigation) reflects some consensus about its importance; hence it was also considered as selection criteria. For example, inequality measures such as the gender wage gap or regional life expectancy gaps feature in national initiatives and the OECD Policy Action on Inclusive Growth Framework (see Annex B).

  Similarly, the methods adopted by governments that have developed very concise indicator sets were reviewed. This process has varied across countries: In France, the 10 New Wealth Indicators were the product of public consultation, with final decisions then taken by the government; in Italy, decisions on 12 budget indicators were made by an expert committee established by the Prime Minister; in Sweden, Statistics Sweden developed the framework, in consultation with government offices. The Welsh Government is currently undertaking a public consultation on a set of around 12 National Milestones, which will incorporate specific target levels (Welsh Government, 2018[44]), to complement its 46 measures of well-being. The Slovenian National Development Strategy relied upon a consultative multi-year initiative to obtain a wide range of public and stakeholder perspectives (Exton and Shinwell, 2018[15]). A summary of the indicators that countries have commonly selected in the five most concise well-being dashboards (see Annex B) shows that one third conceptually belong to resources for future well-being, highlighting that a headline set should not be restricted to current well-being only.

41. Beyond theoretical considerations, working with the data itself will be essential for determining whether a headline set is meaningful and fit for its intended purpose. For example, in an international well-being monitoring context, measures should be sensitive enough to show relevant differences among countries, and relevant changes over time. Indeed, it may be pertinent to highlight indicators where there have been notable losses or gains in well-being over the last few years or decades, and either convergent or divergent trends among OECD members. Very strong correlations among the headline indicators would also suggest some redundancy, which is clearly to be avoided.

42. A central (and related) question is how fixed the headline indicator set should be over time - for example, between the different editions of *How's Life?* On the one hand, consistency of approach is valuable, and helps to avoid the risk of "cherry-picking" the data to tell a particular story. Some indicators are so important for well-being there is probably a case for their enduring relevance in a headline set. And if an indicator is removed from the headline set just before it reaches a critical turning point, important signals could be missed. On the other hand, retaining some flexibility would allow the communication of different priorities, if other indicators from the larger diagnostic dashboard begin to show worsening performance for OECD countries (which would single them out as "ones to watch").

43. An added complication in developing a decision logic for a headline indicator set is the diversity of country experiences within the OECD: in the last ten years, countries have sometimes moved in opposite directions across many of the indicators in the *How's Life?* dashboard (OECD, 2017[4]). This means that an indicator that might be considered "one to watch" in half of OECD countries might be considered "utterly boring" for the other half. Given countries' different starting points, and different domestic priorities across the OECD Well-being Framework, picking a small set of indicators that is of maximum relevance to all countries will be challenging.

44. The upcoming *How's Life?* 2020 report provides an opportunity to test the concept of headline indicators, and to explore different visualisations for headline findings. It will also continue to show the full diagnostic dashboard of indicators.

45. Three concise headline sets of current well-being levels (12 indicators), current well-being inequalities (12 indicators) and resources for future well-being (12 indicators), all drawn from the diagnostic dashboard, are proposed in Table 9 below.

Table 9. Proposed headline indicator set

12 headline indicators – Levels of current well-being

	Dimension	12 headline levels
DOING WELL (Material and household living conditions)	**Income and Wealth**	Household income
		Household wealth
	Housing and Amenities	Housing affordability (disposable income after housing costs, % of total)
	Work and Job Quality	Employment rate
	Environmental Quality	Access to green space
BEING WELL (Individual states)	**Knowledge and Skills**	Student skills (mean score reading, maths, science)
	Health	Life expectancy
	Leisure and Culture	Leisure and personal care time
	Subjective Well-being	Life satisfaction
RELATING WELL (Relational aspects)	**Social Connections**	Time spent in social activities
	Voice	Voter turnout (as a share of the total population)
	Safety	Homicides

12 headline indicators – Inequalities in current well-being

	Dimension	12 headline inequalities	Type of inequality		
			Vertical	Horizontal	Deprivation
DOING WELL (Material and household living conditions)	**Income and Wealth**	Financial insecurity			✓
	Housing and Amenities	Overcrowding			✓
	Work and Job Quality	Gender wage gap		✓	
		Long working hours (paid)			✓
	Environmental Quality	Exposure to outdoor air pollution (> WHO threshold)			✓
BEING WELL (Individual states)	**Knowledge and Skills**	Students below baseline skill levels (below PISA level 2 in either reading, maths, or science)			✓
	Health	Regional gap in life expectancy		✓	
	Leisure and Culture	Gender gap in total working hours (both paid and unpaid)		✓	
	Subjective Well-being	S80/20 life satisfaction distribution	✓		
RELATING WELL (Relational aspects)	**Social Connections**	No social support			✓
	Voice	Having no say in government			✓
	Safety	Gender gap in feeling safe at night		✓	

12 headline indicators – Resources for future well-being

Capital	12 headline resources for future well-being	Type of capital			
		Stock	Flow	Risk factor	Resilience factor
Natural Capital	Greenhouse gas emissions (domestic production)		✓		
	Biodiversity (IUCN Red List Index)	✓			
	Natural and semi-natural vegetated land cover	✓			
Economic Capital	Gross fixed capital formation		✓		
	Financial net worth of the total economy	✓			
	Household debt			✓	
Human Capital	Educational attainment (young adults)	✓			
	Labour market underutilization			✓	
	Premature mortality		✓		
Social Capital	Trust in others	✓			
	Trust in the national government	✓			
	Women in politics				✓

Annex A. Detailed review of the dimensions and indicators of the OECD Well-being Framework

This Annex summarises the technical review of the indicator set feeding the dimensions of the OECD Well-being Framework, including proposed changes.

It is based on inputs prepared by various team members of the OECD Statistics and Data Directorate: Anil Alpman, Carlotta Balestra, Carrie Exton, Lara Fleischer, Chris Jacobi, Hae Ryun Kim, Joshua Monje-Jelfs, Elena Tosetto and Leonardo Zanobetti.

1. Income and Wealth

Scope

The economic resources that households command are essential components of current well-being. A sufficient stream of income allows individuals to satisfy basic needs and enhances their freedom to choose the lives that they want to live, including the goods and services they want to consume and access. Household wealth can protect people from unexpected economic and personal shocks and allows for consumption smoothing over time. Together, income and wealth form part of household's current and future consumption and possibilities, as these are "determined by current earned income, accumulated wealth and the ability to borrow against existing wealth or future savings" (Stiglitz, Fitoussi and Durand, 2018[33]).

However, the intended scope of the dimension extends beyond consumption and saving possibilities: first, economic insecurity has been identified as priority for well-being measurement by the High-Level Expert Group on the Measurement of Economic Performance and Social Progress. Individuals' degree of vulnerability to economic loss can influence economic and political behaviour (e.g. consumer and investment decisions, choices about family formation and geographic mobility, voting) and on subjective well-being (Stiglitz, Fitoussi and Durand, 2018[11]). Second, while economic insecurity can be defined and measured through objective methods, people's perceptions of their economic situation offer a useful complement (OECD, 2019[45]; Stiglitz, Sen and Fitoussi, 2009[18]). Third, measures of household consumption would inform about "realised" material conditions (rather than merely possibilities) (OECD, 2011[1]). Lastly, it is essential to consider the joint distribution of income, consumption and wealth, as none of these measures alone provide a full picture of a household's economic situation (Stiglitz, Fitoussi and Durand, 2018[11]). For example, households that own wealth but are income poor have higher consumption and saving possibilities than their income alone would suggest, and vice versa (OECD, 2013[7]).

Limitations of the existing measures

In *How's Life? 2017*, the dimension features two measures of consumption and saving possibilities: average household net adjusted disposable income per capita[7] and average household net wealth. The former is derived from the system of national accounts, based on well-established standards for all OECD countries; the latter is based on high-quality official surveys. These measures could be further improved by increasing the consistency of definitions and coverage between national accounts and household surveys.

Further limitations include:

- Household net wealth does not currently include public pension wealth, whose size and distribution differs markedly across retirement systems around the OECD.
- Median household income would be more appropriate to show what is happening to the "typical" household (Stiglitz, Sen and Fitoussi, 2009[18]). However, median household net adjusted disposable income estimates[8] are still experimental and only available for a limited number of countries (Zwijnenburg, Bournot and Giovannelli, 2017[46]).
- The dimension includes no measures of economic insecurity, consumption, or subjective perceptions of households' material situation.

[7] I.e. Including social transfers in kind and net of taxes.

[8] These experimental measures refer to the average of the 3rd quintile.

Proposed changes

In view of the dimension's ideal scope and a review of available measures in terms of their quality (Table 10, Table 11), three changes are proposed for the Income and Wealth dimension:

- A measure of observed financial insecurity to cover one aspect of economic insecurity should be added. An indicator with good country coverage that has already been featured in *How's Life?* 2017 and is available in the OECD Wealth Distribution database is the share of financially insecure people. Insecure individuals are defined as those who are not income poor but risk falling into poverty due to insufficient financial resources to protect against a three-month loss of income (operationalised as equivalised liquid financial wealth below 25% of the income poverty line). This measure does not provide information on the severity or character of the shocks that an individual or household might face, nor accounts for borrowing capacity, informal sources of support or formal insurance against major risks. But, it contains valuable information on the (in)sufficiency of assets that can act as buffers against shocks, highlights the distribution of economic resources and presents joint information on income and wealth (though not of consumption).
- In order to capture those that are already now worse off today than the financially insecure, an indicator on income poverty should be added. The relative income poverty rate is readily available in the OECD Income Distribution database and has been used for previous *How's Life?* editions to analyse deprivations in Income and Wealth.
- An indicator of self-reported experiences with material conditions should be added to complement the objective measures in this dimension. Two options are available: Eurostat's EU-SILC annual core module features an indicator of perceived inability to make ends meet, and the Gallup World Poll includes a question on satisfaction with the present income. Although the former only covers those OECD members participating in EU-SILC, it is recommended here for inclusion, given its production by national statistical offices and higher overall quality, including sampling.

Table 10. Proposed Income and Wealth indicators

Label	Indicator	Unit of measurement	Source	Change compared to 2017 Well-being Framework
Household income	Household net adjusted disposable income	USD at current PPPs, average per capita (for the latest available year); and USD at 2010 PPPs, average per capita (for time series)	OECD National Accounts Statistics database	Retained
Household net wealth	Household net wealth	USD at current PPPs, average per household	OECD Wealth Distribution database	Retained
Financial insecurity	Individuals without sufficient financial resources to protect against a three-month loss of income	Share of individuals who are not income poor with equivalised liquid financial wealth below 25% of the income poverty line	OECD Wealth Distribution database	New
Income poverty	Relative income poverty rate	Share of individuals with equivalised income below 50% of the median income	OECD Income Distribution database	New
Inability to make ends meet	Self-reported inability to make ends meet	Share of the population reporting they are "having great difficulty or difficulty to make their ends meet"	EU-SILC (core module)	New

Table 11. Income and Wealth indicators – quality assessment

	Relevance	Inequalities	Accuracy	Credibility + Comparability	Timeliness + Frequency	Interpretability	Working constraints
Household income	✓	x	✓	✓	✓	✓	✓
Household net wealth	✓	✓	✓	✓/~	~	✓	~
Economic insecurity	✓	✓/~	✓/~	✓	~	✓	~
Income poverty	✓	✓/~	✓	✓	✓/~	✓	✓
Inability to make ends meet	✓	✓/~	~	~	✓	~	x

Note: A ✓ shows that an indicator substantially meets the overall quality criteria shown in the table; a ~ shows that an indicator partially meets the quality criteria, an x shows that the indicator does not meet the quality criteria at all or only to a limited extent.

2. Housing and Amenities

Scope

Housing is a major element of people's current well-being and fundamental rights, as enshrined in international law (e.g. the Universal Declaration of Human Rights and the International Covenant on Economic, Social and Cultural Rights). It is essential to meet basic needs, such as for shelter from weather conditions, and to offer a sense of safety, privacy and personal space. Good housing conditions are also essential for people's health and affect childhood development (WHO, 2018[47]). Housing costs constitute the single highest expenditure item of the household budget, and housing assets are one of the main components of household wealth (OECD, 2016[48]).

An ideal set of measures for housing conditions would provide information on the quality of housing (e.g. living space, the presence of damp, mould, leaks etc., access to electricity and clean water), on aspects of housing affordability, and on the amenities and characteristics of the neighbourhood (e.g. exposure to noise, access to services such as internet access, transport, medical centres, schools).

Limitations of the existing measures

Despite the wide-ranging scope of ideal housing measures, data availability for each of these elements is limited. *How's Life? 2017* depicted the housing dimension relatively narrowly, with two measures of housing quality (rooms per person, and access to basic sanitary facilities) and one measure of housing affordability (household expenditures on housing as a share of disposable income).

Challenges with these measures include:

- The number of rooms available to household members highlights the importance of adequate space, but it makes no distinction between the different needs of households depending on their composition (i.e. beyond their size). Yet the space requirements for a couple with two toddlers may be quite different compared to those of a single-parent family with two sons aged 21 and 16 and a daughter aged 17. It furthermore does not take into account the overall size of the dwelling (i.e. square meters per person) (OECD, 2016[49]). Finally, a very large house is not necessarily a sign of high housing quality (in terms of the condition of the property) and may come with mixed results for quality of life (e.g. more rooms to clean, heat and keep in a good state of repair; larger material and carbon footprints). Thus, while living in crowded conditions is unambiguously bad for well-

being, the well-being consequences of a very high number of rooms per person is less straightforward to interpret.

- Household expenditure on housing includes (actual and imputed) rents as well as expenditures on home utilities, while excluding the principal or the interest paid towards mortgages, as this is regarded as gross fixed capital formation rather than expenditure in the System of National Accounts (from which this measure is derived). Since expenditure on mortgages for a household's primary residence often constitutes a large share of housing costs for home-owners, an ideal measure of housing costs would take these into account (whilst still excluding mortgage costs on secondary residences and rental properties).
- The basic sanitation indicator has relatively weak discriminatory power, as the large majority of households in most OECD countries has an indoor flushing toilet available for the sole use of that household.

While access to electricity and water are not typically major housing problems for OECD countries, important aspects of the scope of the housing dimension that remain unmeasured in OECD data include the condition of the housing (damp, mould etc.) and neighbourhood characteristics (e.g. exposure to noise, access to services such as transport and amenities). The importance of access to services is also recognised in the SDGs, and field testing of a suitable battery of questions to capture this concept, carried out by the OECD and UNDP, is currently ongoing.

Several national well-being frameworks across the OECD also recognise the importance of homelessness as measure of extreme housing deprivation (e.g. Australia, New Zealand, Wales). However, there is currently no international agreement on how to define and measure homelessness, and the OECD Affordable Housing database includes estimates for only a small set of countries. Perceptions of different aspects of housing conditions ranging from satisfaction with the building, the neighbourhood, and levels of noise are also listed in national well-being frameworks (e.g. Israel, Korea, Luxembourg, Scotland, the UK, Wales) but are not available internationally.

Proposed changes

In view of the dimension's ideal scope and our assessment of the quality of existing indicators (Table 12, Table 13), five changes are proposed for the Housing dimension:

- Rooms per person should be replaced by the overcrowding rate as a more accurate measure of the sufficiency of living space. This indicator is available in the OECD Affordable Housing database for 32 OECD countries (compared to 35 OECD countries covered in 2016 by the rooms per person indicator) and applies the EU-agreed definition of overcrowding[9] (Eurostat, 2016[50]) to household survey data (EU-SILC and other official household surveys). The overcrowding rate is preferable to rooms per person, as the EU-agreed definition takes into account different personal space needs depending on household composition, and meets the majority of other quality criteria of this review (Table 13). Other well-being initiatives seem to have come to a similar conclusion: Measures of household overcrowding are included in many more national frameworks than are measures of average living space (Australia, Italy, Luxembourg, New Zealand and Slovenia feature the former, Israel and Korea the latter). It should be noted that definitions of what is considered to be a room vary across countries, with non-European countries also counting kitchens, and other countries referring mainly to dining, living and bedrooms. As this cannot be

[9] A household is considered overcrowded if it does not have at its disposal a minimum number of rooms equal to: one room for the household; one room per adult couple in the household; one room for each single person aged 18 and over; one room per pair of single persons of the same sex 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.

harmonised in all cases, both the rooms per person measure and the overcrowding rates for European countries are likely to be slightly underestimated for the former and overestimated for the latter.

- A measure of housing cost overburden rate should be added. Housing cost overburden as available in the OECD Affordable Housing database refers to the proportion of households that spend more than 40% of their disposable income on total housing cost, which is considered the threshold for what can be effectively supported by households following Eurostat methodology (OECD, 2016[51]). Unlike the System of National Accounts-based measure of household expenditure on housing, housing cost overburden is based on household surveys and takes mortgage costs into account. Several national well-being initiatives also recognise the importance of this concept and include a similar measure (e.g. Austria, Italy, Israel, New Zealand, Slovenia). As some middle- and high-income households can decide to spend a larger amount of their disposable income on housing without necessarily incurring any form of material deprivation, this review suggests restricting this indicator to the bottom 40% of the income distribution. Estimates for mortgage and housing costs, the largest components of household expenditure, are available for 35 OECD countries and are hence suggested here.[10] It should be noted that households at both ends of the income distribution can be under-represented in household survey data, and that this indicator is only updated every 2-3 years in the Affordable Housing database. Given these caveats, housing cost overburden should not completely replace household expenditure on housing which is available annually and for all countries, but rather be viewed as an additional complementary indicator.
- The current indicator of basic sanitation should be adjusted to take only poor households (defined as below 50% of median equivalised disposable household income) into account, rather than the total population. This would increase the sensitivity of the indicator, and is in line with what is presented in the OECD Affordable Housing database.
- The dimension should be renamed Housing and Amenities to signify its ideal scope. The name change would reflect that basic sanitation is already partly a measure of both housing quality and infrastructure, and will make it easier to add other measures of the broader residential setting (e.g. amenities in the neighbourhood, access to services). In this spirit, an indicator on household access to broadband internet, available via the OECD ICT Access and Usage by Households and Individuals database, should be added. Further measures on access to public transport and hospitals in the neighbourhood, which are likely to be produced soon by OECD Centre for Entrepreneurship, SMEs, Regions and Cities could be considered in future, once available.

Table 12. Proposed Housing and Amenities indicators

Label	Indicator	Unit of measurement	Source	Change compared to 2017 Well-being Framework
Overcrowding	Overcrowding rate	Share of households living in overcrowded conditions (EU-agreed definition)	OECD Affordable Housing database (based on EU-SILC core module and other National Statistical Office sources)	New (Replaces rooms per person)
Housing affordability	Disposable income after housing costs	Percentage of household gross adjusted disposable	OECD National Accounts database	Retained

[10] Total housing costs can only be computed consistently for countries covered by EU-SILC and New Zealand, as not all cost elements that make up total housing costs according to the EU agreed definition are available for other countries.

		income remaining, after deductions for housing rent and maintenance		
Housing cost overburden	Housing cost overburden	Share of households in the bottom 40% of the income distribution spending more than 40% of their disposable income on total housing costs	OECD Affordable Housing database (based on EU-SILC core module and other National Statistical Office sources)	New
Basic sanitation	Poor households without access to basic sanitary facilities	Share of households below 50% of median equivalised disposable household income without indoor flushing toilet for the sole use of their household	OECD Affordable Housing database (based on EU-SILC core module and other National Statistical Office sources)	New (Replaces total households without access to basic sanitary facilities)
Broadband access	Households with Internet access at home	Share of households with Broadband Internet access at home	OECD ICT Access and Usage by Households and Individuals database	New

Table 13. Housing and Amenities indicators – quality assessment

	Relevance	Inequalities	Accuracy	Credibility + Comparability	Timeliness + Frequency	Interpretability	Working constraints
Overcrowding	✓	✓/~	✓	~	~	✓	✓
Expenditure on housing	✓	x	~	✓	✓	✓	✓
Housing cost overburden	✓	✓/~	✓	~	~	✓	~
Basic sanitation	✓	✓/~	✓	✓/~	✓	✓	✓
Broadband access	~	✓	✓	✓	✓	~	✓

Note: A ✓ shows that an indicator substantially meets the overall quality criteria shown in the table; a ~ shows that an indicator partially meets the quality criteria, an x shows that the indicator does not meet the quality criteria at all or only to a limited extent.

3. Work and Job Quality (replacing Jobs and Earnings)

Scope

Both the quantity and the quality of work matter for well-being. On the one hand, paid work increases people's command over resources. Both paid and unpaid work can provide people with a chance to fulfil their own ambitions, to develop skills and abilities, to feel useful in society and to build self-esteem. Work shapes personal identity and can create opportunities for social relationships. Being unemployed has a large and persistent negative effect on physical and mental health and on subjective well-being, and goes well beyond the income loss that unemployment brings (OECD, 2011[1]). On the other hand, the quality and the nature of the working conditions people face also matter for well-being. This has been recognised by the ILO's notion of "decent work", as well as by the OECD definition of job quality, which focuses on earnings, labour market security (i.e. risks of job loss and the economic cost for workers) and the quality of the working environment (i.e. non-economic aspects of jobs such as the nature and content of the work performed, working-time arrangements and workplace relationships) (Cazes, Hijzen and Saint-Martin, 2015[34]). Similarly, the 2018 OECD Job Strategy framework considers job quantity, job quality and labour market inclusiveness as central policy priorities (OECD, 2018[52]). Very long working hours (whether paid or unpaid) can also be detrimental to people's well-being.

Limitations of the existing measures

The current "Jobs and Earnings" indicators in *How's Life? 2017* are relatively close to this ideal scope laid out by the Job Strategy, and include indicators of job quantity (the employment rate and the long-term unemployment rate) as well as job quality (earnings, labour market security and job strain). It should be noted that while the OECD Job Strategy measure of earnings quality takes into account both the level and the distribution of earnings across the workforce via the general means approach (see (OECD, 2014[53])for more details), the measure used in *How's Life?* focuses only on an (SNA-based) measure of average annual gross earnings per employee, expressed on a full-time equivalent basis. This is consistent with the general approach of the Well-being Framework to account separately for levels and inequalities.

Several important aspects are not currently reflected within the Jobs and earnings indicators of the OECD Well-being Framework:

- First, within job quality, earnings and job strain only refer to employees and exclude the self-employed as well as informal workers (although self-employed income is accounted for within the Income and Wealth dimension). Methodological work on how to tailor the job strain indicator to the self-employed is ongoing (Cazes, Hijzen and Saint-Martin, 2015[34]).
- Second, the *OECD Guidelines on Measuring the Quality of the Working Environment* list factors such as the social environment, organisational culture, and intrinsic motivation as important features of the working environment (OECD, 2017[9]).
- Third, long working hours, clearly an aspect of job quality, are currently listed as indicator within a different dimension in the OECD Well-being Framework (Work-life balance).
- Fourth, several national well-being frameworks include the share of young people not in employment, education and training (i.e. Belgium, Italy, Israel, Japan, New Zealand, the UK, Slovenia, Wales) as well as job satisfaction (i.e. Australia, Germany, Israel, Italy, Japan, Korea, New Zealand, the UK, Wales). The latter is however measured inconsistently across countries.
- Fifth, concerning the quantity of jobs, ideal indicators would also cover the desired number of working hours, i.e. people who are under-employed. The OECD Inclusive Growth Framework includes a measure of involuntary part-time work.
- Lastly, all existing measures of work within the *How's Life? 2017* indicator set address paid work only. This overlooks the role of unpaid work, which includes caring for dependents.

Proposed changes

In view of the dimension's ideal scope and of the quality of existing measures (Table 14, Table 15), several changes are proposed for the Jobs and earnings dimension:

- The dimension should be renamed to Work and Job Quality. This highlights that job quantity and quality represent distinct well-being facets of work and helps to underscore synergies with the OECD Job Quality Framework.
- An indicator of long working hours (in paid work), previously within the Work-life Balance dimension, should be moved into Work and Job Quality. This move mirrors the OECD Job Quality Framework, which emphasises earnings quality, labour market security and the quality of the working environment, including hours worked (Cazes, Hijzen and Saint-Martin, 2015[34]; OECD, 2016[35]). Long working hours are already included in the job strain measure (which is a composite index with several other components and a particular scoring system). However, this measure is only updated every 5-10 years, due to the limited availability of data for several elements of the index. Including long working hours as a separate indicator therefore allows for more frequent (i.e. annual) monitoring of a concept identified as salient and clearly representing an aspect of job

quality by users of the OECD Well-being Framework. This change also allow the conceptual reshaping of the Work-life Balance dimension into Culture and Leisure (see the respective Annex A section).

- An indicator of the share of young people aged 15-24[11] who are not in employment, education or training (NEET) should be added to reflect growing practice within national well-being approaches. This would supply a clear picture of the education and labour market situation of young people, including those that are discouraged.
- Following the inclusion of the NEET measure, which covers ages 15-24, the age range for the employment rate should then be changed to start at 25 years (from 15 years). This would focus the employment rate indicator on the population that is likely to have finished vocational training and the first stages of post-secondary education, and is already practiced by some National Statistical Offices (e.g. Canada). A high share of young people not in employment is not necessarily a bad thing for well-being if they are still in education or training – and the addition of the NEET measure would capture those for whom this is not the case.
- A measure of the gender gap in total working hours (both paid and unpaid work) should be added. This covers the working age population, and is derived from time use surveys. This inequality measure will show how balanced the distribution of total work is between men and women.

An indicator of involuntary part-time work could also be added to the Work dimension. However, this review already proposes to include a measure of broad labour underutilisation, which encompasses involuntary part-time workers, within Human Capital (see the respective Annex A section).

Table 14. Proposed Work and Job Quality indicators

Label	Indicator	Unit of measurement	Source	Change compared to 2017 Well-being Framework
Employment	Employment rate	Employed aged 25-64, as a percentage of the population aged 25-64	OECD Employment and Labour Market Statistics	Retained (change of age range from 15-64)
Long-term unemployment	Long-term unemployment rate	Percentage of the labour force unemployed for one year or more	OECD Employment and Labour Market Statistics	Retained
NEET	Youth not in employment, education or training	NEET share, as percentage of the population aged 15-24	OECD Education database	New
Gender gap in total hours worked	Gender gap in total hours worked, both paid and unpaid	Hours of paid and unpaid work per week, working age population, by gender	OECD Time Use database	New
Earnings	Average annual gross earnings per full-time employee	USD at the PPPs for the latest available year	OECD Average Annual Wages database	Retained
Labour market insecurity	Labour market insecurity due to unemployment	Average expected earnings loss associated with unemployment as a share of previous earnings	OECD Job Quality database	Retained
Job strain	Incidence of job strain	Proportion of employees who experience a number of job demands that exceeds the number of job resources	OECD Job Quality database	Retained

[11] NEET data for the 15-24 age range (instead of 15-29) is only available within the OECD Education database since 2015, but will be the way the OECD is collecting this data going forward to align with Eurostat.

Long working hours (paid)	Employees working very long (paid) hours	Percentage of employees who usually work 50 hours or more per week	OECD Employment and Labour Market Statistics	Retained (moved from Work-life balance dimension)

Table 15. Work and Job Quality indicators – quality assessment

	Relevance	Inequalities	Accuracy	Credibility + Comparability	Timeliness + Frequency	Interpretability	Working constraints
Employment	✓	✓	✓	✓	✓	✓	✓
Long-term unemployment	✓	✓	✓	✓	✓	✓	✓
NEET	✓	✓/~	✓	✓	✓	✓	✓
Gender gap in total hours worked	✓	n/a	~	~	X	✓	~
Earnings	✓	~	✓	✓	✓	✓	✓
Labour market insecurity	✓	~	✓	~	✓	~/X	✓
Job strain	✓	✓	✓	✓	x	~	✓
Long working hours (paid)	✓	✓	✓	✓	✓	✓	✓

Note: A ✓ shows that an indicator substantially meets the overall quality criteria shown in the table; a ~ shows that an indicator partially meets the quality criteria, an x shows that the indicator does not meet the quality criteria at all or only to a limited extent.

4. Environmental Quality

Scope

Environmental quality affects human health through the quality of air, water and soil, and through the presence and density of hazardous substances. Environmental quality also matters intrinsically to people who value its beauty and the amenities that affect their life choices (e.g. a place to live) (Balestra and Dottori, 2011[54]). Finally, people benefit from environmental services and assets. Access to green space is associated with numerous health and well-being benefits, including psychological relaxation, stress reduction, enhanced physical activity, mitigation of exposure to air pollution, excessive heat and noise, improved social capital and pro-environmental behaviours (WHO Regional Office for Europe, 2016[55]) (Engemann et al., 2019[56]).

An ideal set of indicators would inform on the presence of environmental hazards, on people's access to environmental services and amenities, as well as on people's own feelings and evaluations of these. Damage from environmental disasters and extreme events has also been conceptually associated with environmental quality, but are considered here as falling within the scope of the Personal Security dimension.

Limitations of the existing measures

The current *How's Life? 2017* indicator has a limited scope: it includes an objective indicator of air quality (mean population-weighted exposure to fine ($PM_{2.5}$) particulate matter) and a subjective indicator of satisfaction with water quality (the share of people who respond "yes" to a yes/no question about being satisfied with water quality in the local area, sourced from the Gallup World Poll). The former measure is derived from the Global Burden of Disease project and then weighted with gridded population datasets

from the Joint Research Center Global Human Settlement project[12]. The satisfaction with water quality measure was included in *How's Life?* as a placeholder, until higher quality and internationally comparable data become available from official sources.

The limitations include:

- No measure of access to green space. The SDGs list improving access to green spaces under target 11.7 for Goal 11 (Sustainable cities and communities), and several national well-being frameworks consider access to natural areas, albeit not in a consistently defined manner.[13]
- No objective measure of water quality. Water quality is an important component of environmental quality included in various national well-being frameworks (e.g. New Zealand, Italy, Luxembourg, the Netherlands, Sweden and Wales all have included measures of pollution levels of water bodies). The scope of these measure range from the quality of water for drinking and other purposes to the swimmability of freshwater sources such as rivers and lakes.[14]
- In the absence of internationally comparable objective measures, *How's Life?* has, until now, used a subjective measure of satisfaction with water quality. However, experience of reporting these data over several years has raised cause for concern (e.g. considering how responses are distributed within countries).

Proposed changes

In view of the dimension's ideal scope and a review of the quality of available measures (Table 16, Table 17), three changes are proposed for the Environmental Quality dimension:

- The current measure of air pollution should be reformulated from mean average population exposure to pollution (mean $PM^{2.5}$) to the share of the population exposed to pollution levels above the strictest threshold recommended by WHO Air Quality Guidelines (10 µg/m3 of $PM^{2.5}$), one of the indicators used in the OECD Green Growth Indicator Framework.[15] This change has two benefits: first, it is easer to of interpret. Second, the threshold-measure looks at the low tail of the distribution (a moderate average exposure could result from a small share of the population exposed to very high levels of pollution, or a large share of the population exposed to moderate levels).
- An indicator of access to green space should be added, even if currently available only for European countries. The indicator refers to the share of the population with green urban areas in their neighbourhood (based on satellite data) (Poelman, 2016[57]; Poelman, 2018[58]). This indicator follows the WHO Regional Office for Europe recommendations for proximity-based indicators of green space accessibility (WHO Regional Office for Europe, 2016[55]). While the data series is not currently scheduled for regular updates, it should be reviewed once frequently updated data covering non-European OECD countries become available.

[12] And is widely used in national well-being frameworks and OECD databases, e.g. the Green Growth dashboard.

[13] Concepts range from proximity to natural areas (Japan, Scotland), perception of accessibility (New Zealand, Australia, Scotland), density (Korea), and number of visits to the outdoors (Australia, Canada, Israel, Scotland, the United Kingdom).

[14] For example, the New Zealand Treasury's Living Standards Framework Dashboard includes a measure of water "swimmability" reflecting the amenity value of clean water for recreational purposes.

[15] While the WHO Guidelines state that no level of $PM^{2.5}$ exposure can be considered entirely "safe" for human health, they are clear that exposure levels above 10mg represent progressively worsening risks to health. Data for other thresholds (such as 15, 25 and 35mg) are also available.

- The indicator on satisfaction with water quality could be dropped from the well-being dashboard, since it has not been possible to gather sufficient evidence on the accuracy, credibility and comparability of this measure across countries. Despite having a relatively simple construction (i.e. the share of the population satisfied with the quality of their local water) the precise meaning of the questionnaire item behind this inidicator is also in some doubt (e.g. does it refer to tap water, or the quality of local bodies of water?). The downside of this move is that water quality would then be completely absent from the dashboard of measures, thus narrowing the scope of the dimension being covered.

Table 16. Proposed Environmental Quality indicators

Label	Indicator	Unit of measurement	Source	Change compared to 2017 Well-being Framework
Air pollution	Population exposure to outdoor air pollution by fine particulate matter above WHO Guidelines	Population share exposed to more than 10 µg/m3 of PM 2.5	OECD Green Growth database	Retained (change of focus from mean PM2.5 concentrations)
Access to green space	Access to green space	Population share with green urban areas in their neighbourhood	Calculated based on Copernicus Urban Atlas data	New
Water quality	Satisfaction with water quality	Percentage of satisfied people in the overall population	Gallup World Poll	Remove

Table 17. Environmental Quality indicators – quality assessment

	Relevance	Inequalities	Accuracy	Credibility + Comparability	Timeliness + Frequency	Interpretability	Working constraints
Air pollution	✓	x	✓	✓	✓	✓	✓
Access to green space	✓	x	✓	✓	x	✓	x
Water quality	~	✓	?	?	✓	~	✓

Note: A ✓ shows that an indicator substantially meets the overall quality criteria shown in the table; a ~ shows that an indicator partially meets the quality criteria, an x shows that the indicator does not meet the quality criteria at all or only to a limited extent.

5. Knowledge and Skills (previously Education and Skills)

Scope

For individuals, acquiring knowledge and skills has intrinsic value, and responds to the basic need to learn and to adapt to a changing environment. Higher levels of knowledge and skills also have instrumental value: they are associated with higher earnings, greater employability and better job quality; people that are more educated generally have better health status, and report higher social support and life satisfaction (OECD, 2017[4]). Finally, education provides individuals with the knowledge to enjoy certain leisure activities such as reading and cultural events, and with the skills to integrate fully into society, by fostering civic awareness and participation (OECD, 2011[1]).

Traditional education measures refer to levels of formal education attained by people in a country. However, the scope of what is both intrinsically and instrumentally valuable to people goes well beyond formal qualifications: it can relate to a large variety of knowledge and skills, however they are acquired. Literacy and numeracy are foundational skills that enable full participation in daily activities such as work

and leisure, but other skills such as digital skills are increasingly becoming a basic requirement for inclusion in the economic and social activities of modern life. Beyond these core building blocks, the range of knowledge and skills that can contribute to well-being is vast: from parenting skills through to sporting ability, to job-specific skills. Non-cognitive abilities, such as social and emotional skills including resourcefulness, the ability to adapt and the capacity to work well among others by taking personal and collective responsibility can also be considered as essential basic competencies. Research shows that they deliver solid benefits in terms of labour market and education outcomes, especially in times when trends such as automation are shifting the skillsets needed to thrive (World Bank, 2017[59]; OECD, 2015[21]).

Limitations of the existing measures

The measures used in *How's Life? 2017* were: educational attainment of the adult population (i.e. the number of adults aged 25 to 64 holding at least an upper secondary degree), cognitive skills at age 15 (the mean score of mathematics, reading and problem-solving skills, as measured through the OECD Programme for International Student Assessment, PISA), and a measure of adult skills (the mean score of literacy and numeracy for adults aged 16-65 years, as captured OECD Programme for the International Assessment of Adult Competencies, PIAAC). These are high-quality measures with high relevance. Nevertheless, from the perspective of providing a complete coverage of the domain scope, they have limitations:

- Educational attainment only refers to the level of formal education attained, not the quality of the outcome - i.e. what individuals really know and can do. By contrast, the measures of skills from the OECD's PISA and PIAAC programmes provide insights into people's competencies across a range of tasks, regardless of the level of formal attainment.
- OECD PISA and PIAAC measures tend to focus on the core competencies necessary for social and economic inclusion and success. Since the potential range of knowledge and skills that could be assessed is vast, and PISA in particular aims to inform policy focused on the formal education system, other, less formalised knowledge and skills that contribute to people's well-being are less well-captured. Despite progress made in investigating non-cognitive skills through studies such as the OECD Study on Social and Emotional Skills (SSES, initiated mid-2017 for a three year period in participating cities and countries), data cannot be consistently captured across all OECD countries as of yet.
- The current *How's Life?* practice of reporting mean average scores across the different skills assessed in PISA and PIAAC helps to meet a key objective of having a small set of broad summary indicators. Nevertheless, it has two critical drawbacks. The first relates to information loss and interpretability: summarising across mathematics, reading and problem-solving ability (for example) can mask situations where a country (or population group) perform well in one dimension, but poorly on others. Elsewhere in the well-being framework, the use of composite measures is generally avoided in order to facilitate interpretation. Second, reporting the mean average score across all three skills in PISA means that change over time cannot be assessed: the nature of the benchmarking system, and the normalisation procedure used within and between observation years, is such that the mean score of mathematics, reading and problem-solving ability in one year (e.g. 2012) is not comparable with the mean score in another year (e.g. 2015). However, appropriate data for comparisons over time are produced by the OECD Education Directorate for each domain assessed separately (mathematics, reading and problem-solving skills).

Proposed changes

In view of the dimension's ideal scope and a review of indicators for their quality (Table 18, Table 19), three changes are proposed:

- The dimension is renamed Knowledge and Skills, to acknowledge that many competencies are not necessarily acquired through formal education, and continue to develop over the life-course, through self-driven learning, on-the-job learning and other means. Furthermore, education is about the school system of a country, which is just the delivery vehicle of knowledge and skills (rather than the final the outcomes of interest).[16]

- In line with the increased focus on final competencies, the indicator of educational attainment (of working age adults) is removed. The more future oriented indicator of educational attainment of young adults remains under Human capital.

- The previous average summary scores for the PISA and PIAAC indicators (mean proficiency in reading, mathematics and science, and mean proficiency in literacy and numeracy, respectively) is replaced by separate reporting of each skill category. This follows current practice in most other analyses of this data, and would enable comparisons over time.

Table 18. Proposed Knowledge and Skills indicators

Label	Indicator	Unit of measurement	Source	Change compared to 2017 Well-being Framework
Adult skills (literacy)	Literacy competencies of the adult population aged 16-65	Mean proficiency in literacy	OECD Survey of Adult Skills (PIAAC)	Retained (move from mean score across all subjects to individual subject score)
Adult skills (numeracy)	Numeracy competencies of the adult population aged 16-65	Mean proficiency in numeracy	OECD Survey of Adult Skills (PIAAC)	Retained (move from mean score across all subjects to individual subject score)
Student skills (reading)	Cognitive skills of 15-year-old students in reading	Mean score for reading	OECD Programme on International Students Assessment (PISA)	Retained (move from mean score across all subjects to individual subject score)
Student skills (mathematics)	Cognitive skills of 15-year-old students in mathematics	Mean score for mathematics	OECD Programme on International Students Assessment (PISA)	Retained (move from mean score across all subjects to individual subject score)
Student skills (science)	Cognitive skills of 15-year-old students in science	Mean score for science	OECD Programme on International Students Assessment (PISA)	Retained (move from mean score across all subjects to individual subject score)
Educational attainment	Upper secondary educational attainment among working-age adults	Percentage of people aged 25-64 with at least an upper secondary education	OECD Education at a Glance database	Retained

Table 19. Knowledge and Skills indicators – quality assessment

	Relevance	Inequalities	Accuracy	Credibility + Comparability	Timeliness + Frequency	Interpretability	Working constraints
Adult skills (literacy)	✓	✓	✓	✓	x	✓	~
Adult skills (numeracy)	✓	✓	✓	✓	x	✓	~

[16] A broader knowledge and skills framing can be found in several national initiatives, such as the New Zealand Living Standards Framework, or the Slovenian Development Strategy 2030.

Student skills (reading)	✓	✓	✓	✓	~	✓	✓
Student skills (mathematics)	✓	✓	✓	✓	~	✓	✓
Student skills (science)	✓	✓	✓	✓	~	✓	✓
Educational attainment	✓	✓	✓	✓	✓	~	✓

Note: A ✓ shows that an indicator substantially meets the overall quality criteria shown in the table; a ~ shows that an indicator partially meets the quality criteria, an x shows that the indicator does not meet the quality criteria at all or only to a limited extent.

6. Health

Scope

The length of life and whether it is lived free of illness and disability both have intrinsic value for people. Health status is consistently ranked as one of the most valued aspects in people's lives in both the public consultations that have informed national well-being frameworks (e.g. in Italy, Germany, Israel and Scotland) and by the users of the Better Life Index (Balestra, Boarini and Tosetto, 2018[60]). Health status also has instrumental value because it enhances people's opportunities to participate in education, the labour market and community life.

Health in its broadest sense refers to "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 1948[61]). Even though organisations like the WHO or OECD have always insisted on health being a multi-dimensional construct, in practice health has frequently been conceptualised as the "absence of disease", with prevalence indicators of illness used as prime indicators of overall health.

An ideal set of outcome indicators of health would provide information about the most important diseases and conditions causing poor health, disability or death, including their prevalence, chronicity and intensity. It would alsoocus on both physical and mental health, the latter of which is increasingly recognised as a core component of health by policy makers, the medical community and the business world (Patel et al., 2018[62]; OECD, 2019[63]).

Limitations of the existing measures

How's Life? 2017 included two measures of health status: life expectancy at birth as a summary indicator of mortality, and self-rated health as (subjective) summary measure of morbidity. Life expectancy at birth relies on well-established reporting standards, based on internationally harmonised sources and collection methods. Information on self-perceived general health status is sourced from general household or health surveys and is one of the few morbidity indicators that is available for all OECD countries on a reasonably comparable basis. Perceived health is a genuine outcome measure (rare in international health statistics). This measure has the advantage of summarising an individuals' mental, physical and social experience, which all affect general health ratings (Hunt, 1988[64]). Self-reported health, apart from being important in its own right, is also predictive of mortality risk and a range of health outcomes (European Centre for Disease Prevention and Control, 2015[65]; Breidablik, Meland and Lydersen, 2008[66]; Zajacova and Woo, 2015[67]).There is evidence that the predictive validity of self-rated health in terms of mortality risk has strengthened from 1980-2002, suggesting that people have become better at predicting their health status with increased exposed to health information (Schnittker and Bacak, 2014[68]).

Relative to the total scope of the health dimension, the current *How's Life?* indicators face some limitations:

- Life expectancy only refers to the quantity of people's lives, but not to whether extra years of life gained are spent in good health. Numerous national well-being frameworks around the OECD include measures of "healthy" life expectancy (e.g. Belgium, France, Italy. Israel, Netherlands, New Zealand, Northern Ireland, Scotland, Slovenia, the UK, Wales), which uses disability weights associated with different health states to compute the number of years of good health that a newborn can expect. Internationally comparable measures of health expectancy are not yet available beyond the OECD countries covered by Eurostat.
- On perceived health, differences in health questionnaires across OECD countries mean that full standardization regarding wording and response scale has not been achieved beyond Europe. The indicator is based on questions such as: "How is your health in general?", with answers usually classified as "very good, good, not very good, poor", though in some non-European countries, different response categories are used[17]. In the OECD Health Database, the response categories from different surveys are rescored to fit into three broad categories of "good/very good" (all positive response categories), "fair" (not good, not bad), "bad/very bad" (all negative response categories). Like other subjective measures (e.g. trust, subjective well-being), self-reported health status might also be prone to different cultural response styles that may limit comparability across countries (Babones, 2009[69]).
- Measures of functioning (i.e. whether people are able to perform daily activities, including self-care) have long been recommended (e.g. by the Washington Group on Disability). However, despite the existence of international guidance (for example, the Budapest Initiative survey module for measuring health state, prepared by the Joint UNECE/ WHO/ Eurostat Task Force on Measuring Health Status), internationally harmonised measures are not yet available for OECD countries.
- Measures of mental health are currently absent from the *How's Life?* indicator set. There are considerable challenges associated with identifying comparable *outcome* measures of mental health at the population level (as opposed to measures of people diagnosed or treated by medical professionals). Measures focusing on the latter can penalise countries with good medical systems and mental health awareness programs, since more people in these contexts are more likely to seek treatment. The stigma attached to mental problems may also lead to underreporting of this phenomena, affect cross-country comparability and the interpretation of changes in mental health prevalence over time.
- Measures of disability and disease prevalence, intensity and chronicity are also absent from the current *How's Life?* indicator set. This is a complex area to cover comprehensively in an international data set, but a limited number of leading indicators for non-communicable diseases (such as diabetes prevalence) could be considered. A measure of premature mortality (e.g. deaths below the age of 70 due to preventable conditions) would be a valuable addition – that is considered under Human Capital in this discussion paper.

Proposed changes

In view of the dimension's ideal scope and of the quality of existing measures (Table 20, Table 21), two changes are proposed for the Health dimension:

- Suicide, alcohol and drug use deaths could add an objective measure of severe mental illness and addiction. The national well-being frameworks of Finland, Korea, Luxembourg, New Zealand and Slovenia all include suicide rates, even if available data drawn from death registries is likely to underrepresent the scale of the phenomenon due to the associated stigma, and does not account

[17] For instance, the question in Chile's CASEN survey uses a numerical scale: "On a scale of 1-7, where 1 is very bad and 7 very good, what rating would you allocate to your current health status?".

for much higher rates of attempted suicides (Lee, Roser and Ortiz-Ospina, 2016[70]). Also including deaths from substance abuse results in a larger sample of people "in despair" and might mitigate some of the biases of suicide measures. In some OECD countries, suicide, alcohol and drug use deaths have risen significantly in past decades (Hedegaard, Warner and Minino, 2017[71]; Raleigh, 2019[72]; OECD, 2019[73]), which calls for closer monitoring.

- An indicator on self-reported chronic depression could be added to complement the dimension with a measure of mental (ill)health. The indicator proposed here is the share of respondents reporting having chronic depression in the past 12 months (including both respondents whose diagnosis has been confirmed by a medical professional, and those who have self-diagnosed). It is available via the European Health Interview Survey, and has been featured in previous OECD publications such as *Health at a Glance* (2018[74]). This measure needs to be interpreted with some caution regarding underreporting due to stigma, and change in levels potentially reflecting shifting social norms and the public narrative around depression. Moreover, this indicator is only available for European OECD members.

Table 20. Proposed Health indicators

Label	Indicator	Unit of measurement	Source	Change compared to 2017 Well-being Framework
Life expectancy	Life expectancy at birth	Number of years that a newborn can expect to live	OECD Health Statistics database	Retained
Perceived health	Perceived health status	Percentage of adults reporting "good" or "very good" health	OECD Health Statistics database	Retained
Suicide, alcohol and drug use deaths	Deaths from alcohol and drug use disorder and suicide	Deaths from alcohol and drug use disorder and suicide, per 100 000 population (age-standardised to the 2010 OECD population)	OECD Health Statistics database	New
Self-reported depression	Self-reported chronic depression	Share of respondents reporting having chronic depression in the past 12 months	European Health Interview Survey	New

Table 21. Health indicators – quality assessment

	Relevance	Inequalities	Accuracy	Credibility + Comparability	Timeliness + Frequency	Interpretability	Working constraints
Life expectancy	✓	~	✓	✓	✓	✓	✓
Perceived health	✓	✓	~	~	✓	✓	✓
Suicide, alcohol and drug use deaths	✓	~	✓	~	~	✓	~
Self-reported depression	✓	✓/~	~	✓	~	~	x

Note: A ✓ shows that an indicator substantially meets the overall quality criteria shown in the table; a ~ shows that an indicator partially meets the quality criteria, an x shows that the indicator does not meet the quality criteria at all or only to a limited extent.

7. Leisure and Culture (replacing Work-life Balance)

Scope

The way in which people spend the time available in a day is a key determinant of their well-being. Indeed, having sufficient leisure time that can be filled with activities of one's choosing is important for people's health, satisfaction with life and social relationships. At the same time, culture, though an elusive concept, is an important source of individual and collective identity and is frequently named as a well-being priority by people participating in public consultations on well-being.

Ideally, this dimension would cover the quantity of time devoted to leisure and personal care, as well as people's satisfaction with their time use. Time use that is negatively associated with well-being, such as time spent commuting, also belongs in the scope, as this constraints time available for other activities.

National well-being initiatives have conceptualised culture in three different ways: i) cultural participation focuses on access to and participation in cultural activities (e.g. attending shows, live performances, sports events, visits to cultural sites, practice of artistic activities, participation in more regular activities such as reading books and watching television); ii) cultural heritage focuses on a country's cultural assets, such as man-made and natural spaces of special significance, such as World Heritage sites; iii) cultural identity focuses on people's identification with key characteristics and shared norms of their societies[18].

Limitations of the existing measures

The previous Work-life balance dimension included measures of long working hours and time devoted to leisure and personal care. These indicators face a major limitation:

- Both measures refer to people engaging in paid, dependent work, rather than the entire population. In fact, the indicator of time devoted to leisure and personal care as used in *How's Life? 2017*, only refers to people in full-time employment, due to the difficulties in categorising 'leisure' for other groups (e.g. the unemployed). Yet leisure time is important for the whole population, and it may be at greatest risk for those with a high caring responsibilities, work that is unpaid.

Proposed changes

In view of the dimension's ideal scope and a review of the quality of available measures (Table 22, Table 23), five changes are proposed for this dimension:

- A new dimension: Leisure and Culture, should be added to the OECD Well-being framework. This would address some weaknesses of the Work-life balance conceptualisation by highlighting leisure time as relevant to the entire population. Including 'Culture' in the title would address the legitimate complaints that culture, although not well defined, is an important component of well-being that is so far absent from the Framework.
- In line with this conceptual reshaping, the indicator of long working hours in paid employment, which refers to employees working 50 hours or more on a regular basis, is moved to the Work and Job quality dimension (see the respective Annex A section for more details).

[18] For instance, New Zealand Treasury's Living Standards Framework and StatNZ's Indicators Aotearoa New Zealand include measures of the "ability to be oneself", and the Northern Ireland Outcomes Delivery Plan features an indicator on "believing one's their cultural identity is respected by society". Language is a critical cultural competence that enables the understanding of cultural traditions and knowledge, and enables their continued practice and transfer to future generations. Language proficiency is another hence another frequently measured component of cultural identity, especially where language retention is at risk. The national Frameworks of New Zealand, Wales, Latvia and Luxembourg all include indicators on the number of language speakers of either national or indigenous languages.

- Time devoted to leisure and personal care (previously considered under Work-life Balance) squarely belongs in the newly created Leisure and culture dimension[19].
- An indicator on long working hours that takes into account both paid and unpaid work and thus recognises the real working burden taken on by all parts of the population should be added. The measure focuses on individuals that work more than 60 hours per week, out of which at least 30 involve unpaid work. The suggested cut-off includes both people with long hours of unpaid work (e.g. due to caring responsibilities), and those that are subject to total long work hours from a paid job and a significant unpaid work burden (but which fall short of the cut-off of 50 or more hours of paid work of the long working hours indicator under Work and Job Quality). The measure, which must be computed from time use microdata, enables only limited OECD country coverage.
- An indicator of satisfaction with time use that would capture time crunches experiences by individuals (in the entire population) should be added. The importance of tracking satisfaction with time use, rather than just the quantity of time dedicated to specific activities, is recognised in several national well-being initiatives (Italy, Israel, Korea, Luxembourg, Netherlands, New Zealand, Slovenia, and the UK include it). The indicator proposed here is available through the well-being ad-hoc module of EU-SILC based on the question: "How satisfied are you with your time use?" on a scale from 0 (totally dissatisfied) to 10 (fully satisfied). It is only available for European OECD members (other countries measure satisfaction with time use, but with different reference periods and response scales).
- An indicator on cultural participation could be added, to signal that culture is an important part of well-being, and to hopefully encourage future statistical development in this area. Indeed, many national well-being frameworks include measures of cultural participation (Australia, Finland, Israel, Korea, Latvia, New Zealand, Northern Ireland, Scotland, Slovenia, the UK, Wales). What counts as "cultural activity" can range from personal artistic endeavours, to attending an opera performance or a sports game. Nevertheless, some internationally comparable data from official sources is available, thanks to the EU-SILC 2006 and 2015 ad-hoc modules on social participation. This asks respondents to state how often they have engaged in a selected set of activities (cinema, live performances, and cultural sites visits) in the past year. This measure is only available for European OECD members, but is preferable to other alternatives with larger country coverage but a very narrow focus on very narrow and 'passive' activities, such as visits to the cinema per capita. An open question for further research and statistical development should look into which types of activities specifically contribute to well-being.

Table 22. Proposed Leisure and Culture indicators

Label	Indicator	Unit of measurement	Source	Change compared to 2017 Well-being Framework
Leisure and personal care time	Time devoted to leisure and personal care	Hours per day, people in full-time employment	OECD Time Use database	Retained

[19] Ideally, the indicator of leisure and personal care would be reformulated to consider the total population, not just those in full-time paid employment, with three important exclusions: unemployed persons, people disengaged from the labour market, and involuntary part-time workers. The share of unemployed people, discouraged workers (i.e. people who want a job, but have stopped searching for one and thus do not qualify as unemployed) and involuntary part-time workers vary substantially across OECD countries, and could contaminate the estimation of leisure time, since they may be associated with (large) unwanted gaps in productive activity. However, since it is not possible to separate out all of these groups in the data available, for now the recommendation is to continue limiting the measure to full-time paid employees only.

Long unpaid working hours	Individuals working very long unpaid working hours	Percentage of total working age population (aged 15-64) who usually work more than 60 hours per week, out of which at least 30 involve unpaid work	OECD Time Use database	New
Satisfaction with time use	Satisfaction with time use	Mean values on an 11-point scale, with responses ranging from 0 (not at all satisfied) to 10 (fully satisfied)	EU-SILC ad hoc module (well-being), 2013, 2018	New
Cultural participation	Participation in cultural activities	Share of respondents stating that they have attended set of cultural activities (cinema, live performances, cultural sites visits) "at most three times" or "more than three times" in the last 12 months	EU-SILC ad hoc module (social participation) 2006, 2015	New

Table 23. Leisure and Culture indicators – quality assessment

	Relevance	Inequalities	Accuracy	Credibility + Comparability	Timeliness + Frequency	Interpretability	Working constraints
Leisure and personal care time	✓	✓	✓	✓/~	x	✓	~
Long working hours (unpaid)	✓	~	✓	✓/~	x	✓	~
Satisfaction with time use	✓	✓	✓	~	~/x	✓	x
Cultural participation	✓	✓	✓	~	~/x	~	x

Note: A ✓ shows that an indicator substantially meets the overall quality criteria shown in the table; a ~ shows that an indicator partially meets the quality criteria, an x shows that the indicator does not meet the quality criteria at all or only to a limited extent.

8. Subjective Well-being

Scope

The *OECD Guidelines on Measuring Subjective Well-Being* (OECD, 2013[10]) define the concept as:

> *good mental states, including all of the various evaluations, positive and negative, that people make of their lives and the affective reactions of people to their experiences*

This definition encompasses three key elements:

- *Life evaluation* – a reflective assessment on a person's life or some specific aspect of it
- *Affect* – a person's feelings, emotions and states, typically measured with reference to a particular point in time
- *Eudaimonia* – a sense of meaning and purpose in life, or good psychological functioning

The ideal set of subjective well-being indicators would therefore encompass measures of life evaluations, affect, and eudaimonia.[20] For example, the *OECD Guidelines* proposed a core module of five questions, considered to be the absolute minimum necessary to capture these three elements. Within that core module, the life evaluation question (in this case a question about life satisfaction, rated on a 0 to 10 scale) was identified as the primary measure – i.e. in a scenario where only one question can be included in a survey, this is the single question recommended. This was selected as the primary measure largely because it is the question for which there is the greatest degree of international consensus in its construction and use; and the strongest evidence base regarding the relevance, reliability and validity of the measure.

Limitations of the existing measures

The main indicator set for *How's Life? 2017* featured one measure of life evaluation: mean average life satisfaction, reported on a 0-10 scale, where 0 means you feel "not at all satisfied", and 10 means you feel "completely satisfied". This is consistent with the primary measure in the *OECD Guidelines*, and was sourced from national statistical office data sets. Due to a lack of time series in official data sets, a life evaluation indicator from the Gallup World Poll (the "Cantril ladder") was used to assess change over time. In addition, Chapter 2 of *How's Life? 2017*, which focused on inequalities in well-being, used a measure of negative affect balance – i.e. the share of the population who reported more positive than negative feelings yesterday – as a measure of subjective well-being deprivation, sourced from the Gallup World Poll.

Limitations include:

- No eudaimonia measure. Harmonised data, collected by national statistical offices, and consistent with the OECD Guidelines recommendation, are available for 24 European OECD countries from EU SILC, but this was a one-off measure implemented in 2013 only. No time series is available.
- Limited time series and low data frequency for life evaluation from official sources. In nearly two-thirds of OECD EU countries, the only life evaluation measure available dates back to an EU SILC ad hoc module in 2013, and no time series is currently available. In total, around half of all OECD countries have a regular or semi-regular collection of life evaluation data beyond the EU SILC measure, but in three cases the methodology used is not consistent, and therefore not internationally comparable. It is anticipated that a life satisfaction measure will be included in the EU SILC core module from 2019 onwards, which will considerably improve country coverage and time series from official sources. Until then, the only measure with good international comparability, strong country coverage and regular time series (back to 2005/6) is the "Cantril ladder" from the Gallup World Poll.
- Limited time series, low data frequency, and low country coverage for affect data from official sources. As with life evaluation, the large majority of OECD EU countries have only one data point

[20] Self-reported measures of objective concepts, such as self-rated health, or self-reported financial difficulty, are not considered within the scope of subjective well-being. While the measurement tool for questions of this sort are self-reports, the subject matter being investigated is not inherently subjective, i.e. it can be observed by a third party. People's satisfaction with specific domains of life, such as their satisfaction with their financial status or their social relationships, could be considered as subsets of life evaluations – although within the context of the *How's Life?* indicator dashboard, they would most logically appear as subjective measures within their respective domains (income and wealth; social connections). What is specific about the concept of subjective well-being is that only the person under investigation can provide information on their evaluations, emotions and psychological functioning – it is people's own views of their feelings that are the subject of interest (rather than their self-reports of objective phenomena).

available, from EU SILC 2013. Other data collections (in 14 EU and non-EU OECD countries) are poorly harmonised, and in some cases infrequently collected. No current plans have been signalled to include affect data in the EU SILC core. Thus, the only measures with good international comparability, strong country coverage and time series are items from the positive and negative experience scales included in the Gallup World Poll.

Proposed changes

In view of the dimension's ideal scope and a review of available measures that meet the quality criteria of the Well-being Framework (Table 24, Table 25), the only change proposed for the Subjective Well-being dimension is to include negative affect balance on a routine basis as part of the larger diagnostic dashboard. Current levels of life satisfaction and inequalities data will be derived from official data sources, even if the reference year remains 2013 in around half of all countries. However, to assess change over time, *How's Life?* will continue to draw on the Gallup World Poll measure (the Cantril ladder) until greater country coverage is possible for time series based on official data.

Table 24. Proposed subjective well-being indicators

Label	Indicator	Unit of measurement	Source	Change compared to 2017 Well-being Framework
Life satisfaction (current levels and inequalities)	Life satisfaction	Mean values on an 11-point scale, with responses ranging from 0 (not at all satisfied) to 10 (fully satisfied)	EU SILC and other National Statistical Office sources	Retained
Life evaluation (change over time)	Life evaluation (Cantril ladder)	Mean values on an 11-point scale, with responses ranging from 0 (worst possible life) to 10 (best possible life)	Gallup World Poll	Retained
Negative affect balance	Negative affect balance	Share of people who report more negative than positive feelings yesterday	Gallup World Poll	New, but used as an inequality measure in 2017

Table 25. Subjective well-being indicators – quality assessment

	Relevance	Inequalities	Accuracy	Credibility + Comparability	Timeliness + Frequency	Interpretability	Working constraints
Life satisfaction (current levels and inequalities)	✓	✓	✓	✓	x	✓	~
Life evaluation (change over time)	✓	~	~	~	✓	✓	✓
Negative affect balance	✓	✓	~	~	✓	✓/~	✓

Note: A ✓ shows that an indicator substantially meets the overall quality criteria shown in the table; a ~ shows that an indicator partially meets the quality criteria, an x shows that the indicator does not meet the quality criteria at all or only to a limited extent.

9. Social Connections

Scope

Social connections are essential for people's well-being. Beyond the intrinsic pleasure that people derive from spending time with others, people with extensive and supportive networks have better health, tend to live longer and are more likely to be employed. At the same time, the lack of social connections deteriorates individuals' mental and physical health (Cacioppo, Hawkley and Thisted, 2010[75]).

An ideal set of indicators should provide information about the quantity of social interactions (e.g., frequency and amount of time individuals spend with household members, their family, friends, colleagues, and other known persons), their quality (e.g., satisfaction with social interactions, perceived loneliness), and the support (e.g. emotional and financial) provided by these connections.

Measuring both quantity and quality of social connections is particularly relevant as the two do not necessarily capture the same phenomena: spending a considerable amount of time interacting with people does not necessarily prevent loneliness or a lack of support.

Typical measures of social connections have often relied on indirect indicators such as membership of associations (e.g. sporting clubs, religious or professional organisations) or density of voluntary organisations in a given area. However, such measures are limited to formal networks, whose importance can differ over time and across countries (OECD, 2011[1]).

Limitations of the existing measures

*How's Life? c*urrently includes a single indicator of social connections, i.e. the share of the population reporting to have social support. This measure is derived from a "yes/no" question on whether the respondent has friends or relatives whom he or she can count on in times of trouble from is the Gallup World Poll. This indicator has little discriminatory power due to the ceiling effect introduced by the binary response scale.[21] There is also limited evidence on how the question is interpreted by respondents across countries and whether "count on in times of trouble" triggers thoughts of emotional or financial support (or both). Nevertheless, at this point the social support indicator is the only internationally comparable social connections measure available that covers all OECD countries and is collected on a frequent and timely basis.

Further limitations of the dimension so far include:

- Despite being clearly in the scope of the dimension, indicators of the quality and quantity of social interactions are absent. Many national well-being initiatives include relevant measures, with 8 frameworks featuring an indicator of loneliness (Israel, Japan, Korea, New Zealand's two initiatives, Scotland, the UK –where the ONS has a decidated work programme on loneliness, and Wales), an issue which has received much attention from policy makers in recent years due to the extremely harmful impact of social isolation.[22] Loneliness captures a different aspect of social connections, since social support (as currently measured) is related primarily to persons in need.
- Frequency of social contact, although defined differently across countries, is included in 4 frameworks (Belgium, Luxembourg, the Netherlands, Slovenia). Frequency of social support,

[21] In most OECD countries, the share of the population reporting having a friend or relative whom they can count on for help in case of need is close to 90% (OECD, 2017[4]).

[22] For example, France declared loneliness as "the Grande Cause nationale" of 2011 while the British Prime Minister said, in 2018, "loneliness is one of the greatest public health issues" and appointed one of her ministers to lead on issues connected to loneliness.

defined as the proportion of people who report socialising (i.e. meeting face to-face) with friends and relatives at least once a week, from the EU-SILC ad-hoc module on social participation was included as secondary indicator in *How's Life?* 2011.

- Information on whether social interactions take place face-to-face or via social networks is also missing. However, the frequency of the latter has risen and is likely to continue to do so with digitalisation. Since computer technology may foster a wider network with weak ties, rather than smaller network with strong ties, its impact on social interactions is likely substantial (OECD, 2019[19]). Most recent time use surveys ask respondents to report the use of technology, but for the time being, this indicator can be computed only for a limited number of countries.

Proposed changes

In view of the dimension's ideal scope and a review of the quality of available measures (Table 26, Table 27), four changes are proposed for the Social Connections dimension:

- A measure of time spent in social activities could be added to capture the quantity of social connections. Developments in time use surveys allow measuring the time individuals spend in interactions with others on a typical day. While the allocation of time during the day of the interview may not accurately depict an individual's typical time allocation, time use surveys do provide accurate information when estimates are averaged over the whole sample or group (e.g. age, gender, education, migrant status, employment status, number of children, etc.). When measuring the amount of time spent interacting with others, two options are available: the time allocated to activities such as visiting and entertaining friends; or time spent alone (as a deprivation measure). The definition of social activities as available in time use surveys does not account for time individuals spend interacting with people during other activities (e.g. lunches, commuting, watching TV, and doing sports) – i.e. time not technically spent alone. As data on time spent on social interactions is available for slightly more OECD countries than time spend alone (29 vs 28), it is recommended for inclusion in the How's Life? dashboard.
- An indicator on perceived loneliness should also be added. Comparable data on loneliness are available via the well-being ad-hoc module of EU-SILC, where respondents are asked to state whether they are feeling lonely all, most, some, a little, or none of the time. The measure is only available for European OECD members, and has only been added to EU-SILC in 2018. Hence, no time trends are available and data is unlikely to be published in time for the *How's Life?* 2020 report. Nevertheless, the importance of loneliness for well-being and recent strong policy interest warrants the inclusion in the dashboard to signal that future *How's Life?* editions will report on this priority issue.
- A measure of satisfaction with personal relationships should also be added. Indeed, both social support and loneliness are strongly correlated with satisfaction with personal relationships. Data for European countries are available via the 2013 and 2018 well-being ad-hoc module of EU-SILC, while Canada and Mexico also have household surveys in which respondents rate their satisfaction with their personal relationships on the same 11 point scale.

Table 26. Proposed Social Connections indicators

Label	Indicator	Unit of measurement	Source	Change compared to 2017 Well-being Framework
Social support	Social support	Share of people who report having friends or relatives whom they can count on in times of	Gallup World Poll	Retained

		trouble		
Time spent in social activities	Time spent in social activities	Average minutes/ day spent in social activities	Time use surveys conducted by national statistical offices	New
Loneliness	Loneliness	Share of individuals reporting being lonely "all of the time" and "most of the time'	EU-SILC ad hoc module (well-being), 2018	New
Satisfaction with personal relationships	Satisfaction with personal relationships	Mean values on an 11-point scale, with responses ranging from 0 (not at all satisfied) to 10 (fully satisfied)	EU-SILC ad hoc module (well-being), 2013, 2018, Canadian General Social Survey,Well-being survey for Mexico	New

Table 27. Social Connections indicators – quality assessment

	Relevance	Inequalities	Accuracy	Credibility + Comparability	Timeliness + Frequency	Interpretability	Working constraints
Social support	✓	✓	~	~	✓	~	✓
Time spent in social activities	✓	✓	✓	✓/~	x	~	~
Loneliness	✓	✓/~	✓	✓	x	✓	x
Satisfaction with personal relationships	✓	✓	✓	✓	~/x	✓	~

Note: A ✓ shows that an indicator substantially meets the overall quality criteria shown in the table; a ~ shows that an indicator partially meets the quality criteria, an x shows that the indicator does not meet the quality criteria at all or only to a limited extent.

10. Voice (replaces Civic Engagement and Governance)

Scope

Civic engagement allows people to express their voice and to contribute to the political functioning of their society. Political voice is one of the basic freedoms and rights that people have reason to value (Sen, 1999[76]). People who have the opportunity to participate in a decision are more likely to endorse the decision and to consider it fair (Stutzer and Frey, 2006[77]). Civic engagement may also increase people's sense of personal efficacy and control over their lives (Barber, 1984[78]). Finally, civic engagement allows individuals to develop a sense of belonging to their community, trust in others, and a feeling of social inclusion.

Ideal indicators of civic engagement would measure whether citizens are involved in a range of important civic and political activities that enable them to shape the society where they live. In well-functioning democracies, civic engagement shapes the institutions that govern people's lives. However, the quality of these institutions per se is considered under Social Capital. Thus, while governance was originally included in the scope of this dimension, institutions and governance have been considered in *How's Life?* as part of the resources for future well-being indicators since 2015.

Limitations of the existing measures

The indicators of Civic Engagement included in *How's Life?* 2017 are voter turnout (among the population registered to vote in national elections) and political efficacy. While these are both derived from high quality data, they do suffer some limitations:

- Cross-country comparisons of voter turnout (as a share of the population registered to vote) are affected by the institutional features of voting systems. The most important variation is the practice of compulsory voting as it exists in Australia, Belgium, Brazil, Luxembourg and Turkey. These countries generally have among the highest voter turnouts in the OECD. Other sources of non-comparability come from voter registration practices, both in terms of ease of registration and eligibility (e.g. for convicted felons), which may lead significant differences between the population registered and the population of voting age.[23]
- Political efficacy is important as it shapes political participation, perceptions of the legitimacy of public institutions, as well as life satisfaction. The current measure of political efficacy (the share of the share of people aged 16-65 who feel they have a say in what the government does) only refers to "external" political efficacy (i.e. a belief in the responsiveness of public institutions and government officials to citizens' demands), hence excluding "internal" efficacy (i.e. feelings of having the personal competence to participate in politics (Hoskins, Janmaat and Melis, 2017[79]). The indicator in the *How's Life?* dashboard is drawn from the OECD Adult Skills Survey (PIAAC), which asks a question on "To what extent do you agree or disagree with the following statements? People like me don't have any say in what the government does". PIAAC is only run every 10 years, while data for European countries are available through the (non-official) European Social Survey, run every 3 years. In the recent revision of the SDG indicator list, the IAEG has just acknowledged the importance of the concept overall by adding both internal and external political efficacy under Goal 16.
- While voting is the most traditional form of political voice, new types of activism have emerged that are absent from the How's Life? dashboard for this dimension. However, comparable measures of so-called manifest forms of political activity, e.g. signing a petition, attending a political meeting, attending a demonstration, contacting a public official (Boarini and Diaz, 2015[80]), are only available from the European Quality of Life Survey for European countries.

Proposed changes

In view of the dimension's ideal scope and a review of the quality of available measures (Table 28, Table 29), two changes are proposed for the Civic engagement and governance dimension:

- The dimension should be reshaped as Voice. Civic Engagement and Governance is an abstract term that is difficult to communicate to non-specialists. Moreover, most indicators related to quality of governance (e.g. stakeholder engagement, trust in institutions, corruption) are considered as part of Social Capital. The indicators in the dimension at hand – i.e. voter turnout and having a say in what the government does - strongly relate to the ability of individuals to feel able to and act on expressing their voice in the political process.
- The diagnostic dashboard should include measures of voter turnout expressed as a share of both the registered and the voting age population, as each provide a unique perspective.

Table 28. Proposed Voice indicators

Label	Indicator	Unit of measurement	Source	Change compared to 2017 Well-being Framework
Voter turnout (registered)	Voter turnout (registered)	Percentage of votes cast among the population registered to vote	Institute for Democracy and Electoral Assistance (IDEA)	Retained

[23] The 203 and 2015 editions of *How's Life?* considered voter turnout as a share of both the population registered to vote and the population of voting age.

Voter turnout (population)	Voter turnout (population)	Percentage of votes cast among the population of voting age	Institute for Democracy and Electoral Assistance (IDEA)	Reinstated from previous editions
Having a say in government	Having a say in what the government does	Percentage of people aged 16-65 who feel they have a say in what the government does	OECD Survey of Adult Skills (PIAAC)	Retained

Table 29. Voice indicators – quality assessment

	Relevance	Inequalities	Accuracy	Credibility + Comparability	Timeliness + Frequency	Interpretability	Working constraints
Voter turnout (reg)	✓	~/x[24]	✓	✓	✓[25]	✓	✓
Voter turnout (popn)	✓	~/x[26]	✓	✓	✓[27]	✓	✓
Having a say in government	✓	✓	~	~	x	✓	✓

Note: A ✓ shows that an indicator substantially meets the overall quality criteria shown in the table; a ~ shows that an indicator partially meets the quality criteria, an x shows that the indicator does not meet the quality criteria at all or only to a limited extent.

11. Safety (previously Personal Security)

Scope

Personal security or freedom from harm is a key component of people's well-being. The range of threats to people's safety is vast, from political and ethnic conflicts to environmental hazards, industrial and natural disasters and terrorism, to accidents while travelling. Crime is one of the most important aspects of safety, as it may lead to loss of life and property, physical pain, post-traumatic stress, anxiety and feelings of insecurity that limit people's daily activities and functionings (UNODC, 2015[81]).

A set of ideal safety indicators of would inform about the various crimes and offenses experienced by individuals, weighting these crimes by their seriousness. These crimes includes criminal offences such as crimes against property (e.g. car theft, burglary in one's own home), contact crimes (e.g. assault, mugging), other crimes (e.g. hate crimes, emotional abuse, corruption, money-laundering, terrorism), and murders. Cybercrime and incidents of privacy breaches and consumer fraud online present new forms of criminal activities associated to the digital transformation (OECD, 2019[19]). Other threats to people's safety such as traffic accidents (which are the 8th leading cause of death globally (WHO, 2018[82]) and natural disasters also fall within the scope of the Safety dimension.

[24] Estimates of the distribution of voter turnout can be obtained through self-reported survey data, but this is a different source from the official voter turnout data, which cannot be disaggregated by population group with one exception: geographic location.

[25] Although these measures are not annual, the underlying phenomena (voter turnout) is only observable on a periodic basis, and there are no gaps in the data (i.e. years in which national elections occurred but data are missing). The data are also produced in a timely manner.

[26] See footnote 24

[27] See footnote 25

Limitations of the existing measures

Currently, the *How's Life?* indicator set includes two measures: the homicide rate (deaths due to assault as recorded in official registers) and self-reported feelings of safety (the share of people responding "yes" to a yes/no survey question on whether they feel safe walking alone at night in the area where they live).

The homicide rate is widely considered as the most important indicator of violent crime. Importantly, it is one of the few crimes for which recorded figures provide a reasonably accurate and internationally comparable measure: it is more likely to be documented than other crimes that may be unreported to the police and due to its severity is less sensitive to changing laws and practices as to what constitutes a criminal offence.

Feelings of safety is sourced from the Gallup World Poll and has only been included in *How's Life?* as a placeholder until better quality harmonised data become available from official sources (such as national statistical office data). Despite some limitations, it captures an important aspect of the safety dimension: fear of crime (even when not corroborated through objective measures of crime risk) may strongly affect people's well-being and behaviour (e.g. when and where they feel safe to go, and thus what they can do). Sample size and quality-permitting, perceived safety data can be disaggregated by various population groups, and can point to important differences in safety experiences by vulnerable groups, such as women and minorities.

Despite their importance to the concept of safety, these two measures exclude other importance aspects of safety:

- Since murder is very rare, deaths due to assault are only the "tip of the iceberg" in terms of safety. Various national well-being initiatives include experiences of criminal incidents (e.g. Australia, Belgium, Finland, Italy, Israel, Korea, Netherlands, New Zealand, Scotland, Slovenia), often drawing on national crime victimisation surveys. Despite some methodological drawbacks regarding willingness to disclose and variation in answers depending on the time elapsed since an incident, such surveys provide a comprehensive picture of the scope, prevalence and incidence of crime affecting people (UNODC, 2015[81]), but their cross-country comparability is limited.
- Domestic violence is an important aspect of safety highlighted by both the SDGs (Target 5.2.1 refers to women and girls subject to intimate partner violence) and national well-being frameworks (Australia, Italy, Israel, New Zealand). However, existing data come from specialised surveys that are conducted infrequently and focus only women (rather than on the entire population) (UN STATS, 2017[83]),
- Other relevant aspects of safety where standardised statistics need to be further developed include deaths due to conflict, casualties and mortality resulting from road traffic accidents, extreme weather events, and natural disasters.

Proposed changes

In view of the dimension's ideal scope and a review of the quality of available measures (Table 30, Table 31), three changes are proposed for the Personal Security dimension:

- The dimension should be renamed Safety to acknowledge the individual condition of being free from risk and harm, rather than the (security) measures taken to ensure it.[28] Furthermore, the term "personal security" echoes conceptually different concepts such "job security", "labour market

[28] In various languages, including French, Spanish, German and Italian, the same word is used for "safety" and "security". In English, however, the definition of "security" is broader, and can imply measures taken to guard against certain risks rather than the state of being "safe" (i.e. free from danger).

insecurity" and "economic insecurity" that are dealt with in other parts of the OECD Framework. As a further source of confusion, the Personal security dimension is called Safety in the OECD *Better Life Index.* Thus, renaming the dimension would help the harmonisation with *How's Life?.*

- An indicator on road traffic accident fatalities could be added to capture this aspect of people's safety.[29] The indicator proposed here (deaths by road accidents, per hundred thousand population) is available via the traffic database of the International Transport Forum and performs strongly on the quality assessment. It is preferable over other potential measures such as mortality from transport (recorded by medical professionals as cause of death), as the latter includes other modes of transport beyond the road and is more sensitive to catastrophic accidents (i.e. a plane crash or boat accident).
- Online security incidents is potential additional indicator to be included for capturing experience of cybercrimes, which are becoming increasingly relevant in the digital age. However, the measurement of cyber-security risks is challenging as online criminal activity may go unnoticed, and because no centralised reporting mechanism exists for small-scale online security incidents. To measure individual experiences of cyber-security threats, self-reports remain the most reliable technique, although there may be limitations in how respondents understand these questions. In addition, high self-reports may reflect the efforts of respondents to raise awareness on cyber-security issues, rather than high prevalence of online security threats per se. The indicator proposed here refers to self-reported experiences of online security incidents in the last 3 months and is drawn from the OECD ICT Access and Usage survey. However, no correction is applied to account for, for example, different participation rates in e-commerce across OECD countries.

Table 30. Proposed Safety indicators

Label	Indicator	Unit of measurement	Source	Change compared to 2017 Well-being Framework
Homicides	Deaths due to assault	Age-standardised rate, per 100 000 population	OECD Health Statistics database	Retained
Feeling safe at night	Feelings of safety when walking alone at night	Percentage of people declaring that they feel safe when walking alone at night in the city or area where they live	Gallup World Poll	Retained
Road accidents	Deaths due to road accidents	Deaths by road accidents, per hundred thousand population	ITF Transport Statistics database	New
Cybersecurity	Experience of online security incidents	Percentage of individuals who report having experienced security incidents in the last 3 months.	OECD ICT Access and Usage by Households and Individuals database	New

Table 31. Safety indicators – quality assessment

	Relevance	Inequalities	Accuracy	Credibility + Comparability	Timeliness + Frequency	Interpretability	Working constraints
Homicides	✓	~	✓	~	✓	~	✓

[29] Target 3.6 of the SDGs calls for "halving the number of global deaths and injuries from road traffic accidents"; the national well-being frameworks of Belgium, Finland, Italy, Israel, Korea and Slovenia all feature road accidents.

Feeling safe at night	✓	✓	~	~	✓	~	✓
Road accidents	✓	~	✓	✓	✓	~	✓
Cybersecurity	✓	✓	~	~	~	~	✓

Note: A ✓ shows that an indicator substantially meets the overall quality criteria shown in the table; a ~ shows that an indicator partially meets the quality criteria, an x shows that the indicator does not meet the quality criteria at all or only to a limited extent.

12. Natural capital

Scope

The scope of natural capital is vast: it consists of all naturally occurring assets, from tradable items such as minerals and timber, through to oceans and the atmosphere. A distinction can be made between "environmental assets", which are individual components of the environment (such as fish, or oil resources), and "ecosystems" which refer to the joint functioning of, or interactions among, different environmental assets (such as seen in soil, forests, aquatic environments and the atmosphere). *Ecosystem services* refer to the benefits to both the economy and wider human well-being derived from ecosystem functioning.

In 2012, the United Nations Statistical Commission published a new System of Environmental and Economic Accounting (SEEA), and adopted the central framework of this system as an international standard[1].[30] The SEEA Central Framework (UNSC, 2012[84]) defines environmental assets as:

> *the naturally occurring living and non-living components of the Earth, together comprising the bio-physical environment, that provide benefits to humanity*

It lists seven sets of assets: mineral and energy resources; land; soil resources; timber resources; aquatic resources; other biological resources (excluding timber and aquatic resources); and water resources. The SEEA Experimental Ecosystem Accounts meanwhile consider a wider range of material and non-material benefits, relative to the central SEEA framework. Their measurement focus is ecosystems, which can consist of groups of different environmental assets, *functioning together* within a specific spatial area.

The OECD's *Green Growth* framework and indicator set has been an essential reference for the measurement of natural capital in *How's Life?* While the *Green Growth* framework is largely focused on environment-economy interactions, the current suite of *Green Growth Indicators* (OECD, 2017[26]) include measures of the natural asset base (e.g. changes in land cover) as well as quality of life (e.g. population exposure to harmful levels of $PM_{2.5}$ air pollution). Natural capital assets and their management is also a recurring theme within the UN Sustainable Development Goals (SDGs). Planet-focused goals include Goal 6 (water); Goal 12 (sustainable production); Goal 13 (climate); Goal 14 (oceans); and Goal 15 (biodiversity). In addition, Goals 7 (energy) and 11 (sustainable cities) also include concepts of relevance to the measurement and management of natural capital assets.

Limitations of the existing measures

How's Life? 2017 included nine indicators of natural capital: two stock measures (forest area per capita; renewable freshwater resources per capita); four flows (greenhouse gas emissions from production per capita; CO_2 emissions from domestic consumption per capita; freshwater abstractions per capita; and

[30] The SEEA (2012) is a statistical framework setting out internationally agreed concepts, definitions, classifications and accounting rules for collecting comparable information about interactions between the economy and the environment. It adopts a structure that is compatible with the System of National Accounts framework.

population exposure to outdoor air pollution by fine particulate matter, $PM_{2.5}$); and three risk factors, all focused on biodiversity (threatened birds, mammals and plants as a % of all known species).

Compared to the full scope of natural capital outlined above, as well as the environmental indicators used in other countries' well-being frameworks, the SDGs, and in the OECD's Green Growth Framework, there are substantial gaps in the *How's Life? 2017* indicators. For example, a review of national well-being initiatives (Table 4, above) underscores waste management, protected areas and renewable energy as important gaps - issues also highlighted in the SDGs. A brief summary of the limitations of the existing *How's Life? 2017* indicators includes:

- An absence of indicators referring to:
  - energy (e.g. the share of energy from renewable sources)
  - materials consumption (e.g. material consumed per unit of GDP)
  - waste (e.g. recycling rates, or the amount of materials reused in relation to total material use)
  - water quality and soil quality, including nutrient balances in agricultural land areas
  - changes in land use (beyond the current forest area measure), such as land cover conversions from natural to artificial states (i.e. the change in built-up areas)
  - the proportion of fish stocks within safe biological limits
  - protected areas (e.g. marine, terrestrial and Mountain Key Biodiversity Areas)
  - research and development expenditure or patents of importance to environment-related innovation and green growth
- A lack of information on change over time for a number of indicators (e.g. renewable freshwater resources; freshwater abstractions; threatened birds, mammals and plants); and a lack of timely data in other cases (e.g. in 2017, CO_2 emissions from domestic consumption referred to 2011).

Proposed changes

Given the size of the overall scope of natural capital, and the wide range of limitations highlighted above, some (re)prioritisation is necessary to obtain a concise indicator set for the dashboard (Table 32, Table 33). Changes proposed are as follows:

- Add measures of:
  - soil quality (nutrient balance – nitrogen)
  - renewable energy as a share of total final consumption
  - material footprint (tonnes of raw material, per capita)
  - recycling and composting (material recovery rate of municipal waste)
- Add new measures of land cover (natural and semi-natural vegetation; built-up area) to replace the *How's Life? 2017* indicator on forest area per capita, reflecting the availability of new, improved data sources (Hascic and Mackie, 2018[85]). Green Growth headline indicators focus on change in land use cover; in *How's Life? 2020*, both the stock and the change in the stock over time will be considered.
- Replace data on freshwater abstraction rates and total freshwater resources with two complementary measures of water stress (which reflect both resources and abstraction rates) .
- Replace the three threatened species measures with the ICUN Red List Index, which can be used to assess change over time. The latter measure is recommended by the UN Inter-Agency and Expert Group to capture biodiversity loss in the context of SDG Goal 15 (indicator 15.5.1).
- Remove mean population exposure to outdoor air pollution (by fine particulate matter, or PM2.5) and retain a measure of air pollution only under Environmental Quality to reduce overlap between dimensions of current well-being and resources for future well-being.

Table 32. Proposed natural capital indicators

Label	Indicator	Unit of measurement	Stock/ flow/ risk or resilience factor	Source	Change compared to 2017 Well-being Framework
Greenhouse gas emissions from domestic production	Greenhouse gas emissions from production	Tonnes per capita, CO_2 equivalent	Flow	OECD Environment Statistics database	Retained
Carbon footprint	Carbon dioxide emissions embodied in domestic final demand	Tonnes per capita	Flow	OECD Structural Analysis (STAN) databases	Retained
Natural and semi-natural land cover (NB: losses and gains over time to be reported separately)	Natural and semi-natural vegetated land (tree-covered area, grassland, wetland, shrubland and sparse vegetation)	Natural and semi-natural vegetated land cover as a % of total land area	Stock	OECD Environment Statistics database	New
Air quality	Population exposure to outdoor air pollution by fine particulate matter (PM2.5)	Population-weighted mean PM2.5 concentrations, micrograms per cubic metre, 3-year moving average	Risk	OECD Exposure to Air Pollution database	Removed (measure of air pollution retained under Environmental Quality)
Built-up area	Built-up area land cover	Buildings as a % of total land area	Stock	OECD Environment Statistics database	New
Water stress (internal resources)	Water stress (internal resources)	Gross abstractions as a % of internal resources	Risk factor	OECD Environment Statistics database	New
Water stress (total renewable resources)	Water stress (total renewable resources)	Gross abstractions as a % of total renewable resources	Risk factor	OECD Environment Statistics database	
Soil nutrient balance	Nutrient surplus (nitrogen) in agricultural land	Nutrient surplus (nitrogen), kilograms per hectare of agricultural land	Risk factor	OECD Agriculture Statistics: Environmental performance of agriculture	New
Biodiversity	Red List Index (RLI) – combined indicator of extinction risk for birds, mammals, amphibians, cycads and corals	An RLI value of 1.0 equates to all species qualifying as Least Concern (i.e., not expected to become Extinct in the near future). An RLI value of 0 equates to all species having gone Extinct.	Stock	United Nations Global SDG database (sourced from: International Union for the Conservation of Nature, IUCN)	New
Renewable energy	Renewable energy share of the total electricity generated	Renewable energy share of the total electricity generated	Resilience factor	OECD Environment Statistics database	New
Material footprint per capita	Global allocation of used raw material extracted to meet the final demand of the economy	Tonnes per capita	Flow	OECD Environment Statistics database	New
Recycling rate	Recycling and composting	Municipal waste recycled or composted as a % of treated waste	Resilience factor	OECD Environment Statistics database	New

Table 33. Natural capital indicators – quality assessment

	Relevance	Inequalities	Accuracy	Credibility + Comparability	Timeliness + Frequency	Interpretability	Working constraints
Greenhouse gas emissions from domestic production	✓	X	✓	✓	✓	✓	✓
CO_2 emissions from domestic consumption	✓	X	~	~	~	✓	✓
Natural and semi-natural land cover	✓	~	✓	✓	~	✓	✓
Built-up area	✓	~	✓	✓	~	✓	✓
Water stress (internal resources)	✓	NA	~	~	~	~	~
Water stress (total renewable resources)	✓	NA	~	~	~	~	~
Soil nutrient balance	✓	NA	~	~	~/✓	✓	✓
Threatened species (Red List index)	✓	NA	~	~	✓	✓	✓
Renewable energy	✓	NA	✓	✓	✓	✓	✓
Material footprint per capita	✓	NA	✓	✓	✓	✓	✓
Recycling rate	✓	?	?	?	~	✓	✓

Note: A ✓ shows that an indicator substantially meets the overall quality criteria shown in the table; a ~ shows that an indicator partially meets the quality criteria, an x shows that the indicator does not meet the quality criteria at all or only to a limited extent.

13. Economic capital

Scope

Economic capital plays a crucial role in supporting material well-being outcomes (e.g. housing, jobs, wealth and incomes) and in producing goods and services that people consume in pursuit of their well-being today and in the future. In addition, economic capital as store of value provides a buffer for unexpected income shocks, allows households, firms and governments to plan for the future, and helps to ensure material living standards are sustainable over time (OECD, 2015[3]).

Economic capital refers to both produced capital and financial capital (OECD, 2013[2]). Produced capital (i.e. man-made capital) consists of tangible assets such as roads, railways, buildings and machinery; and knowledge assets such as intellectual property, computer software and art works. Knowledge assets contribute to productivity growth and technology development which can help to achieve future well-being. Financial capital includes financial assets such as currency and deposits, stocks, bonds and derivatives, and liabilities in the form of debts.

Beyond the total stock of economic capital, risk factors such as the distribution between institutional sectors (households, governments, non-financial and financial corporations) and within them (e.g. between different types of households) are important for the sustainability of well-being (UNECE, 2013[86]). For example, imbalanced asset distribution between households and other sectors (e.g. high debt of household but low debt of firms) will not translate into everyone having the resources needed to buffer against economic shocks.

Limitations of the existing measures

Economic Capital in the OECD Well-Being Framework encompasses aspects of total and sectoral stocks (household, government, and financial corporations), flows of investment, and risk factors. Indicators for total stock are produced fixed assets, financial net worth of the total economy and intellectual property assets; indicators for sectoral stock are household net wealth and financial net worth of governments; indicators for investment flows are gross fixed capital formation and investment in R&D; and indicators for risk factors are household debt and banking sector leverage.

The majority of these indicators are well defined and measured in the System of National Accounts. Some challenges remain:

- The current measures do not allow to disaggregate wealth data by institutional sectors and asset distribution across different groups at a granular level.
- Banking sector leverage as a measure of risk is not straight forward to interpret as it is a measure of volatility and risk, but at the same time reflects regulations around bank's capital requirements. It is unclear which ratio is ideal from a well-being production perspective, and this is also likely to vary with country circumstances.

Several international and national well-being frameworks (e.g. UNEP's Inclusive Wealth Framework, Australia, Austria, Japan, Latvia, New Zealand, Scotland and Wales) also include productivity as important element of the production process, which could be considered for inclusion as well.

Proposed changes

In view of the dimension's ideal scope and a review of the quality of available measures (Table 34, Table 35), one change is proposed for Economic Capital:

- Household net wealth has been listed under both Income and Wealth and Economic Capital, since it forms the basis of a household's economic resources later in life, but also influences consumption possibilities and risk perceptions today. This review recommends retaining this indicator solely under Income and Wealth. This acknowledges that income and wealth jointly shape people's consumption possibilities, and preserves their side-by-side comparison. Household debt, as a systemic risk factor for both households and the wider economy, remains under Economic Capital.

Table 34. Proposed Economic Capital indicators

Label	Indicator	Unit of measurement	Stock/ flow/ risk or resilience factor	Source	Change compared to 2017 Well-being Framework
Produced fixed assets	Produced fixed assets	USD per capita, at 2010 PPPs	Stock	OECD National Accounts Statistics database	Retained
Gross fixed capital formation	Gross fixed capital formation	Annual growth rates	Flow	OECD National Accounts Statistics database	Retained

Financial net worth of the total economy	Financial net worth of the total economy	USD per capita, at current PPPs	Stock	OECD National Accounts Statistics database	Retained
Intellectual property assets	Intellectual property assets	USD per capita, at 2010 PPPs	Stock	OECD National Accounts Statistics database	Retained
Investment in R&D	Investment in R&D	As a percentage of GDP	Flow	OECD National Accounts Statistics database	Retained
Household debt	Household debt	Percentage of net household disposable income	Risk factor	OECD Financial Dashboard database	Retained
Financial net worth of government	Adjusted financial net worth of general government	As a percentage of GDP	Stock	OECD Financial Dashboard database	Retained
Banking sector leverage	Leverage of the banking sector	Ratio of selected assets to banks' own equity	Risk factor	OECD Financial Dashboard database	Retained

Table 35. Economic Capital indicators – quality assessment

	Relevance	Inequalities	Accuracy	Credibility + Comparability	Timeliness + Frequency	Interpretability	Working constraints
Produced fixed assets	✓	X	✓	✓	✓	✓	~
Gross fixed capital formation	✓	X	✓	✓	✓	✓	✓
Financial net worth of the total economy	✓	X	✓	✓	✓	✓	~
Intellectual property assets	✓	X	✓	✓	✓	✓	✓
Investment in R&D	✓	X	✓	✓	✓	✓	✓
Household debt	✓	x	✓	✓	✓	✓	✓
Financial net worth of government	✓	X	✓	✓	✓	✓	✓
Banking sector leverage	✓	X	✓	✓	✓	~	✓

Note: A ✓ shows that an indicator substantially meets the overall quality criteria shown in the table; a ~ shows that an indicator partially meets the quality criteria, an x shows that the indicator does not meet the quality criteria at all or only to a limited extent.

14. Human capital

Scope

Human Capital broadly refers to the skills, competencies (including education and tacit knowledge), and health status of individuals (OECD, 2015[3]). Many researchers and institutions are currently using definitions of human capital that emphasise its value to economic production and income generation, particularly regarding the importance of quality of labour (Boarini, Mira d'Ercole and Liu, 2012[87]). Beyond technical skills, the concept of human capital has since been expanded to include aspects of motivation and behaviour, as well as the physical, emotional and mental health of individuals (OECD, 2009[88]). Both

health and education are also outcomes of intrinsic value in their own right, as well as contributing extensively to the production of other well-being outcomes (OECD, 2011[1]).

Ideally, the scope of Human Capital thus encompasses a broad range of measures that only if seen in combination influence the total stock of human capital. These include educational attainment, skills and competencies of the population, as well as measures of health status.

Limitations of the existing measures

In the *How's Life? 2017* indicator set, Human Capital includes the following indicators: Young adult educational attainment and educational expectancy as measures of educational stock, student and adult skills as measures of competencies and skills, long term unemployment to capture the deterioration of human capital within the labour force, life expectancy at birth as measure of health stock, and smoking and obesity prevalence as risk factors for human capital. While these measures are in line with the broad scope of this type of capital, several challenges can be observed:

- Young adult educational attainment is measured at the secondary level. This is not a very sensitive measure, since 36% of adults are now tertiary-educated across the OECD on average. However, tertiary education may not necessarily be considered a better goal for human capital than e.g. a vocational training path, depending on the country considered.
- Educational expectancy is no longer reported by the OECD Directorate for Education and Skills. In countries where inequalities are high and where access to education is limited, the estimates can be misleading regarding the mandatory amount of years in education (at any given level).
- Healthy life expectancy would be a more preferable measure than life expectancy for the reasons given in the above discussion under the current well-being dimension of Health.
- Smoking and obesity prevalence are not fully comparable across countries due to different questions featured in health interviews, and the distinction between self-reported and measured obesity levels that are used in different countries.

Proposed changes

In view of the dimension's ideal scope and a review of the quality of available measures (Table 36, Table 37), several changes are proposed for Human Capital:

- The indicator of educational expectancy should be dropped given its difficulty of interpretation and the fact that a regular time series is no longer compiled by the OECD.
- Retain long-term unemployment only under the Work dimension, and add an indicator of broad labour underutilisation to Human Capital. Long-term unemployment has been listed under both Jobs and Earnings and Human capital, since prolonged unemployment has detrimental effects on a person's current well-being, but also results in skills loss and scarring that affects future job opportunities and the sustainability of well-being over a much longer time period. This review proposes retaining long-term unemployment solely under the newly created Work dimension. Under Human Capital, a new indicator taken from the OECD Job Strategy and available via the OECD Employment database broad labour underutilisation, should be added. Broad labour underutilisation refers to the share of inactive, unemployed or involuntary part-timers in the population (excluding youth in education or training), and is thus a broader way of conceptualising risk factors for a country's human capital.[31]

[31] Some labour market inactivity might contribute to others' well-being (e.g. when caring for dependents or performing other unpaid work), and could be associated with skills gains rather than losses. Nevertheless, the broad measure of labour market underutilisation is cast here as a risk factor for future well-being, to the extent that it might be associated

- To reduce indicator overlap, cognitive skills of adults and (15 year old) youth should be removed from Human Capital and only be retained under Knowledge and Education. Human Capital continues to feature a (future-oriented) measure of education through the educational attainment of young adults indicator.
- To reduce indicator overlap, life expectancy at birth should only be retained under Health. In this case, it has been especially difficult to find a solution to reduce the indicator overlap: Virtually all conceptual frameworks consider life expectancy an essential component of human capital (OECD, 2013[2]). But, life expectancy is the only objective measure of general health status in the Health dimension, and would severely diminish that dimension's content if taken out.
- An indicator of premature mortality should be added. Measures of disability and disease prevalence, intensity and chronicity are so far absent from the current *How's Life?* indicator set. A measure of premature mortality would be a valuable addition: potential years of life lost (PYLL) presents a summary measure of this concept by weighting deaths occurring at younger ages, which may be preventable. Its calculation involves summing up deaths occurring at each age and multiplying this with the number of remaining years to live up to a selected age limit (age 70 is used in OECD Health Statistics). In order to assure cross-country and trend comparison, the PYLL are standardised, for each country and each year.

Table 36. Proposed Human Capital indicators

Label	Indicator	Unit of measurement	Stock/ flow/ risk or resilience factor	Source	Change compared to 2017 Well-being Framework
Young adult educational attainment	Upper secondary educational attainment, people aged 25-34	Percentage of people who have attained at least an upper secondary education	Stock	OECD Education at a Glance database	Retained
Smoking prevalence	Prevalence of daily smoking	Percentage of people aged 15 and over who report smoking every day	Risk factor	OECD Health Statistics database	Retained
Obesity prevalence	Obesity prevalence	Percentage of the population aged 15 and older	Risk factor	OECD Health Statistics database	Retained
Labour market underutilization	Broad labour market underutilization	Share of inactive, unemployed or involuntary part-timers (15-64) in population (%), excluding youth (15-29) in education and not in employment	Risk factor	OECD Employment database	New
Premature mortality	Potential year of life lost (PYLL)	Years lost per 100 000 inhabitants	Flow	OECD Health Statistics database	New

Table 37. Human Capital indicators – quality assessment

	Relevance	Inequalities	Accuracy	Credibility + Comparability	Timeliness + Frequency	Interpretability	Working constraints

with a loss or stagnation of professional skills during time away from paid work. It is particularly important for capturing discouraged workers, who do not meet the narrow definition of unemployment.

Young adult educational attainment	✓	✓	✓	✓	✓/~	~	✓
Educational expectancy	✓	~	✓	✓	~	~/x	✓
Smoking prevalence	✓	✓/~	✓/~	~	✓/~	✓	✓
Obesity prevalence	✓	✓/~	✓/~	~	~	~	✓
Labour market underutilization	✓	✓/~	✓	✓	✓	✓	✓
Premature mortality	✓	✓/~	✓	✓	~	~	✓/~

Note: A ✓ shows that an indicator substantially meets the overall quality criteria shown in the table; a ~ shows that an indicator partially meets the quality criteria, an x shows that the indicator does not meet the quality criteria at all or only to a limited extent.

15. Social capital

Scope

Social Capital broadly refers to the networks, social norms, trust and values that foster co-operation within or among different groups in society (OECD, 2001[89]; OECD, 2013[2]).

This is a somewhat narrower scope than some approaches to conceptualising and measuring social capital in the literature which include: Personal relationships (people's networks and the social behaviours that contribute to establishing and maintaining those); social network support (the emotional, material, practical, financial, intellectual or professional resources that are available to individuals through their personal networks); civic engagement (the activities through which people contribute to civic and community life); and trust and co-operative norms (shared values and expectations that underpin societal functioning and enable mutually beneficial co-operation) (Scrivens and Smith, 2013[90]). The two types of trust which are most often considered as forms of social capital are generalised interpersonal trust (i.e. trust in "others", including strangers) and institutional trust (i.e. trust in public institutions).

To some extent, it is debatable which of these aspects are outcomes of well-being here and now, and which belong to Social Capital. Part of that debate relates to whether these assets are "owned" by an individual or are rather relational public goods that are available to and shared by society as a whole and can be transmitted across generations. The latter clearly applies to trust and co-operative norms, which have strong and wide-ranging instrumental value and contribute to the functioning of societal systems – market, state infrastructure, social stability – that are essential for many aspects of well-being (OECD, 2017[91]). Personal relationships and social network support on the other hand are more appropriately conceptualised as part of individual Social Connections under current well-being.

Some definitions of social capital also include aspects of governance (e.g. quality of institutions, legal frameworks) as important components of well-being sustainability (OECD, 2011[1]). Both formal and informal institutions create the framework conditions and set the rules to support (or destroy) the formation and exercise of social capital in practice, and underpin multiple other aspects of well-being (e.g. education, health).

Limitations of the existing measures

The Social Capital dimension in the OECD Well-being Framework currently includes indicators of norms and values (trust in others, trust in the police, trust in national government), civic engagement (volunteering through organisations), and institutional quality (government stakeholder engagement).

These measures face several limitations:

- The OECD has conducted recent statistical work on the measurement of trust and there is strong evidence that these measures are fit for purpose (OECD, 2017[8]). However, this has not yet translated into internationally comparable collection across many countries of the OECD. These measures hence remain limited to EU-SILC (and New Zealand), and the Gallup World Poll for the time being.
- The government stakeholder engagement indicator scores low on the quality criteria of this review, since it is collected by the OECD via a survey of civil servants that self-report whether and in what ways the government consults with its constituents. Despite concerns about social desirability bias in reporting, the concept of government stakeholder engagement is an important aspect of the quality of governance and should thus be kept as a placeholder to signal this.
- Volunteering through organisations reflects only one type of volunteering, and is restricted to engagement in formal organisations. It's interpretation is also not always straightforward, as lower provision of social services by the state might lead to people having to volunteer more, in order to fill gaps.

Proposed changes

In view of the dimension's ideal scope and a review of the quality of available measures (Table 38, Table 39), several changes are proposed for Social Capital:

- Retain voter turnout only under the current well-being dimension of Voice to reduce indicator overlap. Voter turnout captures people's opportunities for expressing their voices although it is also an investment in future well-being by citizens, i.e. they vote to affect government's actions in ways that are meaningful to them. This review proposes to retain voter turnout solely within the renamed Voice dimension. This unique listing distinguishes more cleanly between indicators that relate to people's direct participation in the political process (under current well-being) and those that refer to quality and perception of governance and institutions at a broader level (under Social Capital).
- Add an indicator on corruption perceptions. Corruption has been recognised as one of the main impediments to good governance, and is featured as one of the chapters of the upcoming UN Praia Group Handbook on Governance Statistics. The national well-being frameworks of Korea and New Zealand also include corruption indicators among their dashboards. Measuring corruption is challenging, and most indicators either come from (non-transparent) expert assessments or household surveys focusing on corruption perceptions or experience of bribery. Household surveys tend to biased towards petty corruption and miss other important and less visible aspects of corruption, such as revolving doors, awarding of contracts and tenders and undue lobbying (UNODC, 2018[92]; OECD, 2017[4]). It is therefore recommended to rely on multiple measures of corruption to get at its different facets. However, since there is only space for one indicator, the Corruption Perception Index compiled by Transparency International is proposed here, as it combines expert assessments with household surveys and is available for all OECD countries.
- Add an indicator on the female share of parliamentarians to capture the representation of women in politics. The share of women in politics is an important indicator of the inclusiveness of decision-making, and of gender equality more generally (Beaman et al., 2012[93]). While it would also be interesting to include the representation of other societal groups typically underrepresented in governance (e.g. people from different economic or ethnic backgrounds), such measures are not yet available on a frequent and comparative basis for all OECD countries (Comparative Candidates Survey, 2019[94]).

Table 38. Proposed Social Capital indicators

Label	Indicator	Unit of measurement	Stock/ flow/ risk or resilience factor	Source	Change compared to 2017 Well-being Framework
Trust in others	Interpersonal trust	Mean average, on a scale from 0 (you do not trust any other person) to 10 (most people can be trusted)	Stock	EU SILC + Statistics New Zealand	Retained
Trust in the police	Trust in the police	Mean average, on a scale from 0 (no trust at all) to 10 (complete trust)	Stock	EU SILC + Statistics New Zealand	Retained
Trust in the national government	Trust in the national government	Proportion of the population responding "yes" to a question about confidence in the national government	Stock	Gallup World Poll	Retained
Voter turnout	Voter turnout	Percentage of votes cast among the population registered to vote	Flow	IDEA	Removed (retained only in Voice)
Government stakeholder engagement	Government stakeholder engagement when developing primary laws and subordinate regulations	0-4 scale, based on OECD review of country responses to the 2014 OECD Regulatory Indicators Survey	Resilience factor	OECD Dataset on the Indicators of Regulatory Policy and Governance (iREG)	Retained
Volunteering through organisations	Participation in formal volunteering	Percentage of the working-age population who declared having volunteered through an organisation at least once a month, over the preceding year.	Flow	OECD Survey of Adult Skills (PIAAC)	Retained
Women in politics	Women parliamentarians	Share of women in the national lower or single houses of parliament	Resilience factor	OECD International Development Statistics: Gender, Institutions and Development	New
Corruption	Corruption Perception Index (CPI)	CPI score on a scale of 0 (highly corrupt) to 100 (very clean)	Risk factor	Transparency International	New

Table 39. Social Capital indicators – quality assessment

	Relevance	Inequalities	Accuracy	Credibility + Comparability	Timeliness + Frequency	Interpretability	Working constraints
Trust in others	✓	✓	✓	✓	x	~	x
Trust in the police	✓	✓	✓	✓	x	~	x
Trust in the national government	✓	✓	~	~	✓	~	✓

Government stakeholder engagement	✓	x	~	~	~/x	~	✓
Volunteering through organisations	✓	✓	✓	✓	x	~	✓
Women in politics	✓	x	✓	✓	✓	✓	✓
Corruption	✓	x	~	✓/~	✓	~	✓

Note: A ✓ shows that an indicator substantially meets the overall quality criteria shown in the table; a ~ shows that an indicator partially meets the quality criteria, an x shows that the indicator does not meet the quality criteria at all or only to a limited extent.

Annex B. Frequently featured indicators elsewhere

This Annex provides an overview of headline indicators that are frequently featured in other well-being initiatives.

Table 40. Frequent inequality indicators in national well-being frameworks and the OECD Policy Action on Inclusive Growth Framework

Dimension	Concept	Indicator	Appears where…
Income and wealth	Income inequality	S80/20 share of income	Inclusive Growth Framework, Austria, Luxembourg, New Zealand (Indicators Aetearoa), Slovenia (National Development Stategy), Belgium (Sustainable Development Indicators)
		Gini	Australia (Australia's Welfare), Finland (Findicators), Germany, Israel, Korea, Luxembourg, Slovenia, Poland, Latvia, Belgium (Sustainable Development Indicators)
	Wealth inequality	Bottom 40% wealth share and top 10% wealth share	Inclusive Growth Framework
	Poverty	Relative poverty rate	Inclusive Growth Framework, France, Korea, Italy, New Zealand (Indicators Aetearoa), Scotland, Slovenia (Indicators of Well-being), Sweden, the UK (Measures of National Well-being), Wales,
Job quality	Gender equality	Female wage gap	Inclusive Growth Framework, Austria, Belgium (Complementary Indicators to GDP + Sustainable Development Indicators), Luxembourg, Scotland, Wales, Slovenia (National Development Strategy)
	Wage inequality	Earnings dispersion (inter-decile ratio)	Inclusive Growth Framework
Knowledge and skills	Social mobility	Resilient students	Inclusive Growth Framework
Health	Regional inequality	Regional life expectancy gap	Inclusive Growth Framework
Civic voice	Gender equality	Share of female parliamentarians	Inclusive Growth Framework, Belgium (Complementary Indicators to GDP + Sustainable Development Indicators) Italy, Slovenia (Indicators of Well-being)

Table 41. Frequent headline indicators in concise national well-being dashboards

Indicators of selected national well-being initiatives (Poland, France, the UK (Personal and Economic Well-being Bulletin), Italy (Measures of Equitable and Sustainable Well-being - small set), Sweden)

Dimension/ Capital	Indicators	Appears where…
Income and Wealth	Household disposable income	Italy, UK
	Household consumption expenditure	UK, Poland
	Perception of financial situation	UK
Work	Unemployment rate, non-participation rate	Italy, Sweden, UK
	Employment rate	France, Sweden
Knowledge and Skills	Educational attainment	Sweden
Environmental Quality	Air pollution	Sweden, Poland
	Water quality	Sweden
Health	Healthy life expectancy, life expectancy	Italy, France, Poland
	Self-perceived health	Sweden
	Anxiety	UK
Safety	Number of burglaries, pick pockets and robberies	Italy
	Homicide rate	Poland
Subjective Well-being	Life satisfaction	France, Sweden, UK
	Happiness and eudemonia	UK
Natural Capital	Emissions of CO2, carbon footprint	Italy, France, Sweden
	Artificialization of soil	France
	Protected areas	Sweden
Economic Capital	Debt (e..g. household, public, private sector)	France, Sweden, UK

	Household wealth	UK
	R&D investment	France
Human Capital	Obesity rate	Italy, Poland
	Early school leavers	Italy, France
Social Capital	Length of civil proceedings	Italy
	Interpersonal trust	Sweden

Note: Only indicators that take into account levels are taken into account.

References

Babones, S. (2009), "The consistency of self-rated health in comparative perspective", *Public Health*, Vol. 123, pp. 199-201, http://www.medicine.mcgill.ca/epidemiology/courses/EPIB654/Summer2010/QALY/Self-rated%20health%20across%20countries.pdf. [69]

Balestra, C., R. Boarini and E. Tosetto (2018), "What matters the most to people?: Evidence from the OECD Better Life Index users' responses", *OECD Statistics Working Papers*, https://doi.org/10.1787/edf9a89a-en. [60]

Balestra, C. and D. Dottori (2011), "Aging society, health and the environment", *Journal of Population Economics*, Vol. 25/3, pp. 1045-1076, http://dx.doi.org/10.1007/s00148-011-0380-x. [54]

Barber, B. (1984), *Strong Democracy: Participatory Politics for a New Age*, University of California Press. [78]

Beaman, L. et al. (2012), "Female Leadership Raises Aspirations and Educational Attainment for Girls: A Policy Experiment in India", *Science*, Vol. 335/6068, pp. 582-586, https://dx.doi.org/10.1126%2Fscience.1212382. [93]

Boarini, R. and M. Diaz (2015), "Cast a Ballot or Protest in the Street - Did our Grandparents Do More of Both?: An Age-Period-Cohort Analysis in Political Participation", *OECD Statistics Working Papers*, https://econpapers.repec.org/scripts/redir.pf?u=https%3A%2F%2Fdoi.org%2F10.1787%2F5js636gn50jb-en;h=repec:oec:stdaaa:2015/2-en. [80]

Boarini, R., M. Mira d'Ercole and G. Liu (2012), "Approaches to Measuring the Stock of Human Capital: A Review of Country Practices", *OECD Statistics Working Papers*, No. 2012/4, OECD Publishing, Paris, https://dx.doi.org/10.1787/5k8zlm5bc3ns-en. [87]

Breidablik, H., E. Meland and S. Lydersen (2008), "Self-rated health in adolescence: A multifactorial composite", *Scandinavian Journal of Public Health*, https://doi.org/10.1177/1403494807085306. [66]

Cacioppo, J., L. Hawkley and R. Thisted (2010), "Perceived social isolation makes me sad: 5-year cross-lagged analyses of loneliness and depressive symptomatology in the Chicago Health, Aging, and Social Relations Study", *Psychol Aging*, Vol. 25/2, pp. 453-63, https://doi.org/10.1037/a0017216. [75]

Cazes, S., A. Hijzen and A. Saint-Martin (2015), "Measuring and Assessing Job Quality: The OECD Job Quality Framework", *OECD Social, Employment and Migration Working Papers*, [34]

No. 174, OECD Publishing, Paris, https://dx.doi.org/10.1787/5jrp02kjw1mr-en.

Central Bureau of Statistics Israel (2016), *Well-being Indicators in Israel*, http://wellbeingisrael.gov.il/wb/english/Pages/defulat.aspx. [17]

Comparative Candidates Survey (2019), *CCS*, http://www.comparativecandidates.org/. [94]

Durand, M. and C. Exton (2019), "Adopting a well-being approach in central government: Policy mechanisms and practical tools", in *Global Happiness Policy Report 2019*, Sustainable Development Solutions Network, New York, http://www.happinesscouncil.org. [14]

Engemann, K. et al. (2019), "Residential green space in childhood is associated with lower risk of psychiatric disorders from adolescence into adulthood", *Proceedings of the National Academy of Sciences*, Vol. 116/11, pp. 5188-5193, http://dx.doi.org/10.1073/PNAS.1807504116. [56]

European Centre for Disease Prevention and Control (2015), *Excess mortality among the elderly in european countries*, http://dx.doi.org/doi:10.2807/1560-7917.ES2015.20.11.21065. [65]

Eurostat (2016), *Statistics Explained: Overcrowding rate*, http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Overcrowding_rate. [50]

Exton, C. and M. Shinwell (2018), "Policy use of well-being metrics: Describing countries' experiences"*, OECD Statistics Working Papers*, No. 2018/07, OECD Publishing, Paris, https://dx.doi.org/10.1787/d98eb8ed-en. [15]

Hascic, I. and A. Mackie (2018), "Land cover change and conversions: Methodology and results for OECD and G20 countries"*, OECD Green Growth Papers, No. 2018/04*, OECD Publishing, Paris. [85]

Hedegaard, H., M. Warner and A. Minino (2017), "Drug Overdose Deaths in the United States, 1999-2016", *NCHS data brief*, Vol. 294, pp. 1-8. [71]

Hoskins, B., J. Janmaat and G. Melis (2017), "Tackling inequalities in political socialisation: A systematic analysis of access to and mitigation effects of learning citizenship at school", *Social Science Research*, Vol. 68, pp. 88-101, http://discovery.ucl.ac.uk/1574086/1/Janmaat_1-s2.0-S0049089X16304458-main.pdf. [79]

Hunt, S. (1988), "Subjective health indicators and health promotion", *Health Promotion International*, Vol. 3/1, pp. 23-34, https://doi.org/10.1093/heapro/3.1.23. [64]

Jeffrey, K. and J. Michaelson (2015), *Five Headline Indicators of National Success: A Clearer Picture of How the UK is Performing*, New Economics Foundation, London, https://neweconomics.org/uploads/files/1ff58cfc7d3f4b3fad_o4m6ynyiz.pdf. [40]

Kanbur, R., E. Patel and J. Stiglitz (2018), "Sustainable Development Goals and the measurement of economic and social progress", in Stiglitz, J., J. Fitoussi and M. Durand (eds.), *For Good Measure: Advancing Research on Well-being Metrics Beyond GDP*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264307278-4-en. [41]

Kanbur, R., E. Patel and J. Stiglitz (2018), "Sustainable Development Goals and the measurement of economic and social progress", in *For Good Measure: Advancing Research on Well-being Metrics Beyond GDP*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264307278-4-en. [38]

Lee, L., M. Roser and E. Ortiz-Ospina (2016), *Suicide. Our World in Data project.*, [70]

https://ourworldindata.org/suicide.

McGregor, A. (2018), *Implementing Human Wellbeing: Universal Frameworks and Local Realities (presentation at an OECD Staff Seminar)*. [36]

McGregor, A. and A. Sumner (2010), "Beyond Business as Usual: What Might 3-D Wellbeing Contribute to MDG Momentum?", *IDS Bulletin*, Vol. 41/1. [37]

Murtin, F. et al. (2017), "Inequalities in longevity by education in OECD countries: Insights from new OECD estimates", *OECD Statistics Working Papers*, No. 2017/2, OECD Publishing, Paris, https://dx.doi.org/10.1787/6b64d9cf-en. [39]

New Zealand Treasury (2018), *The Living Standards Framework: Background and Future Work*, New Zealand Government, Wellington, https://treasury.govt.nz/sites/default/files/2018-12/lsf-background-future-work.pdf. [16]

OECD (2019), *Addressing Problematic Opioid Use in OECD Countries*, OECD Health Policy Studies, OECD Publishing, Paris, https://dx.doi.org/10.1787/a18286f0-en. [73]

OECD (2019), *How's Life in the Digital Age?: Opportunities and Risks of the Digital Transformation for People's Well-being*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264311800-en. [19]

OECD (2019), *Linking Indigenous Communities to Regional Development*, OECD Publishing, Paris. [23]

OECD (2019), *Measuring Distance to the SDG Targets 2019: An Assessment of Where OECD Countries Stand*, OECD Publishing, Paris, https://dx.doi.org/10.1787/a8caf3fa-en. [29]

OECD (2019), *OECD Child Well-Being Data Portal*, http://www.oecd.org/els/family/child-well-being/data/. [28]

OECD (2019), *OECD Economic Surveys: New Zealand 2019*, OECD Publishing, Paris, https://doi.org/10.1787/19990162. [43]

OECD (2019), *OECD Mental Health Performance Framework*, http://www.oecd.org/health/health-systems/OECD-Mental-Health-Performance-Framework-2019.pdf. [63]

OECD (2019), *Public Procurement in Germany: Strategic Dimensions for Well-being and Growth, OECD Public Governance Reviews*, OECD Publishing, Paris. [22]

OECD (2019), "Social and economic risk perceptions and concerns", in *Society at a Glance 2019: OECD Social Indicators*, OECD Publishing, Paris, https://dx.doi.org/10.1787/5b260db0-en. [45]

OECD (2019), *The OECD Better Life Index, 2019 edition*, http://www.oecdbetterlifeindex.org. [20]

OECD (2018), *Good Jobs for All in a Changing World of Work: The OECD Jobs Strategy*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264308817-en. [52]

OECD (2018), *Opportunities for All: A Framework for Policy Action on Inclusive Growth*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264301665-en. [27]

OECD (2017), *Green Growth Indicators 2017*, OECD Green Growth Studies, OECD Publishing, [26]

Paris, https://dx.doi.org/10.1787/9789264268586-en.

OECD (2017), *Guidelines on Measuring Trust*, OECD Publishing, Paris, https://doi.org/10.1787/9789264278219-en. [91]

OECD (2017), *How's Life? 2017: Measuring Well-being*, OECD Publishing, Paris, https://dx.doi.org/10.1787/how_life-2017-en. [4]

OECD (2017), *OECD Guidelines on Measuring the Quality of the Working Environment*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264278240-en. [9]

OECD (2017), *OECD Guidelines on Measuring Trust*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264278219-en. [8]

OECD (2016), *Job Quality*, https://www.oecd.org/statistics/job-quality.htm. [35]

OECD (2016), *OECD Affordable Housing database - HC1.2. HOUSING COSTS OVER INCOME*, https://www.oecd.org/els/family/HC1-2-Housing-costs-over-income.pdf. [51]

OECD (2016), *OECD Affordable Housing Database HC2.1. LIVING SPACE*, https://www.oecd.org/els/family/HC2-1-Living-space.pdf. [49]

OECD (2016), *Policies to promote access to good-quality affordable housing in OECD countries*, https://www.oecd-ilibrary.org/docserver/5jm3p5gl4djd-en.pdf?expires=1553622152&id=id&accname=guest&checksum=62A6CF341AB3B8FD292D2D0EFEFFF7B5. [48]

OECD (2015), *How's Life? 2015: Measuring Well-being*, OECD Publishing, Paris, https://dx.doi.org/10.1787/how_life-2015-en. [3]

OECD (2015), *Skills for Social Progress: The Power of Social and Emotional Skills*, OECD Skills Studies, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264226159-en. [21]

OECD (2014), *How's Life in Your Region?: Measuring Regional and Local Well-being for Policy Making*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264217416-en. [25]

OECD (2014), *OECD Employment Outlook 2014*, OECD Publishing, Paris, https://dx.doi.org/10.1787/empl_outlook-2014-en. [53]

OECD (2013), *How's Life? 2013: Measuring Well-being*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264201392-en. [2]

OECD (2013), *OECD Framework for Statistics on the Distribution of Household Income, Consumption and Wealth*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264194830-en. [7]

OECD (2013), *OECD Guidelines for Micro Statistics on Household Wealth*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264194878-en. [6]

OECD (2013), *OECD Guidelines on Measuring Subjective Well-being*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264191655-en. [10]

OECD (2011), *How's Life? 2011: Measuring Well-being*, OECD Publishing, Paris, https://doi.org/10.1787/9789264121164-en. [1]

OECD (2011), *Quality Framework for OECD Statistical Activities*, OECD Publishing, Paris, [32]

https://www.oecd.org/sdd/qualityframeworkforoecdstatisticalactivities.htm.

OECD (2009), *Measuring Capital - OECD Manual 2009: Second edition*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264068476-en. [88]

OECD (2001), *The Well-Being of Nations*, OECD Publishing, Paris. [89]

OECD (forthcoming), *Approaching Climate Change Mitigation through a Well-being Lens*, OECD Publishing, Paris. [24]

OECD/EU (2018), *Health at a Glance: Europe 2018: State of Health in the EU Cycle*, OECD Publishing, Paris/European Union, Brussels, https://dx.doi.org/10.1787/health_glance_eur-2018-en. [74]

Patel, V. et al. (2018), "The Lancet Commission on global mental health and sustainable development", *The Lancet Commissions*, Vol. 392/10157, pp. 1553-1598, https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)31612-X/fulltext. [62]

Poelman, H. (2018), "A walk to the park? Assessing access to green areas in Europe's cities - Update using completed Copernicus Urban Atlas data", *European Commission Working Papers*, https://ec.europa.eu/regional_policy/sources/docgener/work/2018_01_green_urban_area.pdf. [58]

Poelman, H. (2016), "A walk to the park? Assessing access to green areas in Europe's cities", *European Commission Working Papers*, Vol. 01, https://ec.europa.eu/regional_policy/sources/docgener/work/2016_03_green_urban_area.pdf. [57]

Raleigh, V. (2019), "Trends in life expectancy in EU and other OECD countries: Why are improvements slowing?", *OECD Health Working Papers*, Vol. 108, https://doi.org/10.1787/18152015. [72]

Schnittker, J. and V. Bacak (2014), "The Increasing Predictive Validity of Self-Rated Health", *PLOS ONE*, https://doi.org/10.1371/journal.pone.0084933. [68]

Scott, R. and R. Boyd (2017), *Interagency Performance Targets: A Case Study of New Zealand's Results Programme*, IBM Center for The Business of Government, Washington, DC, http://www.ssc.govt.nz/interagency-performance-targets-case-study-new-zealands-results-programme. [42]

Scrivens, K. and C. Smith (2013), "Four Interpretations of Social Capital: An Agenda for Measurement", *OECD Statistics Working Papers* 06, https://doi.org/10.1787/18152031. [90]

Sen, A. (1999), *Development as Freedom*, Alfred Knopf. [76]

Stiglitz, J., J. Fitoussi and M. Durand (2018), *Beyond GDP: Measuring What Counts for Economic and Social Performance*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264307292-en. [33]

Stiglitz, J., J. Fitoussi and M. Durand (eds.) (2018), *For Good Measure: Advancing Research on Well-being Metrics Beyond GDP*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264307278-en. [11]

Stiglitz, J., A. Sen and J. Fitoussi (2009), *Report by the Commission on the Measurement of Economic Performance and Social Progress*, http://ec.europa.eu/eurostat/documents/118025/118123/Fitoussi+Commission+report [18]

(accessed on 28 June 2018).

Stutzer, A. and B. Frey (2006), "Political participation and procedural utility: An empirical study", *European Journal of Policital Research*, Vol. 45/3, https://doi.org/10.1111/j.1475-6765.2006.00303.x. [77]

UN STATS (2017), *https://unstats.un.org/sdgs/metadata*. [83]

UNECE (2014), *Conference of European Statisticians Recommendations on Measuring Sustainable Development*, United Nations, New York and Geneva, http://www.unece.org/fileadmin/DAM/stats/publications/2013/CES_SD_web.pdf. [30]

UNECE (2013), *Framework and suggested indicators to measure sustainable development Prepared by the Joint UNECE/Eurostat/OECD Task Force on Measuring Sustainable Development*. [86]

United Nations (2019), *System of Environmental-Economic Accounting*, https://seea.un.org/. [5]

United Nations Department of Economic and Social Affairs Statistics Division (2019), *SDG Indicators: Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development*. [13]

United Nations General Assembly (2015), *Resolution 70/1, Transforming our World: the 2030 Agenda for Sustainable Development*, United Nations, New York, https://www.unfpa.org/sites/default/files/resource-pdf/Resolution_A_RES_70_1_EN.pdf. [12]

UNODC (2018), *Manual on Corruption Surveys*, https://www.unodc.org/documents/data-and-analysis/Crime-statistics/CorruptionManual_2018_web.pdf. [92]

UNODC (2015), *International Classification of Crime for Statistical Purposes, Version 1.0*. [81]

UNSC (2012), *System of Environmental-Economic Accounting*, https://unstats.un.org/unsd/envaccounting/seeaRev/SEEA_CF_Final_en.pdf. [84]

UNU-IHDP and UNEP (2014), *Inclusive Wealth Report 2014. Measuring Progress towards Sustainability*, http://www.ihdp.unu.edu/docs/Publications/Secretariat/Reports/SDMs/IWR_SDM_2014.pdf. [31]

Welsh Government (2018), *Written Statement: Consultation on Milestones Under the Wellbeing of Future Generations Act (Wales) Act 2015*, https://beta.gov.wales/written-statement-consultation-milestones-under-wellbeing-future-generations-act-wales-act-2015 (accessed on 13 February 2019). [44]

WHO (2018), *Global status report on road safety 2018*, https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/. [82]

WHO (2018), *Housing and Health Guidelines*, https://apps.who.int/iris/bitstream/handle/10665/276001/9789241550376-eng.pdf?ua=1. [47]

WHO (1948), *Constitution*, https://www.who.int/about/who-we-are/constitution. [61]

WHO Regional Office for Europe (2016), *Urban green spaces and health*, http://www.euro.who.int/__data/assets/pdf_file/0005/321971/Urban-green-spaces-and-health-review-evidence.pdf?ua=1 (accessed on 9 April 2019). [55]

World Bank (2017), *http://blogs.worldbank.org/education/non-cognitive-skills-what-are-they-and-why-should-we-care*. [59]

Zajacova, A. and H. Woo (2015), "Examination of Age Variations in the Predictive Validity of Self-Rated Health", *The Journals of Gerontology: Series B*, Vol. 71/3, pp. 551-557, https://doi.org/10.1093/geronb/gbv050. [67]

Zwijnenburg, J., S. Bournot and F. Giovannelli (2017), "Expert Group on Disparities in a National Accounts Framework: Results from the 2015 Exercise"*, OECD Statistics Working Papers*, No. 2016/10, OECD Publishing, Paris, https://dx.doi.org/10.1787/2daa921e-en. [46]