

Remote Meeting  
March 28–31, 2023

SNA/M1.23/17

**Guidance on enhancing and broadening the SNA framework for  
household well-being and sustainability (WS.1)**



## **WS.1**

# **Guidance on enhancing and broadening the SNA framework for household well-being and sustainability<sup>1</sup>**

***Advisory Expert Group on National Accounts***

***March 2023***

---

<sup>1</sup> This guidance note was prepared by Catherine van Rompaey (World Bank) and Jorrit Zwijnenburg (OECD), with the help of the area group on the broader framework, consisting of Giuliano Amerini (Eurostat), Jean-Marc Germain (INSEE), Rutger Hoekstra (MetricsFortheFuture.com), Jianguo Liu (Michigan State University), Gabriela Saborio (Central Bank of Costa Rica), Michael Smedes (ABS), Herman Smith (UNSD), Peter van de Ven (Lead editor of the SNA), Branko Vitas (ABS), and Yuanyuan Wei (NBS China). The note also benefited from useful feedback from Sarah Barahona and Paul Schreyer (OECD) and from the area group leads of the Well-being and Sustainability Task Team: Amanda Seneviratne (ABS) (WS.2), Chris Payne (UK ONS) (WS.3), Michael Smedes (ABS) (WS.4), Ann Lisbet Brathaug (Statistics Norway) (WS.5), Mark de Haan (IMF) (WS.6 and WS.9), Peter van de Ven (lead editor of the SNA) (WS.6 and WS.8), Emmanuel Manolikakis (IMF) (WS.7), Jim Tebrake (IMF) (WS.7 and WS.12), Dennis Fixler (US BEA) (WS.10), Grzegorz Peszko (World Bank) (WS.11), Rob Smith (Midsummer analytics) (WS.11) and Joe St. Lawrence (Statistics Canada) (WS.6-WS.12).

## 1. Introduction

1. The System of National Accounts (SNA) provides the international standard or ‘framework’ for countries to compile their national accounts. The national accounts measure the economy and provide a full set of macroeconomic statistics for each country.

2. The ‘framework’ is a set of tables based on coherent economic accounting concepts, in which each table, and every row and column of each table, contributes by design to a consistent and complete picture of a country’s economy. It includes all economic activities, sectors, flows and stocks within the SNA boundaries. In this sense, it is like a complex piece of architecture in which everything has its place, and all parts are important although some, like Gross Domestic Product (GDP), are more often used than others. The framework is the key tool that countries use to measure their economies and changes in economic performance over time; and because the SNA is an international standard, the results are largely comparable between countries.

3. The SNA framework has developed and expanded over the years, from the first publication in the 1950s. The current version is known as the 2008 SNA. Work is in course to improve the framework to meet the needs of an ever-changing world and to answer the most important policy questions of our times. These efforts will result in the 2025 SNA. In response to demand from economic policy makers, a key ambition for the new SNA is to ‘enhance and broaden’ the framework to provide better insights into economic well-being and sustainability.

4. One of the most important functions of the SNA is to establish the boundaries of what the economy includes and what it does not. Within the SNA boundaries, the economy of each country is divided into institutional sectors – non-financial corporations, financial corporations, general government, households, and non-profit institutions serving households (NPISH) – each with their own set of accounts. The SNA boundaries have real-world impacts on decision-making, for example by determining what is included in GDP growth and in important indicators for the institutional sectors.

5. While not designed for this purpose, the headline economic growth indicator produced from the national accounts, GDP, is often used to represent societal progress or the economic well-being of the population. In fact, other national accounts indicators relating to the household sector, such as household disposable income (HDI) and household net worth, are better suited for this purpose. HDI measures all income available to households. The ‘adjusted’ HDI indicator includes the addition of social transfers in kind, such as free education and health services provided by government and NPISH. Household net worth measures the wealth of the household sector: people’s assets minus their liabilities or debts.

6. Existing national accounts indicators of people’s economic well-being, such as HDI and household net worth, are however, insufficient to address many of the important questions on well-being and sustainability on countries’ policy agendas in the 21<sup>st</sup> century. Such policy priorities include understanding: a) the distribution of income and wealth across household groups or inequalities; b) activities that take place outside the boundaries of the economy, such as unpaid household work; c) evidence relating to the key policy topics of work (labour), education, human capital, and health care; and d) how human beings’ impact on the environment may affect their future economic well-being. These priorities have informed the research agenda on enhancing and broadening the framework to better capture well-being and sustainability in the 2025 SNA.

7. In this guidance note, ‘well-being’ is taken to mean the current economic well-being of households. Although a broader definition would include subjective factors,

they are beyond the scope of the national accounts framework. ‘Sustainability’ is taken to mean the maintenance and generation of resources to support economic well-being in the future, such as financial wealth, buildings, machinery and equipment, as well as environmental, human and social capital.

8. The proliferation of alternative approaches to address well-being and sustainability goes back many decades. Significant recent global initiatives include:

- The Stiglitz-Sen-Fitoussi *Report by the Commission on the Measurement of Economic Performance and Social Progress*, calling for statistics to move ‘Beyond GDP’ and close the gap between aggregate production, citizen’s well-being and long-term sustainability.
- The development of dashboards with indicators on various aspects of well-being by countries and international organisations (e.g., OECD *How’s Life?*).
- The United Nations Sustainable Development Goals (SDGs), building on economic growth while addressing a range of social and environmental needs.
- ‘Inclusive Growth’ policies adopted by many international organizations (e.g., OECD, World Bank, IMF).
- Measures of comprehensive or inclusive wealth for an enhanced understanding of sustainability as a complement to current national income.

9. These initiatives reflect the view that the economic well-being of households is a complex multidimensional phenomenon, difficult to address with a single summary indicator. Understanding is therefore enhanced by a coherent information system that enables analysis of its relevant, interlinked, dimensions.

10. While some enhancements to key aggregates are required, more broadly, the challenge for the 2025 SNA is to propose new datasets and indicators that can be linked to standard macroeconomic measures to shed light on issues affecting well-being and sustainability. Clear linkages to the sequence of economic accounts means added elements benefit from the coherent SNA conceptual and methodological framework and allows policy makers to directly assess how economic events impact elements of well-being and sustainability. The approach also ensures a high degree of cross-country comparability in the added dimensions.

11. In accordance with the 2025 SNA research agenda, the Well-being and Sustainability Task Team (WSTT) of the Inter-Secretariat Working Group on National Accounts (ISWGNA)<sup>2</sup> has developed a strategy covering five key areas corresponding to the policy priorities discussed above:

1. Distribution of household income, consumption, saving and wealth
2. Unpaid household service work
3. Labour, education and human capital
4. Health care
5. Environmental-economic accounting

12. These are explored in detail in WSTT guidance notes WS.2 to WS.14<sup>3</sup>. This guidance note (WS.1) on enhancing and broadening the SNA framework for household well-being and sustainability, is aligned with guidance notes in each of these domains.

---

<sup>2</sup> The ISWGNA is the body coordinating the SNA update, made up of five international organisations: the OECD, United Nations, World Bank, IMF and Eurostat on behalf of the European Commission.

<sup>3</sup> See Annex A for a list of guidance notes in the area of well-being and sustainability, including links to the latest versions. These can also be found on the dedicated website: <https://unstats.un.org/unsd/nationalaccount/snaupdate/guidancenotes.asp>

It brings together the key recommendations and describes how the existing SNA sequence of accounts can be expanded to provide this more comprehensive information.

13. The remainder of this note is structured as follows. **Section 2: Existing initiatives** discusses efforts in the statistical world to better capture elements of well-being and sustainability. It is followed by a discussion on possible ways forward for the SNA update in **Section 3: Options considered**, which also presents guiding principles for enhancing and broadening the existing SNA framework. **Section 4: Specific proposals on well-being and sustainability** shows how the key recommendations in WSTT guidance notes WS.2 to WS.14 will be brought together in the 2025 SNA to provide more insights on current and future well-being. **Section 5: Implementing the guidance** looks at national and international implementation issues and provides suggestions to maximize the impact of proposed changes. **Section 6: Conclusions and recommendations** summarises achievements and recommendations for taking the work forward.

## 2. Existing initiatives

14. The work to enhance and broaden the SNA sequence of accounts to provide more insights on households' economic well-being and sustainability builds on prior efforts in this area. This section provides a brief overview of existing initiatives relevant to the research programme of the WSTT for the 2025 SNA, starting with more conceptual approaches, then focusing on practical applications. It concludes with reflections on how these apply in the SNA context.

### *Stiglitz-Sen-Fitoussi Report*

15. One of the most important and influential initiatives for understanding well-being is the 2009 *Report by the Commission on the Measurement of Economic and Social Progress* by Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi. It contains a sweeping range of recommendations, among which the first five relate directly to macroeconomic statistics:

- Recommendation 1: when evaluating material well-being, look at income and consumption rather than production.<sup>4</sup>
- Recommendation 2: emphasise the household perspective.
- Recommendation 3: consider income and consumption jointly with wealth.
- Recommendation 4: give more prominence to the distribution of income, consumption and wealth.
- Recommendation 5: broaden income measures to non-market activities.

16. The report also contains a range of recommendations on well-being and sustainability. It stresses that current well-being and long-term sustainability should be viewed separately, in a manner consistent with the SNA distinction between current accounts and asset accounts, the latter representing the sources of future income and well-being.

17. The Stiglitz-Sen-Fitoussi report does not contain a recommendation to capture well-being or sustainability in a single metric. Rather, it considers well-being as a multi-dimensional phenomenon for which the dimensions should be defined, and appropriate indicators chosen.

18. Since its publication in 2009, the report has prompted a shift in emphasis from a focus on aggregate production to the household sector. It led to a recognition of the difference between GDP and household (adjusted) disposable income, the relevant metric for understanding people's material well-being. It also gave rise to an increased emphasis on distributional measures of household income, consumption, saving and wealth consistent with national accounts, to better understand how specific household groups are impacted by macroeconomic developments.

### *Well-being dashboards and indicators*

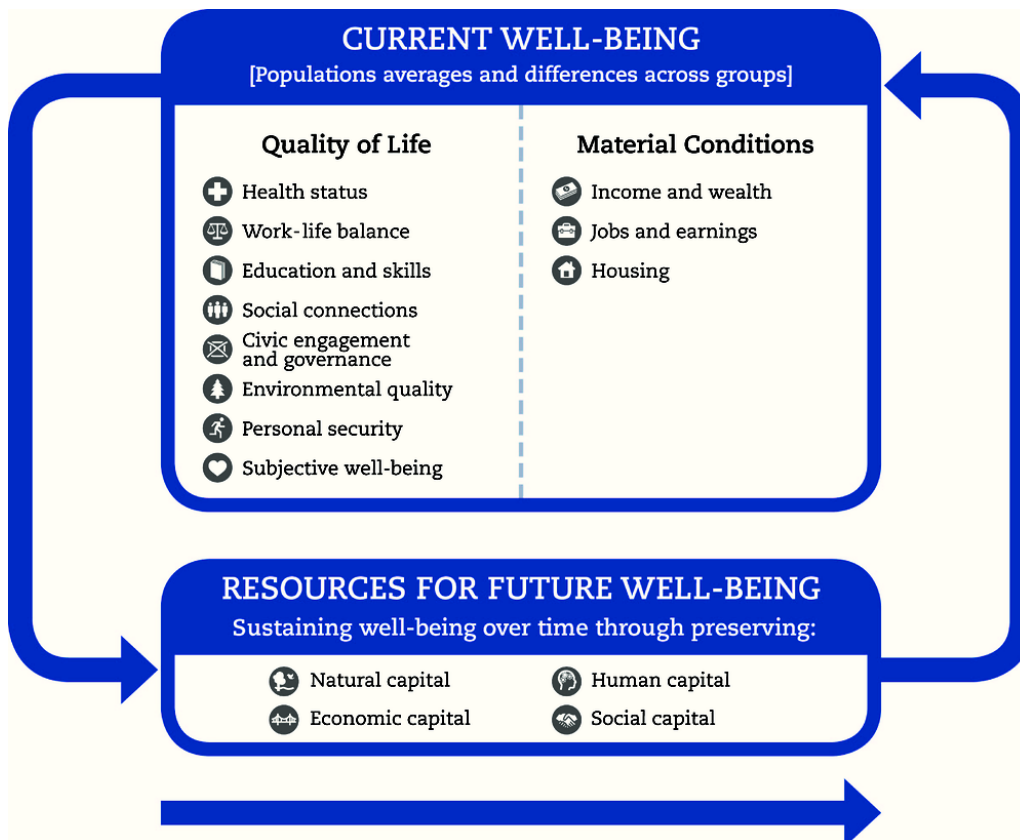
19. Outside the national accounts and macroeconomic statistics sphere, the Stiglitz-Sen-Fitoussi report spurred the development of multidimensional well-being dashboards and indicators, such as OECD *How's Life?* This was developed in consultation with national statistical offices (NSOs) of OECD member countries, largely based on the recommendations of the Stiglitz-Sen-Fitoussi Commission along with

---

<sup>4</sup> In looking at income, the Stiglitz-Sen-Fitoussi report also stresses the importance of focusing on net measures instead of gross measures, not only incorporating depreciation but also the depletion of natural resources, and possibly other environmental degradation or improvements.

other national and international initiatives. It conceptualises well-being as a multi-dimensional construct, distinguishing between current and future well-being (sustainability over time). Within the former, it distinguishes between quality of life and material conditions.

20. The eight dimensions of ‘quality of life’ range from health status to education and skills, quality of the local environment, personal security and subjective well-being. ‘Material conditions’ are detailed in three specific dimensions (income and wealth, jobs and earnings, and housing). As in the Stiglitz-Sen-Fitoussi report, the OECD framework describes sustainability in terms of resources critical for future well-being (natural, human, economic and social capital).



21. In the same spirit, many country-specific well-being indicator dashboards have also been developed, often geared towards monitoring local issues and national policy priorities. The Netherlands Monitor for Well-being, for example, reports annually on three themes: quality of life here and now, resources for the future, and impacts elsewhere, on other countries.<sup>5</sup> The UK publishes a progress report biannually, covering health, natural environment, personal finances and crime, encompassing both objective and subjective measures.

#### *Sustainable Development Goals*

22. The Sustainable Development Goals (SDGs) were adopted by the United Nations Member States in 2015. The 17 interconnected goals are wide-reaching and seek to unify global policy in economic, social and environmental spheres. A set of indicators was developed to monitor progress, as a follow-up and review mechanism for the implementation of the 2030 Agenda for Sustainable Development. The approach

<sup>5</sup> This is three-part distinction is based on the recommendations on Measuring Sustainable Development of the Conference of Economic Statisticians.



was adopted by the General Assembly in 2017 and included 232 indicators associated with 17 goals and 169 associated targets.



23. While the SDGs and their associated indicators were a compromise aiming to serve different policy and country needs, they have coalesced local policy target-setting in many areas of the world, including for the private sector, and warrant consideration in the development of enhancing and broadening the SNA framework in view of well-being and sustainability.

#### *Comprehensive or inclusive wealth*

24. To contribute to an increased understanding of sustainability, measures of comprehensive wealth have gained momentum as a complement to current economic indicators. These broader wealth measures augment traditional national wealth concepts to include new forms of natural and human capital. While a third extension for social capital (trust, networks, social interactions and the ability to achieve outcomes on the basis of collective action) is also acknowledged as an important contributor to future economic progress, its measurement has so far been restricted to non-monetary indicators. Developing concepts and measures to assign a monetary wealth value to social capital has not, up to now, been achieved.

25. Significant comprehensive wealth programs include the 2018 Inclusive Wealth Report, produced by the United Nations Environment Program (UNEP) in collaboration with Kyushu University and other partners, and comprehensive wealth measures found in the World Bank's recent edition of *The Changing Wealth of Nations 2021, Managing Assets for the Future*. These reports demonstrate the feasibility of operationalizing these concepts for a wide range of countries with differing levels of development. Findings offer new insights on how wealth and its composition and complement current income measures for a fuller understanding of sustainable development.

26. In keeping with the concept of comprehensive wealth, the World Bank also publishes measures of adjusted net saving as part of its annual reporting of World Development Indicators. Adjusted net saving as currently defined is measured as gross national saving less depreciation of produced capital, depletion of subsoil assets and

timber resources and the cost of air pollution damage to human health, plus a credit for education expenditures. These related flow measures will be re-examined to align with expanded wealth concepts as the statistical program continues to develop.

*Perspectives on broadened frameworks for economic well-being*

27. Insights on how the SNA accounting system could be logically situated in a broader information system were offered by André Vanoli in the context of the IARIW<sup>6</sup>-OECD conference in 2017: Future of National Accounts: W(h)ither the SNA. The paper, entitled ‘The Future of the SNA in a Broad Information System Perspective’, discusses conceptual and methodological considerations to extend the coverage of the national accounts “central framework” into four distinct spheres: Economy, Nature, People, and Society. Vanoli proposes to rebrand the traditional SNA as the System of National Economic Accounts, within this broader set of monetary and non-monetary measures.

28. Among the points highlighted in relation to well-being and sustainability are fundamental conceptual difficulties and implicit assumptions for equivalent transaction values required to monetize the dimensions of well-being. Vanoli suggests that this complicates (or perhaps precludes) the establishment of an integrated accounting system in the traditional sense. He also highlights key conceptual differences in production and asset boundaries between the traditional SNA and the SEEA and proposes alternate characterizations of the relationship between the economy and nature as “unpaid ecological costs” and “the accumulation of ecological debt”.

29. Rutger Hoekstra, in his 2019 book *Replacing GDP by 2030: Towards a Common Language for the Well-being and Sustainability Community*, proposes an elaborate interdisciplinary framework, encompassing a body of science outside traditional welfare economics in, for example, the environmental, demographic or other social science fields. The proposed optimal framework elaborates multiple dimensions in addition to economic accounts, including physical, spatial, demographic and time use accounts, along with accounts enabling distributional and network analysis.

30. As background to his proposal, Hoekstra provides context on factors contributing to the apparent success of the ‘GDP multinational’ and the proliferation of a “cottage industry” of competing concepts and frameworks developed over several decades in reaction to the limitations of GDP as an indicator of societal progress. His appeal for broadening the narrative stresses the importance of coincident statistical and policy development.

*2008 SNA Chapter 29: Satellite accounts and other extensions*

31. Chapter 29 of the 2008 SNA deals with satellite accounts<sup>7</sup> and other extensions to the SNA.<sup>8</sup> Satellite accounts are described as a flexible mechanism to introduce new classifications or extend concepts in specialized accounts that are linked to, but distinct from, the SNA sequence of accounts. They are characterized as optional accounts to avoid overburdening the SNA sequence of accounts with excessive detail, or to experiment with new concepts and methods prior to their possible integration and implementation in traditional headline indicators.

---

<sup>6</sup> The International Association for Research in Income and Wealth (IARIW).

<sup>7</sup> The term ‘satellite accounts’ will no longer be used in the 2025 SNA. These will be referred to as ‘supplementary accounts’ or ‘supplementary tables’ (see **Section 3**).

<sup>8</sup> The SNA 1993 included a lengthy section on social accounting matrices (SAMs). These were also characterized as optional special detail tables, elaborated as integrated expansions of Supply and Use tables and institutional sector accounts, to highlight, for example, distributions of income and expenditure and disaggregated labour market data consistent with national accounts. Other relevant detail for specific institutional sectors in monetary or physical terms could be introduced via this mechanism, to make integrated connections with social statistics. The full material on social accounting matrices was not carried forward into the 2008 SNA, due to limited take-up and the need for more flexible options for presentation.

32. A broad range of options are presented in Chapter 29 of the 2008 SNA, from theme-based accounts that reorganize or better specify existing detail, such as tourism, to those that extend the production or asset boundary, such as household unpaid activities. Several examples address issues related to well-being and sustainability considered in this work

33. The possible inclusion of non-monetary information (such as physical units or labour market characteristics) is highlighted in a number of examples cited in Chapter 29. Environmental accounting reflected in the System of Environmental-Economic Accounting (SEEA) is cited as an example of using physical units as essential components of effective analysis.

*The CES in-depth review of satellite accounts*

34. In February 2018, the Bureau of the Conference of European Statisticians (CES) decided to undertake an in-depth review on satellite accounting. The review was prompted by a growing interest from the user community in more detailed statistics to meet specific information needs, aligned with concepts and methods in well-established frameworks such as the SNA. Several handbooks on SNA-based satellite accounts had been developed by different organizations and increasing pressure to produce a range of specialized accounts was putting a strain on resources available to NSOs. In this context, Statistics Canada, with the support of the OECD, Eurostat, UNECE, UNSD and the IMF, prepared an overview of existing practices on satellite accounting. Results available via this [link](#). The paper describing the findings (UNECE, 2019) proposes the development of a typology of satellite accounts and offers recommendations for future work.

35. In response to these recommendations, the ISWGNA's Advisory Expert Group on National Accounts (AEG) agreed that statistical outputs should be enhanced to improve the consistent integration of the 'core' national accounts and the 'satellite accounts' on well-being and sustainability under a broader SNA accounting umbrella. The AEG further recommended that appropriate terminology and branding be developed to facilitate this integration. The review recommended that, under the umbrella of the ISWGNA, a guidance note proposing an extended set of economic, social and environmental accounts should be prepared, to be presented for endorsement to the United Nations Statistical Commission. The note would address well-being and sustainability gaps in the 2008 SNA, including the measurement of unpaid household activities, environmental-economic impacts, health and education. This guidance note (WS.1) is the result of this recommendation.

### 3. Options considered

#### *Pragmatic way forward*

36. In his 2019 article ‘Measuring economic well-being and sustainability: a practical agenda for the present and the future’, Peter van de Ven<sup>9</sup> suggests the integration into the new SNA of elements such as households’ unpaid activities, the environment and other aspects of well-being and sustainability. In addition to advocating greater emphasis on household measures that are already available, Van de Ven proposes to enrich the SNA framework by including a standard range of accounts for the environment, health, education and time use, drawing on the body of available guidance and without a strict requirement for monetary valuation.

37. The WSTT agreed it was possible to envisage the regular compilation of supplementary accounts and tables on, for example, environment, health, education and unpaid household activities. These need not necessarily be compiled on a quarterly or annual basis, and those with a more structural focus could be compiled every three to five years, depending on national demands and the availability of source data.

#### *Guiding principles for the enhancement*

38. The following guiding principles were established for an enhancement and broadening of the SNA framework to better capture household economic well-being and sustainability:

1. Changes will be restricted to economic (material) aspects affecting well-being and sustainability and not all possible domains or indicators.
2. Any required changes to the sequence of economic accounts will not compromise its current key applications (for example by central banks and treasuries, for economic and fiscal policy or monitoring, or understanding the business cycle).
3. It will leverage the comparative advantages of the SNA as a coherent integrating framework, identifying linkages and enabling integrated analysis among new distinct elements and the sequence of accounts.
4. No one single indicator will be featured, rather elaborations or variants will be developed in each of the domains identified.
5. Non-monetary measures will be integrated in each of the domains as appropriate to facilitate enhanced analysis.
6. In each of the added domains, the focus will be on output type measures, allowing for analytical linkages to possible outcome measures not in scope for the SNA expansion.
7. To the extent possible, enhancements in each domain will address the full sequence of economic accounts, focusing not just on production, but also the impact on income, consumption and wealth accumulation.
8. The enhancement should seek a broad correspondence with well-being indicators, such as OECD *How’s Life?* or the Sustainable Development Indicators, to enable this extended analysis.
9. The enhancement and broadening efforts will leverage guidance in well-developed satellite account frameworks that are already available and have been subject to consultation, testing and implementation.

---

<sup>9</sup> This article was published in the Eurostat Review on National Accounts and Macroeconomic Indicators. At the time of publication, Peter van de Ven was Head of National Accounts at the OECD. He is currently Lead Editor of the SNA update.

### *Terminology*

39. This guidance note uses terminology proposed in guidance note [CM.3: A Taxonomy for Communicating Economic Statistics Releases, Products and Product Updates](#). For example, reference is made to the ‘sequence of economic accounts’ as the main set of inter-related accounts that trace economic activity from production to the distribution of income, to expenditure, saving, capital formation, financing and to wealth (positions) for the main sectors in the economy.

40. The term ‘supplementary accounts’ is used in proposals for data sets including an opening item, a closing item, a balancing item and a debit and credit structure, but presented as independent from main sequence of economic accounts or including additional features. This category is further broken down into ‘extended accounts’ and ‘thematic accounts’. Reference is also made to ‘supplementary tables’ for data sets that are not ‘accounts’ in the sense that they do not have balancing items and are not part of a sequence of inter-connected accounts. These supplementary tables are broken down into ‘extended tables’ and ‘thematic tables’.

## 4. Specific proposals on well-being and sustainability

### 4.1 Introduction

41. The previous sections reviewed existing initiatives on well-being and sustainability and options considered by the WSTT. This section looks at the specific recommendations in each of the WSTT guidance notes WS.2 to WS.14<sup>10</sup> and how they will be brought together in the 2025 SNA to provide more information to address the following key information needs:

- Understanding the distribution of income and wealth among household groups, reflecting inequalities.
- Activities taking place outside the boundaries of the market economy, such as unpaid household activities.
- Key policy topics such as work (labour), education and human capital, and health care.
- Measuring how human beings' impact on the environment may affect their future economic well-being.

42. Before presenting detailed recommendations in these areas, it bears noting that the 2008 SNA already includes important indicators of household economic well-being, such as adjusted Household Disposable Income (HDI) and household net worth (see **Section 1**).

43. When enhancing and broadening the SNA framework to better reflect well-being, the focus is on objective measures. In the 2025 SNA, these will either be reflected within the sequence of economic accounts or in supplementary accounts and tables. It warrants clarifying the aim is not to measure well-being directly, but rather identify and present specific SNA elements linked to the well-being of households.

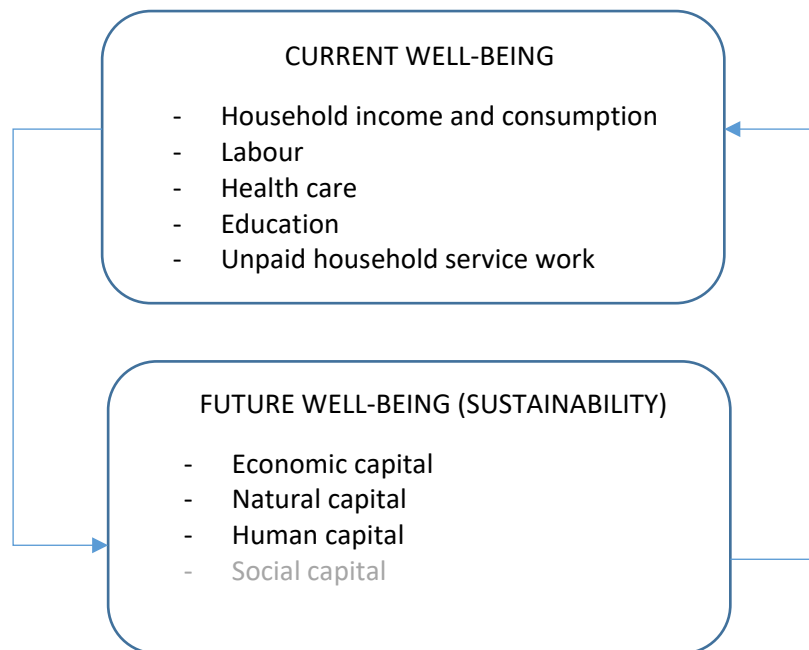
44. In line with the recommendations of the Stiglitz-Sen-Fitoussi report, elements affecting current well-being, i.e., related to resources and flows directly affecting people's lives here and now, are distinguished from those affecting future well-being, focusing on stock measures and providing insights on sustainability over time.

45. In addition to information already available from the SNA sequence of economic accounts (such as household disposable income and consumption), new elements relevant to current well-being include labour, health care, education and unpaid household service work, in line with key elements in well-being dashboards such as OECD's *How's Life?*

46. Stocks of assets constituting the resources affecting future well-being are relevant to sustainability. These concern economic capital (e.g., produced assets such as buildings, machinery and equipment, and financial wealth), natural capital (e.g., land, non-renewable and renewable energy resources and biological resources), human capital, and social capital. They are also often present in dashboards or in measures of comprehensive or inclusive wealth.

---

<sup>10</sup> See Annex A for a complete overview, including links to the various guidance notes.



47. In line with recommendations of the Stiglitz-Sen-Fitoussi report, distributional aspects for other well-being and sustainability topics such as unpaid household activities, the labour market, education and health care must be considered, in addition to the distribution of income, consumption, saving and wealth.

48. Analysis of key socio-demographic characteristics, such as household type, home ownership status, gender, age group, education level and employment status is also desirable. Policy makers may wish to understand, for example, how many children are included in the top or bottom income quintile on the basis of the equivalized income of the household to which they belong; or how many households included in a particular income quintile rent or own their home.

49. In addition to information at the household level, there is a clear interest for analysis pertaining to individuals. Given that the household is the main statistical unit, this may not be feasible to estimate for the full sequence of economic accounts. However, this analysis can be enabled by incorporating socio-demographic information into specific elements of national accounts estimates. Several guidance notes include such proposals, presented as illustrative optional breakdowns.

50. The remainder of this section looks at how the WSTT guidance notes address well-being and sustainability information needs, and how this will be reflected in relation to the SNA sequence of economic accounts. Section 4.2 discusses the elements pertaining to current well-being, while Section 4.3 focuses on those relevant for future well-being. Section 4.4 discusses distributional aspects, of relevance to both perspectives on well-being. Finally, Section 4.5 touches upon the issue of valuation, a relevant topic in this area.

51. A schematic overview of how the full set of proposals will affect the SNA sector classification and the transaction and asset breakdowns is presented in **Annexes B, C and D** respectively.

52. In depth guidance notes are available for each individual area or work<sup>11</sup>, explaining the options examined, considerations and detailed recommendations. These

<sup>11</sup> See Annex A for a list of the relevant guidance notes, including links to the latest versions. These can also be found on the dedicated UN Website: <https://unstats.un.org/unsd/nationalaccount/snaupdate/guidancenotes.asp>.

individual guidance notes are essential companion documents and readers are encouraged to refer to them for a full examination of each issue.

## 4.2 Current well-being

53. This section describes elements recommended as additions to the SNA for more comprehensive insight into current well-being. In addition to aspects already captured in the sequence of economic accounts (such as household income and consumption), this concerns information on labour, health care, education and unpaid service work, each discussed in turn below.

### *Labour*

54. In addition to providing insights on its role in the production process, more detailed information on labour as it directly contributes to the well-being of households is needed. First, labour provides the income needed to satisfy basic needs and pursue other important life goals. Second, the quality of a job, the opportunities it provides to develop new skills, and the time spent in the workplace are all aspects directly affecting household well-being.

55. Guidance note WS.4 recommends the inclusion of new tables on labour as a standard component to accompany the sequence of economic accounts, as is the case for the supply and use tables. These new ‘labour tables’ will provide coherent data on aspects of the labour market, both in monetary terms and in physical terms. The tables will focus on four dimensions (see **Annex E** for an overview of how these tables link together):

- **Jobs:** Information on jobs, broken down into filled jobs (main and secondary) and vacancies.
- **Persons:** Information on the labour force, broken down into employed (both employees and self-employed) and unemployed persons, and on under-utilisation, combining unemployed and underutilised persons. This quadrant will include demographic breakdowns by gender, age and educational attainment.
- **Volume:** Information on aspects of the labour market in terms of hours (hours worked, hours sought but not worked, hours paid, overtime hours paid for, average hours worked per job).
- **Payments:** Information on labour costs incurred by enterprises and incomes received for labour, including additional indicators such as average costs per hour worked, average costs per hour paid and average labour income per employed person.

56. The industry breakdown will be aligned to supply and use tables, to enable their use in productivity analyses. It is also recommended to compile labour data for detailed breakdowns for expanded tables on health and education discussed later in this document. It is also recommended to extend the labour accounts with information on unpaid household service work (discussed below) in years for which this data is available, to provide a comprehensive account of paid and unpaid productive activities in the economy. These extended tables<sup>12</sup> are referred to as ‘work tables’.

57. These new labour tables will provide insights into the labour market, its role in the distribution of income, and the role of labour in economic growth. They will also provide insights into working and living conditions, including the impact of changes in production arrangements, driven, for example, by digitalisation and globalisation.

---

<sup>12</sup> Extended tables are a form of supplementary table in the 2025 SNA.



## ***Health care***

58. Given health is an important element of well-being, detailed insights concerning the production and outputs of the health care systems in countries, the entities involved, and how this activity is being financed are required. Guidance note WS.5 includes such recommendations.

59. The key recommendation in WS.5 is to regularly compile supplementary tables with more detailed information on estimates of health care final consumption expenditure in terms of functions, providers and financing schemes, in line with the System of Health Accounts 2011<sup>13</sup> (see **Annex F** for examples of the relevant tables):

- In terms of **functions**, breakdowns are recommended separately identifying curative care, rehabilitative care, long-term care, ancillary services, medical goods, preventive care, governance and health system and financing administration, and other health care services N.E.C.
- In terms of **providers**, breakdowns are recommended separately identifying hospitals, residential long-term care facilities, providers of ambulatory health care, providers of ancillary services, retailers and providers of medical goods, providers of preventive care, providers of health care system administration and financing, the rest of the economy, and the rest of the world.
- Finally, in terms of **financing**, breakdowns are recommended separately identifying government schemes and compulsory contributory health care financing schemes, voluntary health care payment schemes, household out-of-pocket payments, and non-resident financing schemes.

60. It is recommended to include socio-demographic breakdowns, such as by gender and age. On the basis of this information, important indicators can be developed to provide insights on the provision of health care, such as health care expenditures as a share of GDP, per capita or per household group (e.g., age and gender), expenditure by health care function, the shares between health care expenditures paid out of own pocket versus the payments made by private insurance, government or non-profit organisations (see **Annex F** for an overview of proposed indicators).

61. In addition to information linked to the SNA sequence of accounts, the guidance note proposes extending measures for the provision of health care and long-term social care through unpaid household service work. These extensions may be compiled less frequently but are important for a more comprehensive picture of health care provision. Finally, the guidance stresses the importance of indicators in physical terms, such as employment in health and social care or number of hospital beds available.

## ***Education***

62. From an economic viewpoint, education is important for improving both career opportunities and living conditions by gaining knowledge and skills used in day-to-day life. Furthermore, it provides a sense of self-fulfilment, also enhancing well-being. Many people spend large portions of their life in the education system, so it is important to fully understand the production and outputs of these institutions, the entities providing the services, and how activities are financed.

63. Guidance note WS.4 recommends the regular compilation of thematic tables<sup>14</sup> on education and training (see **Annex G** for an overview of the relevant tables). These encompass tables on education output by provider and purpose, education expenditure by purchaser and purpose, financing of education expenditure by sector and purpose,

---

<sup>13</sup> There are some small differences between the SNA and SHA that may need to be aligned, if possible, in a future update of the SHA. For more information, see guidance note WS.5.

<sup>14</sup> Thematic tables are a form of supplementary table in the 2025 SNA.

and cost structures of education output by purpose. In these tables, the following breakdowns are distinguished:

- **Purpose:** Pre-primary education, primary education, secondary education, higher education, cultural, sport and recreation education, other education and vocational training, in-house training, and other.
- **Provider:** Central government, state government, local government, NPISH, market producers in education, other market producers, and non-residents.
- **Financing:** Central government, state government, local government, NPISH, households, other sectors, and exports.

64. It is proposed to supplement the monetary information with non-monetary data, for example on population, enrolled students (broken down by sex and age group), teachers/staff or employed person by educational attainment. This information would allow compiling indicators such as per capita or per student expenditures. Furthermore, it is recommended to include information on time spent on learning for the years this information is available, potentially from time use accounts as compiled in the context of unpaid household service work (see later on)), acknowledging the important contribution of education to build human capital (see Section 4.3).

65. All of this information will provide important insights into the operation of the education system, the way in which it contributes to the development of human capital, which household groups are benefiting from what types of education specifically, and how it is financed.

### *Unpaid household service work*

66. The 2008 SNA excludes unpaid household service activities (except for owner-occupied housing) from its production boundary mainly for practical reasons. Understanding this work is nonetheless crucial to the analysis of household well-being. Individual well-being is affected by both paid and unpaid work, with each feeding into goods and services consumed by households. The measurement of unpaid work also contributes to a fuller understanding of economic growth, factoring in the impact of shifts across the SNA production boundary for many activities.

67. Guidance note WS.3 recommends the regular compilation of accounts<sup>15</sup> on unpaid household service work at least every 5 years, to complement measures in the main sequence of economic accounts. These measures will be used to derive extended estimates of adjusted GDP including unpaid household service production, as well as complementary measures of household (adjusted) disposable income, reflecting the implicit income derived from unpaid household service work.<sup>16</sup>

68. In terms of approach, it is recommended to extend supply and use tables with estimates both in physical units (labour inputs in hours spent on relevant activities) and in monetary terms (assigning a monetary value to the activities<sup>17</sup>) Unpaid household service work includes any activity meeting the third-party criterion, in other words, the potential to contract out to a market service provider. The following categories are recommended as a guide for the types of productive activity likely meeting this criterion<sup>18</sup>:

---

<sup>15</sup> Extended accounts are a form of supplementary account in the 2025 SNA.

<sup>16</sup> It is further recommended to include consumer durables used in the production of unpaid household service work on the balance sheet as part of the extended accounts.

<sup>17</sup> The guidance recommends applying the input approach (i.e., sum of costs) for valuations of unpaid work to arrive at measures as consistent as possible with those included in the SNA.

<sup>18</sup> These will need to be linked to industries included in the supply and use tables.

- Unpaid childcare (split into active and passive care<sup>19</sup>)
- Adult care (split into active and passive care<sup>19</sup>)
- Nutrition
- Transport
- Household management services
- Laundry and clothing services
- Direct volunteering
- Organisation-based volunteering
- Shopping
- Information services
- Other unpaid household production not elsewhere classified

69. It is also recommended to include memorandum items for a breakdown in physical terms for leisure time and hours spent on other activities not included elsewhere, to arrive at a complete accounting for the use of time. This recognizes that time available for leisure clearly contributes to well-being and is subject to important trade-offs with market consumption. A breakdown of the information according to socio-demographic characteristics, such as by gender, age and educational attainment is also recommended.

70. Accounts for unpaid household service work will provide insights into structural changes between paid and unpaid work, highlighting the services most affected. One could analyse a range of important policy questions, for example, the impact of relying on informal care in health care provision, or the impact of lock-down measures during the COVID-19 crisis leading to a higher level of engagement in unpaid household service work (for example for parents assisting their children in education). Other examples include the impact of digitalisation of the economy, providing the opportunity for people to undertake activities themselves previously undertaken via paid employees, such as booking travel, self-scanning at the supermarket or online banking. It will ultimately provide a deeper understanding of the time allocated to paid and unpaid activities, including leisure time, and the nature of goods and services actually consumed by households.

### 4.3 Future well-being (sustainability)

71. This section describes recommendations to enhance and broaden the SNA sequence of accounts for elements affecting future well-being. In addition to economic capital, already comprehensively captured, this concerns natural and human capital, discussed in turn below. Social capital, often referred to in well-being dashboards or indicators as an element of future well-being, is also briefly discussed, but not recommended for inclusion in the 2025 SNA, given unresolved valuation and compilation challenges.

#### *Natural capital*

72. Recommendations for the 2025 SNA give more prominence to various forms of natural capital and aim to better account for policy relevant environmental factors. Changes in scope aim to clarify how the environment is accounted for in the SNA sequence of accounts, and, to the extent possible, harmonize SNA concepts with the more fully elaborated complementary standards in the SEEA Central Framework (SEEA CF) and the SEEA Ecosystem Accounting (SEEA EA). These important information systems sit alongside the SNA as complementary standards, each with a lens more appropriate to specific environmental analyses.

---

<sup>19</sup> Passive (supervisory) care refers to the time a person is “available and in close proximity” to provide care for a child or a dependent adult should the need arise.

73. In addition to monetary accounts, the SEEA Central Framework includes comprehensive accounting in physical terms, both for the material and energy flows (physical supply and use tables) and for natural resources (asset accounts in physical terms). The SEEA's measurement boundary is broader than the SNA's through the inclusion of stocks of natural resources, including land, that do not have economic value. The recording of physical flows may coincide with transactions in goods, but not exclusively. The recording of emissions to air and water and flows of solid waste, for example, are part of the physical supply and use tables in the SEEA Central Framework, but generally remain unrecorded in the SNA. At the same time, these stocks and flows that are outside the scope of the SNA are organised such that the relevant data can be readily combined with data from the SNA sequence of accounts, especially the production accounts. Consequently, the combination of data from the SNA and the SEEA can support better insights into environmental aspects of well-being and sustainability.

74. The SEEA framework also encompasses new standards and recommendations for the measurement and analysis of ecosystem stocks and flows. Accounting for ecosystem assets and the services they generate is crucially important for capturing natural capital to a fuller extent. The SEEA Ecosystem Accounting describes how this accounting, representing an extension of the SNA's production and asset boundary, can be reflected in an extended sequence of accounts. Much work is currently underway in many countries to implement ecosystem accounting, including for example, legislation for reporting ecosystem accounts within the EU. For now, it is recommended to include a reference to ecosystem assets as an important element of comprehensive wealth measures without an explicit extension of the SNA's sequence of accounts and associated production and asset boundaries.

75. The recommendations aim to better account for the environment in balances and flows recorded in the SNA sequence of accounts by capturing the stock and variety of natural capital and its evolution over time. In terms of transactions, rents from the exploitation of natural resources and their ultimate beneficiaries are better reflected, as are the impacts of their depletion over time on economic growth (see **Annex C**).

76. Seven guidance notes were drafted on specific issues in environmental-economic accounting. Proposals enabling enhanced understanding of future well-being are summarized below.

#### *Coverage and classification of natural resources*

77. Effective stewardship of natural resources and policies on sustainable development depend on the value of the assets, and updated categories must be considered in this context, along with their appropriate presentation.

78. Concerning the coverage of natural resources, guidance note WS.11 recommends broadening the SNA asset boundary to include renewable energy resources in the sequence of accounts, including breakdowns for wind, solar, water and geothermal energy.<sup>20</sup> Their recognition on the SNA balance sheet will provide essential insights in the transition from non-renewable energy sources, as governments increasingly exercise ownership rights and capture associated rents from renewables. Including the stocks of these assets will enable links to associated income flows as renewable energy markets continue to develop and mature.

79. Another important change concerns the treatment of biological resources. Guidance note WS.8 recommends removing the current distinction between cultivated

---

<sup>20</sup> Only renewable energy resources that are viable for use in economic production under prevailing technological and economic conditions qualify as assets. Although it may be argued these values are captured in the underlying land values, the guidance note explains why is unlikely in practice. Where it may be the case, adjustments are needed to avoid double counting.

and non-cultivated biological assets, given that all biological resources are directly or indirectly impacted by human activity and, consequently, “produced” to some degree. This treatment will improve the feasibility of compilation and increase cross-country comparability.<sup>21</sup> The only relevant distinction remaining in this area is between migrating and non-migrating biological resources, with migrating treated as non-produced and non-migrating as produced assets.

80. Given the increased prominence of natural assets, updated presentations of asset classes are required. In SNA2008, non-financial assets are presented in distinct produced or non-produced categories. Guidance note WS.12 alternatively proposes distinctions between types of non-financial assets, with natural capital to be shown as a separate asset class. Separate sub-classes are then recommended for produced and non-produced natural resources<sup>22</sup> retaining the potential for overall aggregates of produced and non-produced capital. The guidance in WS.12 also recommends including the wealth value of human capital in a supplementary table.

81. **Annex D** provides an overview of the full suite of required changes to the classification of natural capital.

#### *Ownership of natural assets*

82. Economic ownership must be properly assigned in the recording natural resources. As resource rents from extraction are often shared between the legal owner and the extractor, guidance note WS.6 recommends splitting the asset in these cases, according to SNA principles of economic ownership. These principles are applied based on an assessment of who bears the risks and obtains the rewards in terms of future income streams.<sup>23</sup> The split asset approach better reflects SNA ownership principles than does assigning the full value to the legal owner, generally in the government sector, while the extractor is often a non-financial corporation. It allows for better insights on the impact of transferring access rights and improves coherence with the production costs of the relevant actors.

#### *Depletion of natural assets*

83. Natural resources are depleted via their ongoing extraction and subsequent use in the production of goods and services. Guidance note WS.6 recommends recording natural resource depletion as a standard component in the sequence of economic accounts, treating it as an input cost of production. This clarifies that depletion does not represent “newly created” economic value but rather a reduction in the value of an existing asset via its use in the production process. In that sense, the depletion of natural resources is treated in a parallel fashion to the depreciation of fixed assets like buildings, machinery, and equipment.<sup>24</sup>

84. This change will affect the key SNA indicators of Net Domestic Product (NDP) and Net National Income (NNI), increasing their usefulness for policy makers. Guidance note WS.6 recommends more emphasis on net measures by national statistical organizations to provide a more accurate and meaningful assessment of sustainable production.<sup>25</sup>

---

<sup>21</sup> Guidance note WS.8 also recommends that the value, compiled as the net present value of future resource rents, should be split into a part representing the “pure” building up of inventories, and the remainder representing the underlying asset.

<sup>22</sup> Produced natural resources concern non-migrating biological resources.

<sup>23</sup> Endorsement of the ‘split ownership of assets’ proposal is pending, subject to the results of testing currently in course.

<sup>24</sup> Please note that WS.8 recommends recording net regeneration of the relevant biological resources as gross fixed capital formation.

<sup>25</sup> Guidance note CM.4 *Use of Net measures in the presentation of the National Accounts* discusses this issue in more detail.

### *Valuation of natural resources*

85. Given there is often limited information on prices associated with existing natural resource stocks, the value of these assets is generally estimated as the present value of the expected returns resulting from their exploitation ('net present value' or NPV method). Not unlike the perpetual inventory method used in compiling the produced capital stock, the NPV method relies on parameters and assumptions, and the 2025 SNA will therefore benefit from further details on its appropriate application. Guidance note WS.10 recommends adding the needed clarifications, adopting guidance from the SEEA CF. This includes a recommendation to use a constant rate or most recent quantity of extraction as indicative of future rates, and to assume the output price of the extracted resource follows a long-run historical trend. While the main focus of WS.10 is on extractible resources, the application of the NPV approach also applies to other relevant natural resources categories.

86. WS.10 also recommends breaking down non-renewable energy resources into three underlying classes according to their commercial status, significantly benefiting cross-country comparability and the valuation of distinct types of resources.

### *Proposals to better capture key environmental-economic issues*

87. As well as detailed information on the value and use of natural resources, guidance of the WSTT encompasses proposals on the appropriate treatment of key environmental-economic issues.

88. Guidance note WS.7 covers recommendations on the recording of emission trading schemes (ETS), important policy instruments increasingly implemented to reduce greenhouse gas emissions. The recommendation is to record the permits as financial assets with taxes on production being recorded at surrender. This recording implies the creation of a new subclass for emission permits in the financial balance sheet, and the creation of a new subcategory under taxes on production to reflect specific amounts related to surrendering emission permits separately.

89. As governments may adopt other policies to achieve environmental goals, guidance note WS.12 recommends the inclusion of 'of which' items for environmental taxes and subsidies under the relevant existing categories, separating taxes obtained via this route from other types of carbon taxes.

90. Another proposed addition in guidance note WS.12 specifies the return on the leasing of non-produced natural resources according to the specific type of resource. Currently, the SNA recommends recording a single aggregate value for rent from all types of (non-produced) natural resources. Given the importance of understanding the source of revenue from natural resources, further breakdowns are proposed.<sup>26</sup>

91. Guidance note WS.12 also introduces measurement of sustainable finance into the SNA. It recommends a new financial corporations' subsector and a number of associated financial instrument breakdowns. Specifically, "of which" categories for ESG<sup>27</sup> and climate adaptation investment funds are introduced to the non-money market funds (non-MMF) sub-sector. For debt securities, loans and equity and investment fund shares, 'of which' sub-categories for ESG and 'green' financial instruments are recommended.

92. Finally, WS.9 includes guidance on the recording of provisions. Natural assets or environmental-related capital investment may be accompanied by terminal costs

---

<sup>26</sup> The subject of rent is currently being discussed as part of guidance note AI.2 "Treatment of rent", which may affect its classification in the accounts. However, it is proposed to keep the subclasses presented here, regardless of how rent will be classified.

<sup>27</sup> Environmental, Social and Governance. ESG funds are those which screen their investments based on ESG principles.

(obligations to decommission oil rigs after termination of a mining operation) and/or compensation costs (future obligations to compensate for damages imposed on others). WS.9 recommends a supplementary table capturing these provisions (see **Annex H**), and to add a provision charge to each relevant asset category for an appropriate value more accurately reflecting the future costs, income, and net worth.

### ***Human capital***

93. The role of human capital is gaining increasing prominence in discussions on productivity and sustainable development. In general, there is a need for better understanding its role in production and its relationship to other knowledge-based capital in the SNA. How human capital is created, how it affects labour markets, and how it relates to the sustainability of future growth are all key topics of interest. As an important asset for households, it provides career opportunities, and a range of benefits in day-to-day activities.

94. Guidance note WS.4 recommends the development of extended tables, including the human capital stock both in terms of volumes and at current prices, including demographic breakdowns, for example by gender, age, or educational attainment. The note recognizes, however, that more work is needed to assure consistent and comparable results across countries. Two approaches are distinguished to value human capital: the cost-based approach and the lifetime income approach, each with distinct methodological challenges. Ongoing work is needed to improve these methodologies and facilitate the compilation of high quality, comparable estimates in the future.

95. In view of this recommendation, human capital is included as new asset class in Annex D.

### ***Social capital***

96. As a category relevant to sustainability, social capital is often referenced in relation to comprehensive wealth measures. It is generally defined to include trust, networks, social interactions, and the ability to achieve outcomes on the basis of collective action.<sup>28</sup> However, due to a lack of consensus on a common definition, in addition to important complexities in determining market values in line with national accounts valuation principles, it is not proposed for inclusion in the 2025 SNA. More work may be considered in the future SNA research agenda.

## **4.4 Understanding distributions of income, consumption and wealth**

97. Information on the distribution of resources among households is required for policy makers to understand inequality and its evolution over time. Aggregate results for the overall household sector can conceal large differences in the distribution of income, consumption, saving and wealth among households.

98. Guidance note WS.2 recommends the regular compilation of household distributions as supplementary accounts<sup>29</sup>, providing consistent results across income, consumption, saving and wealth for specific household groups. At a minimum, a breakdown of income, consumption and wealth in the sequence of economic accounts by income and wealth deciles is recommended. If possible median values, results for the top 5% and ideally the top 1% of the distribution should be compiled. Alternative

---

<sup>28</sup> See World Bank (2021).

<sup>29</sup> The term ‘supplementary accounts’ is to be used in the 2025 SNA for data sets including an opening item, a closing item, a balancing item and a debit and credit structure, but that are independent from the main sequence of economic accounts or include features not included in the main sequence of economic accounts.

breakdowns may also be included, for instance by main source of income and by household type (see **Annex B** for an overview of household categories).

99. Household distributional results can also be compiled for topics covered by other supplementary accounts and tables, such as the value of unpaid household service work, labour, education and health expenditures.

100. These results are relevant both for macroeconomic analyses and for monitoring trends in economic well-being of specific household groups. They provide insight on how groups are faring in light of macroeconomic trends and policies, and what measures are needed to address issues.

#### 4.5 Clarifying SNA valuation principles and methodologies

101. While not within the work of the WSTT, broader guidance to clarify SNA valuation methods and principles bears mentioning, given its relevance to many domains in the well-being and sustainability guidance. In this area there are many instances where exchange values are not observable and must be estimated via a suitable proxy. Initially prompted by discussions on SEEA-EA valuation methods, [Guidance note AI.1](#) provides a holistic view on the valuation of SNA transactions and positions, including the main conceptual foundations, to arrive at more precise guidance in the 2025 SNA. Its aim is not to change fundamental valuation concepts, but rather to clarify them, and using a predefined set of criteria, to arrive at a hierarchy of valuation methods from both a conceptual and a feasibility perspective. Readers are encouraged to consult this guidance for a comprehensive treatment of this issue.



## 5. Implementing new guidance on wellbeing and sustainability

### *Implementation approach*

102. Although SNA update guidance notes generally focus on conceptual matters, the WSTT has identified practical issues to support successful implementation of an enhanced and broadened framework on well-being and sustainability.

103. As recommendations are broad-ranging, priority will need to be given to changes impacting the SNA sequence of economic accounts, such as broadening the asset boundary to include renewable energy resources and accounting for the depletion of natural capital in net measures of production and income. For many countries this will mean sourcing new data and undertaking complex calculations, for which they may need assistance in the form of practical guidance and exchanging best practices. Such support can be facilitated by establishing dedicated expert groups or task forces, developing compilation guides on specific topics, and organising workshops or training seminars. These strategies will be further developed in early implementation planning. In the case of recommendations on natural capital, it will be important to leverage experience in the SEEA community.

104. The recognition of natural resource depletion as an input to production, akin to the consumption of fixed capital, and the recommendation for NSOs to place more emphasis on net measures excluding both depreciation and depletion is of particular significance. Specific guidance on the appropriate characterization or “labelling” of net measures has been developed by the Communications Task Team.<sup>30</sup>

105. For other elements recommended in supplementary accounts or additional breakdowns within the sequence of economic accounts, it must be borne in mind that policy requirements may differ across countries. This will logically lead to different a prioritisation for the development of specific elements across countries and will need to be carefully discussed between compilers and users over the coming years, at both the national and at the international level.

106. As issues surrounding well-being and sustainability are critical in the debate on measuring societal progress (the “beyond GDP” discussion), they will be given high prominence in the 2025 SNA manual. A new chapter on national accounts measures of well-being and sustainability, directly following the introductory chapter, will aim to dispel misunderstanding on how the SNA can inform on this subject, starting with a general discussion of the SNA and measures of welfare, followed by the introduction of the enhanced and broadened SNA framework. While the SNA manual is generally aimed towards compilers, this new Chapter 2 will address a wider audience, and clarify the scope of the new proposals in the context of other initiatives and statistical frameworks, such as the SEEA, required for a more comprehensive view.

107. The new Chapter 2 will reference two additional chapters to be included later in the manual, on measuring well-being and its sustainability, respectively. These will describe the new proposals detailed here, including their links to the SNA sequence of accounts, more specifically, highlighting their advantages to shed light on critical policy issues. The sustainability chapter will include a discussion on the advantages of monitoring sustainability via a capital approach (economic capital, human capital, social capital and natural capital).

---

<sup>30</sup> See Guidance note CM.4, on the use of net measures in the presentation of the National Accounts.

## 6. Conclusions and recommendations

108. To summarize, this note first establishes what is meant by SNA ‘framework’: a sequence of accounts based on coherent economic accounting concepts, with each contributing to a complete and consistent picture of a country’s economy. It discusses how this framework or architecture has developed and expanded over time to meet the needs of an ever-changing world and to answer key policy questions.

109. While the current SNA framework contains indicators on the household sector, such as adjusted household disposable income and household net worth, these are not sufficient to address the many important questions on well-being and sustainability on today’s policy agendas. Current policy priorities require understanding the distribution of income, consumption and wealth across household groups, unpaid activities undertaken by households outside the production boundary, key policy topics like work (labour), education, human capital, and health care, and human beings’ impacts on the environment affect future economic well-being.

110. The guidance note WS.1 explores existing initiatives on households’ current and future economic well-being and considers options consistent with the SNA’s comparative advantage to provide meaningful, comparable and coherent macroeconomic statistics for each economy. Linking new elements to the SNA sequence of economic accounts allows new elements to benefit from the underlying conceptual and methodological framework, and enables their coherent analysis.

111. This guidance summarizes the main proposals for enhancing and broadening the SNA framework to better capture aspects of household economic well-being. For current well-being, proposals cover detailed information on labour, health care, education and unpaid household service work. For sustainability, recommendations cover stocks of assets that affect future economic well-being, covering natural and human capital. In addition, recommendations include distributions of income, consumption and wealth by household groups, and, optionally, by socio-demographic characteristics, and highlights new guidance clarifying SNA valuation principles and methods.

112. While specific proposals are outlined in detail in each individual guidance note, this guidance note also clarifies how the full suite of new information will appear in the 2025 SNA. It indicates cases where recommendations will affect the sequence of economic accounts or where results will be presented in supplementary accounts or tables.

### *The key overarching recommendations are as follows:*

113. It is recommended that **the relevant chapters of the 2025 SNA**, including the new Chapter 2, subsequent chapters on well-being and sustainability and the chapter on the household sector, **build on the analysis in this guidance note**, explaining the main objectives for enhancing and broadening the SNA framework in response to policy demands.

114. For implementing the new guidance, it is recommended that **priority be given to recommendations impacting the sequence of economic accounts**. This may require developing practical guidance on specific topics to assist countries in implementation and, where relevant, draw on experience in related satellite accounts and from the SEEA community.

115. For enhancements envisaged as supplementary accounts and tables or additional breakdowns within the sequence of economic accounts, priorities are

expected to differ among countries. It is recommended that **discussions at the national level be accompanied by a dialogue between countries and with international organisations on priority information** required for international comparisons and which elements should be part of regular data collection by international organisations.

116. In enhancing and broadening the SNA framework, a single indicator of well-being and/or sustainability is not recommended. Instead, the new SNA will provide coherent recommendations on a range of aspects of well-being and sustainability and specify their linkages to the sequence of accounts. It is recommended that **this rich source of information from the national accounts be used for additional analysis and to populate dashboards or indicator sets.**

## References

Hoekstra, R. (2019), Replacing GDP by 2030. Towards a Common Language for the Wellbeing and Sustainability Community, Cambridge Press, Cambridge, United Kingdom.

OECD (2013), OECD Framework for Statistics on the Distribution of Household Income, Consumption and Wealth, OECD Publishing, Paris, France.

[https://www.oecd-ilibrary.org/economics/framework-for-statistics-on-the-distribution-of-household-income-consumption-and-wealth\\_9789264194830-en](https://www.oecd-ilibrary.org/economics/framework-for-statistics-on-the-distribution-of-household-income-consumption-and-wealth_9789264194830-en)

OECD (2011), OECD A System of Health Accounts OECD Publishing, Paris, France.

<https://www.oecd.org/els/health-systems/a-system-of-health-accounts-2011-9789264270985-en.htm>

Stiglitz, J. E., A. Sen and J-P. Fitoussi (2009), Report by the Commission on the Measurement of Economic Performance and Social Progress, Paris, France.

[https://library.bsl.org.au/jspui/bitstream/1/1267/1/Measurement\\_of\\_economic\\_performance\\_and\\_social\\_progress.pdf](https://library.bsl.org.au/jspui/bitstream/1/1267/1/Measurement_of_economic_performance_and_social_progress.pdf)

Stiglitz, J.E., J-P Fitoussi and M. Durand (2018) Beyond GDP, Measuring What Counts for Economic and Social Performance, OECD Publishing, Paris, France.

<https://www.oecd.org/social/beyond-gdp-9789264307292-en.htm>

United Nations, European Commission, International Monetary Fund, Organisation for Economic Cooperation and Development, World Bank, System of National Accounts 1993, New York, United States.

<https://unstats.un.org/unsd/nationalaccount/docs/1993sna.pdf>

United Nations, European Commission, International Monetary Fund, Organisation for Economic Cooperation and Development, World Bank (2009), System of National Accounts 2008, New York, United States.

<https://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf#:~:text=The%20System%20of%20National%20Accounts%2C%202008%282008%20SNA%29%20is,accounts%20for%20policymaking%2C%20analy-%20sis%20and%20research%20purposes.>

United Nations, European Commission, Food and Agriculture Organization of the United Nations, International Monetary Fund, Organisation for Economic Cooperation and Development, World Bank (2014a), System of Environmental-Economic Accounting 2012 - Central Framework, New York, United States.

[https://unstats.un.org/unsd/envaccounting/seeaRev/SEEA\\_CF\\_Final\\_en.pdf#:~:text=The%20System%20of%20Environmental-Economic%20Accounting%202012%E2%80%94Central%20Framework%20%28SEEA,research.%20It%20has%20been%20produced%20and%20is%20released](https://unstats.un.org/unsd/envaccounting/seeaRev/SEEA_CF_Final_en.pdf#:~:text=The%20System%20of%20Environmental-Economic%20Accounting%202012%E2%80%94Central%20Framework%20%28SEEA,research.%20It%20has%20been%20produced%20and%20is%20released)

United Nations, European Commission, Food and Agriculture Organization of the United Nations, International Monetary Fund, Organisation for Economic Cooperation and Development, World Bank (2014b), System of Environmental-Economic Accounting 2012 - Experimental Ecosystem Accounting, New York, United States.

<https://openknowledge.worldbank.org/handle/10986/23959#:~:text=The%20System%20of%20Environmental->

[Economic%20Accounting%202012%E2%80%94Experimental%20Ecosystem%20Accounting,this%20i  
nformation%20to%20economic%20and%20other%20human%20activity](#)

United Nations Economic Commission for Europe (2019), Conference of European Statisticians, In Depth Review of Satellite Accounting, Note by Statistics Canada, New York, United States and Geneva, Switzerland.

[https://unece.org/fileadmin/DAM/stats/documents/ece/ces/2019/ECE\\_CES\\_2019\\_18-G1910795E.pdf](https://unece.org/fileadmin/DAM/stats/documents/ece/ces/2019/ECE_CES_2019_18-G1910795E.pdf)

United Nations Economic Commission for Europe (2017), Guide on Valuing Unpaid Household Service Work, New York, United States and Geneva, Switzerland.

<https://www.un-ilibrary.org/content/books/9789213627921#:~:text=Guide%20on%20Valuing%20Unpaid%20Household%20Service%20Work.%20This,measurement%20of%20labour%20input%20and%20the%20subsequent%20valuation>

United Nations Economic Commission for Europe (2016), Guide on Measuring Human Capital, New York, United States and Geneva, Switzerland.

<https://unstats.un.org/unsd/nationalaccount/consultationDocs/HumanCapitalGuide.web.pdf>

United Nations Environment Program (2018), Inclusive Wealth Report 2018, Nairobi, Kenya.

<https://www.unep.org/resources/inclusive-wealth-report-2018>

Vanoli, A. (2017), The Future of the SNA in a Broad Information Perspective, The Review of Income and Wealth, Volume 63 s2, pp. S238-S265.

<https://onlinelibrary.wiley.com/doi/full/10.1111/roiw.12332>

Van de Ven, Peter (2019), Measuring Economic Well-being and Sustainability: a Practical Agenda for the Present and Future, Eurostat Review on National Accounts, Publications Office of the European Union, Luxembourg.

[https://ec.europa.eu/eurostat/cros/content/measuring-economic-well-being-and-sustainability-practical-agenda-present-and-future-peter-van-de-ven\\_en#:~:text=Measuring%20economic%20well-being%20and%20sustainability%3A%20a%20practical%20agenda,widely%20used%20indicator%20from%20the%20system%20of%20national%20accounts.](https://ec.europa.eu/eurostat/cros/content/measuring-economic-well-being-and-sustainability-practical-agenda-present-and-future-peter-van-de-ven_en#:~:text=Measuring%20economic%20well-being%20and%20sustainability%3A%20a%20practical%20agenda,widely%20used%20indicator%20from%20the%20system%20of%20national%20accounts.)

World Bank (2021), The Changing Wealth of Nations 2021: Managing Assets for the Future, Washington, DC.

<https://www.worldbank.org/en/publication/changing-wealth-of-nations>

## Annex A: List of Guidance Notes in the area of well-being and sustainability (including links to the most recent versions)

- WS.1: Enhancing and broadening the SNA framework to better capture well-being and sustainability
- WS.2: Distributions of household income, consumption and wealth ([consultation version](#))
- WS.3: Unpaid household service work ([consultation version](#))
- WS.4: Labour, human capital and education ([consultation version](#))
- WS.5: Indicators of health care in the System of National Accounts ([endorsed version](#))
- WS.6: Accounting for the economic ownership and depletion of natural resources ([consultation version](#))
- WS.7: Treatment of emission trading schemes ([endorsed version](#))
- WS.8: Accounting for biological resources ([endorsed version](#)<sup>31</sup>)
- WS.9: Recording of provisions ([consultation version](#))
- WS.10: Valuation of mineral and energy resources ([endorsed version](#)<sup>31</sup>)
- WS.11: Treatment of renewable energy resources as assets ([endorsed version](#)<sup>31</sup>)
- WS.12: Environmental classifications ([initial draft](#))
- WS.13: Recording of Losses (this has been dropped)
- WS.14: Distinction between a tax and service transaction and other borderline cases ([initial draft](#))

---

<sup>31</sup> Still pending a decision on the split-asset approach.

## Annex B: Updated sector classification in view of changes proposed in area of well-being and sustainability

S1	Total economy
S11	Non-financial corporations
S12	Financial corporations
...	...
S124	Non-MMF Investment funds
	Of which: ESG funds
	Of which: Climate adaptation investment funds
...	...
S13	General government
S14	Households
	Household equivalized disposable income groups (quintiles/deciles/percentile)
	Household equivalized net worth groups (quintiles/deciles/percentage)
	Main source of income groups (wages and salaries; income from self-employment; net property income; pension benefits; net other current transfers received)
	Household type (single less than 65 years old; single 65 and older; single with children living at home; two adults less than 65 without children living at home; two adults at least one 65 or older without children living at home; two adults with less than 3 children living at home; two adults with at least 3 children living at home; and other)
S15	Non-profit institutions serving households
S2	Rest of the world

## Annex C: Updated transaction classification in view of well-being and sustainability guidance

P1	Output
P2	Intermediate consumption
B1g	Gross value added
P51c	Consumption of fixed capital
	Depletion of natural resources
B1n	Net value added
D2	Taxes on production and imports
D21	Taxes on products
	Of which: Environmental taxes on products
D29	Taxes on production
	Of which: Other environmental taxes on production
	Taxes related to emission trading schemes
	Other carbon taxes
D3	Subsidies
D31	Subsidies on products
	Of which: Environmental subsidies on products
D39	Subsidies on production
	Of which: Other environmental subsidies on production
D45	Rent
	Natural resource rent
	Rent on land
	Rent on non-renewable energy resources
	Rent on renewable energy resources
	Rent on mineral resources
	Rent on biological resources
	Rent on water resources
	Rent on other natural resources
	Non-natural resource rent



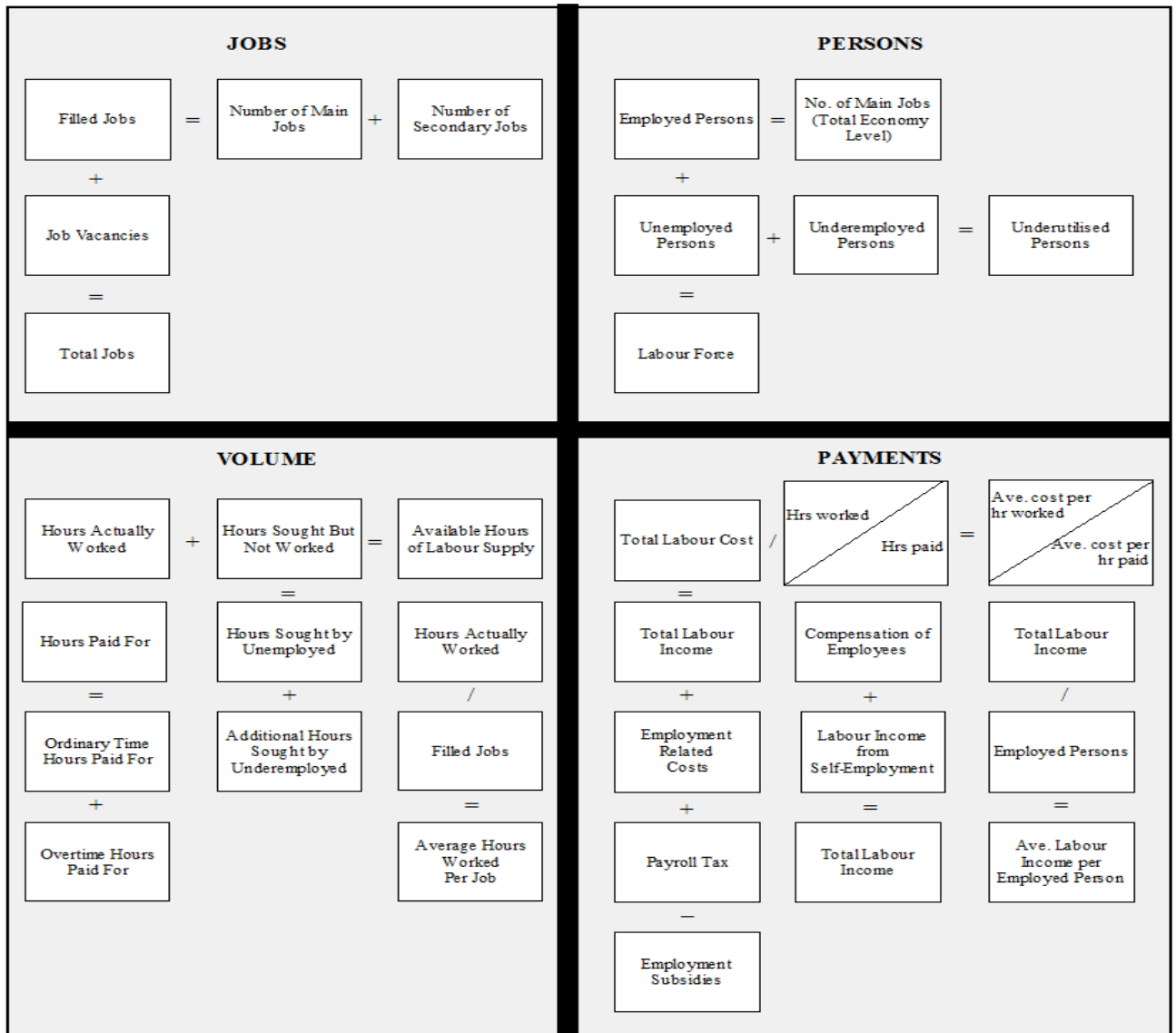
## Annex D: Updated asset classification in view of well-being and sustainability guidance

(Changes to existing categories in green and new classes in red)

AN	Non-financial assets
AN1	Produced non-financial assets, excluding natural resources
	Fixed assets, excluding produced natural resources
	Dwellings
	Other buildings and structures
	Of which: Renewable energy installations
	Of which: Fossil fuel installations
	Machinery and equipment
	Transport equipment
	Of which: Electric powered transport equipment
	ICT equipment
	Other machinery and equipment
	Of which: Carbon capturing equipment
	Of which: Nuclear fusion equipment
	Weapon systems
	Ownership transfer costs
	Intellectual property products
	Inventories
	Valuables
	Memorandum item: Consumer durables
AN2	Non-produced non-financial assets, excluding natural resources
	Contracts, leases and licences
	Goodwill
AN3	Natural capital
	Natural resources
	Land
	Mineral and energy reserves
	Non-renewable mineral and energy reserves
	Oil reserves
	Natural gas resources
	Other mineral and energy resources
	Renewable mineral and energy resources
	Wind energy resources
	Solar energy resources
	Water energy resources
	River water energy resources
	Tidal energy resources
	Wave energy resources
	Geothermal energy resources
	Other renewable energy resources
	Biological resources
	Biological resources yielding repeat products
	Animal resources yielding repeat products

	Tree, crop and plant resources yielding repeat products
	Biological resources yielding once-only products
	Migrating biological resources yielding once-only products
	Non-migrating biological resources yielding once-only products
	Work-in-progress on non-migrating biological resources
	Water resources
	Other natural resources
	Radio spectra
	Other
AN4	Human capital
AF	Financial assets
AF.1	Monetary gold and SDRs
AF.2	Currency and deposits
AF.3	Debt securities
	Of which: ESG bonds
	Of which: Green bonds
	Of which: Emission permits (still to be decided)
AF.4	Loans
	Of which: ESG loans
	Of which: Green loans
AF.5	Equity and investment fund shares
	Of which: ESG equity and investment fund shares
	Of which: Green equity and investment fund shares
AF.6	Insurance, pension and standardized guarantee schemes
AF.7	Financial derivatives and employee stock options
AF.8	Other accounts payable/receivable

## Annex E: Identity relationships for new labour tables



## Annex F: Supplementary tables on health care

### A. Indicators based on final consumption expenditures and capital formation

Axis	Indicator	CU	%GDP	Per Capita CU	Percent-age of CHE
General	Total current health and social care expenditure	X	X	X	
	Total current health expenditure plus capital spending	X	X	X	
Health Functions	Preventive spending				X
	Curative spending				X
	Inpatient spending				X
	Outpatient spending				X
	Total pharmaceutical spending	X	X	X	X
	Health expenditures on LTC	X			X
Providers	Social care (spending)	X			X
	Hospital health spending				X
	Ambulatory health spending				X
Financing Schemes	Social care spending				X
	Government health schemes				X
	Compulsory contributory health insurance				X
	Voluntary health insurance				X
Capital Formation	Out of pocket health expenditures				X
	Total public spending on capital formation	X			X
	Total private spending on capital formation	X			X
	Spending on capital formation by hospitals	X			X

Source: Adapted from table 15.1 of *SHA 2011*. CU = currency unit (national, USD, or Euro), CHE = current health expenditures and adjusted for the inclusion of social long-term care.

### B. Health output, by provider and health functions (example table)

Supply		HP.1 Hospitals	HP.2 Residential long-term care facilities	HP.3 Providers of ambulatory health care	HP.4 Providers of ancillary services	HP.5 Retailers and other market producers of medical goods	HP.6 Providers of preventive care	IP.7 Providers of health care systems and financing	IP.8 Other secondary health care providers	Imports	Taxes less subsidies on products	Total
Health functions and Social care function	HC.1 Curative care											
	HC.2 Rehabilitative care											
	HC.3 Long-term care (health)											
	HC.4 Ancillary services (non-specified by function)											
	HC.5 Medical goods n.s.f.											
	HC.6 Preventive care											
	HC.7 Governance and health systems and financing administration											
	H.C.9 Other health care services not elsewhere classified											
	HCR.1 Long-term care (social)											
	Total output = Total current expenditure											
R&D (own account and for sale)												

*C. Health expenditure, by consumer and health function (example table)*

Use		Final consumption expenditures					Intermediate consumption – market producers	Exports	Total
		Central government	State government	Local government	NPISH	Households			
Health functions and Social care function	HC.1 Curative care								
	HC.2 Rehabilitative care								
	HC.3 Long-term care (health)								
	HC.4 Ancillary services (non-specified by function)								
	HC.5 Medical goods n.s.f.								
	HC.6 Preventive care								
	HC.7 Governance and health systems and financing administration								
	HC.9 Other health care services not elsewhere classified								
	HCR.1 Long term care (social)								
Total output (intermediate and final consumption) = Total current expenditure									
		<b>Gross fixed capital formation in health industry (ISIC 85)</b>							
		Central government	State government	Local government	NPISH		Market producers in education industry	Total	
R&D (both purchased and produced for own account)									
Capital formation (excluding R&D)									
Total gross fixed capital formation									

*D. Financing, by sector and health function (example table)*

		Health and social care functions									Total
		HC.1 Curative care	HC.2 Rehabili- tative care	HC.3 LTC health	HC.4 Ancillary services	HC.5 Medical goods	HC.6 Preventive care	HC.7 Governance and health systems and financing administration	HC.9 Other health care services not elsewhere classified	HCR.1 LTC social	
<b>Resources</b>											
Central govern- ment	Final consumption expenditure of central government										
	Plus - transfers / subsidies to other sectors (detail to be country specific)										
	Less – transfers / subsidies from other sectors (detail to be country specific)										
	<b>Central government financing</b>										
State govern- ment	Final consumption expenditure of state government										
	Plus - transfers / subsidies to other sectors (detail to be country specific)										
	Less - transfers / subsidies from other sectors (detail to be country specific)										
	<b>State government financing</b>										
Local govern- ment	Final consumption expenditure of local government										
	Plus - transfers / subsidies to other sectors (detail to be country specific)										
	Less - transfers / subsidies from other sectors (detail to be country specific)										
	<b>Local government financing</b>										

NPISH	Final consumption expenditure of NPISH										
	Plus - transfers to other sectors (detail to be country specific)										
	Less – transfers / subsidies from other sectors (detail to be country specific)										
	<b>NPISH financing</b>										
Households	Final consumption expenditure of households										
	Plus - transfers to other sectors (detail to be country specific)										
	Less – transfers / subsidies from other sectors (detail to be country specific)										
	<b>Household financing</b>										
Other sectors <sup>32</sup>	Intermediate consumption										
	Plus - transfers to other sectors (detail to be country specific)										
	Less – transfers / subsidies from other sectors (detail to be country specific)										
	<b>Other sectors financing</b>										
Rest of the world (exports)											
<b>Total resources</b>											

<sup>32</sup> Corporate sectors and households as producers.

## Annex G: Supplementary tables on education

### *A. Education and training output, by provider and by education and training purpose*

		Supply								
		Central government	State government	Local government	NPISH	Market producers in education industry <sup>33</sup>	Other market producers	Imports	Taxes less subsidies on products	Total
Education and training purpose	EP0 - Pre-primary education									
	EP1 - Primary education									
	EP2 - Secondary education									
	EP3 - Higher education									
	EP4 - Cultural, sport and recreation education									
	EP5 - Other education and vocational training									
	EP6 - In-house training									
	Associated products and administrative expenditures, not allocated									
<b>Total output = Total current expenditure</b>										
<b>R&amp;D production of ISIC 85 (own account and production for sale by the Education Industry)</b>										

<sup>33</sup> Includes households as producers.



*B. Education and training expenditure, by consumer and by education and training purpose*

		Use							
		Final consumption expenditures					Intermediate consumption – market producers	Exports	Total
		Central government	State government	Local government	NPISH	Households <sup>34</sup>			
<b>Education and training purpose</b>	EPO - Pre-primary education								
	EP1 - Primary education								
	EP2 - Secondary education								
	EP3 - Higher education								
	EP4 - Cultural, sport and recreation education								
	EP5 - Other education and vocational training								
	EP6 - In-house training								
	Associated products and administrative expenditures, not allocated								
<b>Total output (intermediate and final consumption) = Total current expenditure</b>									
		<b>Gross fixed capital formation in education industry (ISIC 85)</b>							
		Central government	State government	Local government	NPISH		Market producers in education industry		Total
<b>R&amp;D (both purchased and produced for own account)</b>									
<b>Capital formation (excluding R&amp;D)</b>									
<b>Total gross fixed capital formation</b>									

*C. Financing, by sector and by education and training purpose*

		Education and training purposes								Total
		EPO Pre-primary education	EP1 Primary education	EP2 Secondary education	EP3 Higher education	EP4 Cultural, sports and recreation education	EP5 Other education and vocational training	EP6 In-house training	Associated products and administrative expenditure, not allocated	
		Resources								
<b>Central government</b>	Final consumption expenditure of central government									

<sup>34</sup> Households as consumers only

	Plus - transfers / subsidies to other sectors (detail to be country specific)									
	Less – transfers / subsidies from other sectors (detail to be country specific)									
	<b>Central government financing</b>									
<b>State government</b>	Final consumption expenditure of state government									
	Plus - transfers / subsidies to other sectors (detail to be country specific)									
	Less - transfers / subsidies from other sectors (detail to be country specific)									
	<b>State government financing</b>									
<b>Local government</b>	Final consumption expenditure of local government									
	Plus - transfers / subsidies to other sectors (detail to be country specific)									
	Less - transfers / subsidies from other sectors (detail to be country specific)									
	<b>Local government financing</b>									
<b>NPISH</b>	<b>Final consumption expenditure of NPISH</b>									
	<b>Plus - transfers to other sectors (detail to be country specific)</b>									
	<b>Less – transfers / subsidies from other sectors (detail to be country specific)</b>									
	<b>NPISH financing</b>									
<b>Households<sup>35</sup></b>	<b>Final consumption expenditure of households</b>									
	<b>Plus - transfers to other sectors (detail to be country specific)</b>									
	<b>Less – transfers / subsidies from other sectors (detail to be country specific)</b>									
	<b>Household financing</b>									
	<b>Intermediate consumption</b>									

<sup>35</sup> Households as consumers only.

Other sectors <sup>36</sup>	Plus - transfers to other sectors (detail to be country specific)									
	Less – transfers / subsidies from other sectors (detail to be country specific)									
	Other sectors financing									
Rest of the world (exports)										
Total resources										

*D. Cost structure, by education and training purpose*

		Education and training purposes								Total
		EPO Pre- primary education	EP1 Primary education	EP2 Secondary education	EP3 Higher education	EP4 Cultural, sports and recreation education	EP5 Other education and vocational training	EP6 In-house training	Associated products and administrative expenditures, not allocated	
		Uses								
All sectors (or by sectors if desired)	Compensation of employees									
	Intermediate consumption									
	Consumption of fixed capital									
	Taxes on production and imports, less subsidies									
	Operating surplus									
Total current domestic expenditures										
Rest of the world (imports)										
Total current expenditure										

<sup>36</sup> Corporate sectors and households as producers.

## Annex H: Supplementary entries to account for provisions

	Non-financial corporations	Financial corporations	General government	Households	NPISH	Total economy
Opening Balance sheet						
Net worth <i>non-financial assets + financial assets</i>						
– liabilities	-88	-30	498	4500	210	5090
of which:						
Terminal and compensation costs	-300					
Standardised guarantees			-100			
Provisions as supplementary entries (-)	-400	-120	-15			
Financial assets related		-120	-10			
Non-financial assets related	-400					
Unrelated to asset ownership			-5			
Net worth <i>non-financial assets + financial assets</i>						
– liabilities – provisions	-488	-150	483	4500	210	
Changes in Net worth						
<i>non-financial assets + financial assets</i>						
– liabilities	236	4	-54	305	9	500
of which:						
Terminal and compensation costs	-23					
Standardised guarantees			12			
Provisions as supplementary entries ( <i>net change</i> )	-20	10	1			
Financial assets related		10	-2			
Non-financial assets related	-20					
Unrelated to asset ownership			1			
Changes in Net worth						
<i>non-financial assets + financial assets</i>						
– liabilities – provisions	216	14	-53	305	9	
Closing balance sheet						
Net worth <i>non-financial assets + financial assets</i>						
– liabilities	148	-26	444	4805	219	5590
of which:						
Terminal and compensation costs	-323		-88			
Standardised guarantees						
Provisions as supplementary entries (-)	-420	-110	-16			
Financial assets related		-110	-12			
Non-financial assets related	-420					
Unrelated to asset ownership			-4			
Net worth <i>non-financial assets + financial assets</i>						
– liabilities – provisions	-272	-136	428	4805	219	