

Remote Meeting
July 10–13, 2023

SNA/M2.23/02_02

Report of the global consultation on
WS.1 A Broader SNA framework for Wellbeing and Sustainability

WS.1 Enhancing and broadening the SNA framework to better capture elements of well-being and sustainability.

This report provides an overview of the outcome of the global consultation for guidance note WS.1 (results as of 10 July 2023). A total of 62 respondents contributed to this consultation, 41 of which consented to the publishing of their verbatim responses which are provided below. However, the graphs/tables below reflect the answers of all 62 respondents. Completely anonymous contributions have been excluded. Responses in Russian (for Azerbaijan) have been translated into English with the use of DeepL.

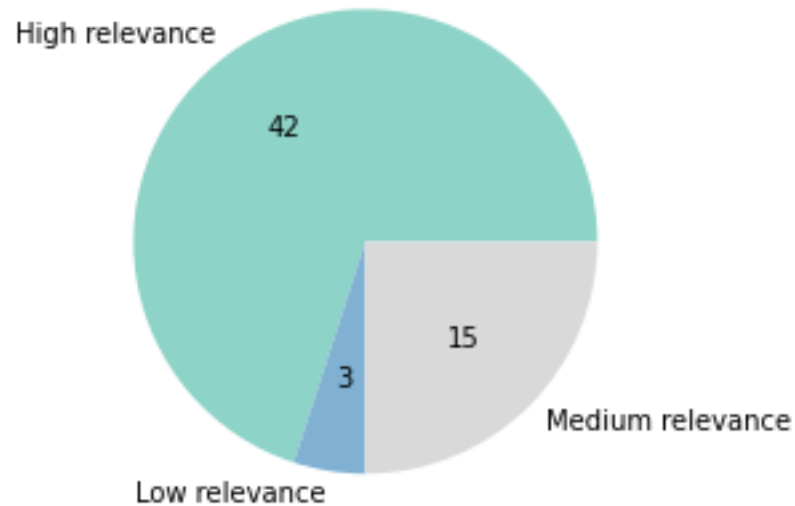
Summary of average scores

Average scores	Q5-Feasibility of proposals (0 is not at all feasible and 10 is highly feasible)	Q6-Relevance for users (0 is not at all relevant and 10 is highly relevant)	Q7-Prioritization (1 as highest priority and 14 as lowest)	Q8 – Top 3 Total points 1=3pts, 2=2pts, 1=3pts
1. Accounts on unpaid household service work (at least every 5 years)	5.9	7.2	6.9	34
2. Applying split-asset approach in determining economic ownership of natural resources	5.4	5.4	9.0	20
3. Experimental extended table on human capital	5.0	6.5	8.7	33
4. Inclusion of renewable energy resources	5.6	7.7	7.0	40
5. Inclusion of ‘of which’ items for environmental taxes and subsidies	5.8	6.5	7.1	6
6. Inclusion of ‘of which’ items to distinguish different categories of natural resource rent	5.3	6.2	8.2	8
7. Recording depletion of natural resources as an input cost of production	5.2	6.6	8.1	40

Average scores (continued)	Q5-Feasibility of proposals (0 is not at all feasible and 10 is highly feasible)	Q6-Relevance for users (0 is not at all relevant and 10 is highly relevant)	Q7-Prioritization (1 as highest priority and 14 as lowest)	Q8-Top 3 Total points 1=3pts, 2=2pts, 1=3pts
8. Removing distinction between cultivated and non-cultivated biological resources and only distinguishing between migrating and non-migrating resources	4.4	4.8	9.7	26
9. Supplementary table on distributions of household income, consumption and wealth	7.1	8.2	4.4	42
10. Supplementary table on provisions	5.2	6.2	10.0	7
11. Supplementary tables on health care	6.2	7.5	6.2	10
12. Tables on labour as a standard component	6.8	7.4	4.5	30
13. Thematic tables on education and training	6.2	7.3	6.4	14
14. Updating asset classification to create a separate asset class for natural capital	5.9	6.5	7.3	26

Detailed tables and comments

Q2A. Is the topic of well-being and sustainability relevant for your country?



Q2B. Please provide arguments to support your response:

Angola (National Statistic Office): NSO of Angola has provided many social and economic indicators for helping the government take a good politics and decision in order to help the population

Armenia (Central Bank of Armenia): In addition to the low level of standard of living in my country the high level of economic growth does not solve unequal distribution of income among households, and these issues are priority for our policy makers, so issues and recommendations are mentioned in this guidance will be very helpful for my country.

Armenia (Statistical Committee): The UN, together with its partners in Armenia, is working to achieve the Sustainable Development Goals, 17 interrelated and ambitious goals that address key development challenges facing people in Armenia and around the world. The UN Office in Armenia supports the Government and people of Armenia in achieving the 2030 Agenda in line with national development priorities. 20 structures, funds and programs operating and represented in Armenia implement a wide range of projects in areas such as gender equality, climate change, youth empowerment, education, health, employment, nutrition and food security, migration, governance and human rights.

In its National Security Strategy, Armenia has set itself the goal of attaining public well-being and solidarity through human rights-centered social policy.

The Government of Armenia committed to substantially reducing poverty levels and eradicating extreme poverty, as well as improving citizen welfare through structural reforms in social security programs and the establishment of an effective system to exercise social rights. To ensure social security, Armenia shall take steps directed at reducing unemployment, providing the population with permanent and temporary employment, improving living standards via job creation, and expanding the middle class, ensuring equal opportunities and social and economic inclusion for various social groups, including ensuring dignified aging, equality between women and men and violence prevention, as well as the effective protection of the rights of persons with disabilities and children.

Australia (Australian Bureau of Statistics): Well-being and sustainability are key areas of focus for our users and policy makers in Australia. We have an abundance of natural resources, both renewable and non-renewable, which makes this area highly relevant.

Azerbaijan (The State Statistical Committee of the Republic of Azerbaijan): В Азербайджане вопросы повышения уровня жизни, благосостояния и социальной защиты населения являются одним из главных приоритетов государственной политики. Наличие статистических данных о доходах, потреблении и сбережениях, сбалансированных на уровне различных групп домашних хозяйств в рамках СНС, расширят возможности анализа и мониторинга результатов реформ, государственных программ, реализуемых в этой области.

In Azerbaijan, the improvement of living standards, welfare and social protection of the population is one of the main priorities of state policy. The availability of statistical data on income, consumption and savings, balanced at the level of different groups of households within the SNA framework, will expand the possibilities for analysis and monitoring of the results of reforms and state programmes implemented in this area.

Canada (Statistics Canada): Statistics Canada has been working on several aspects of this topic.

Chile (Central Bank of Chile): Considering the demand of well-being and sustainability statistics by the users in Chile, we support SNA includes this dimension in a consistent and coherent manner.

Colombia (DANE): The measurement of the interrelations between the economy and the environment provides useful information for the management of natural capital sustainability issues in the country, while responding to the needs established by the Colombian state in the 1991 Political Constitution, the National Code of Renewable Natural Resources and Environmental Protection and the documents of the National Council for Economic and Social Policy (CONPES), which include, among others, the Green Growth Policy (CONPES 3934 of 2018) and the National Policy for the control of deforestation and sustainable forest management (CONPES 4021 of 2020). Additionally, the country's natural capital measurement processes have made it possible to respond to international requirements and/or reports from the Organization for Economic Cooperation and Development (OECD) and the Sustainable Development Goals (SDGs).

Egypt, Arab Republic (The Central Agency for Public Mobilization & Statistics): In 2016, Egypt launched its national Agenda, Egypt Vision 2030 to reflect its long-term strategic plan to achieve the principles and goals of sustainable development in all fields and accommodate in various institutions of Egypt.

Germany (Destatis (Federal Statistical Office)): In general, the issues of well-being and sustainability (WB+S) are relevant for each and every modern country and the vast majority of nations has committed to some sustainable development goals. Nonetheless, in Germany a broad array of indicator sets is available more or less independent from National Accounting to illustrate the state and development of important WB+S measures.

Indonesia (BPS - Statistics Indonesia): As well as in other developing countries, GDP lock-in, where the development focuses on the race of economic growth occurs. Economic growth sacrifices almost anything, including the well-being of people and sustainability of environment. Prior to do anything necessary, we need to have a clear picture on both matters. That's why I believe well-being and sustainability should be prepared all over the world.

Ireland (Central Statistics Office): There is a need to provide information on how citizens are managing within countries.

Lithuania (State Data Agency. Statistics Lithuania): This is one of the priorities highlighted by the country's policy makers in recent years. More comprehensive measurements would allow to assess the country's progress in this area.

Malaysia (Department of Statistics Malaysia): These topic (well-being and sustainability) are important as input in the implementation and achievement of the goals of the Twelfth Malaysia Plan and fulfill one of the cores in the Shared Prosperity Vision 2030, as in Thrust 7.

There are new challenges to tackle on climate change, inequalities, beyond Gross Domestic Product (GDP), beyond income, and the revolution of new technology to secure the people's future well-being and wealth.

In terms of the labour market, by promoting employee well-being, ensuring a safe work environment, investing in relevant skills, adopting socially responsible practices, and embracing green industries, countries can create a more sustainable and prosperous labour market that benefits both individuals and the economy as a whole.

Mexico (INEGI): The measurement of well-being and sustainability allow reflecting the progress of households in aspects such as their income, consumption, environmental environment, health, access to housing, to name a few; and how these are going to be solved in the future. In this sense, the enjoyment or possession of decent and decent housing, by all households, will guarantee that they have elements that allow them to improve their welfare state; as well as guarantee the future enjoyment of the hosting service.

Additionally, well-being and sustainability are relevant to guarantee development and productive inclusion, considering cultural, social and territorial diversity, allowing all people, especially historically vulnerable groups, to effectively exercise their rights and develop satisfactorily during their course. of life.

In our country, these issues are essential, since it is a signatory to multilateral environmental agreements and has participated in statistical initiatives to measure well-being, in addition to having a platform for measuring progress on the SDGs.

Netherland (Statistics Netherlands (CBS) and De Nederlandsche Bank (DNB)): This issue is not clearly addressed in this guidance note!

Portugal (Statistics Portugal): We consider most of the issues important but some of them should have been kept outside the SNA framework, whereas others should not be part of the core accounts but instead included in supplementary tables/accounts. The significant number of assumptions and estimations associated to some new topics introduce a high level of uncertainty that will significantly jeopardize international comparability and undermine the credibility of the national accounts. Although the system of National Accounts should provide an enlarged framework for macroeconomic statistics, maintaining the high reliability and comparability of the core accounts and its key indicators should be a priority issue, notably for the international organizations. Controversial issues, notably those demanding a high degree of assumptions and estimations (splitting the economic ownership of a natural resource between a legal owner and extractor; recording of depletion of natural resources), should only be covered in supplementary accounts and tables. This should be taken into consideration in the next steps of the process. Regarding the valuation of unpaid household work, it is our opinion that the proposed valuation methods are not adequate. The SNA should not include recommendations to construct supplementary accounts/table based on doubtful valuation methods. Only estimates on physical terms should be included.

Singapore (Department of Statistics): Well-being and sustainability topics such as labour, education, human capital, health care and environment are relevant and of interest to users of official statistics and policymakers.

South Africa (South African Reserve Bank and Stats SA): Well-being and sustainability of the Household sector is of special importance to developing countries and therefore relevant for South Africa. With its high level of unemployment and income inequality, South Africa is arguably one of the most relevant countries in the world for this topic. The ability to determine risks and potential crisis areas emanating from certain sub-sectors are valuable and crucial for policymaking and government planning. Existing national accounts indicators of people's economic well-being are not sufficient to address many of the important questions on well-being and sustainability for policy priorities. New datasets and indicators to provide clarity on issues affecting households' well-being and sustainability is needed especially for policy makers.

South Korea (Bank of Korea/Economic Statistics Department): To comprehensively analyze a national economy and assess policies, there has been an increased demand for considering both well-being indices and the growth of the economy.

Spain (INE - NATIONAL STATISTICS OFFICE): Yes it is. In fact, in Spain there is a Ministry of Social Rights and the 2030 Agenda with a Secretary of State for the 2030 Agenda.

Sweden (Statistics Sweden, NSI): The relevance depends on what you refer to. The topic or the proposed statistics in the GN. The topic has been of very high relevance for more than 50 years. The statistics we have developed in Sweden have mainly been in the field of well-being. Sustainability data have only been developed and produced on regular basis for the last 30 years mainly in the form of sustainability indicators. The statistics you have proposed uses another theoretical perspective (individual micro-economic perspective) than what we usually have been supplying data for (social macro-economic perspective). This means that the relevance of your data proposals is not very high in the current context of the matter.

Ukraine (State Statistics Service of Ukraine): -

United Kingdom (UK Statistics Authority): he UK has a wide brevity of examples that showcase the relevance of well-being and sustainability: Beyond GDP theme day, review of measuring national well-being framework and its open consultation, recent work on human, social and natural capital as well as explicit work on frameworks to incorporate these components together, such as inclusive income and wealth, and accounting prices and the Dasgupta Review of the Economics of Biodiversity with its recommendations for statistical collection.

United States (Bureau of Economic Analysis): The topic of well-being and sustainability is important. Our primary aim at BEA is with the economic measurement aspects of the SNA. Some of the extensions may be less important for BEA, particularly for proposed measures or concepts that are difficult to define and require significant subjective input.

Wales/United Kingdom/Northern Ireland (Cyfoeth Naturiol Cymru / Natural Resources Wales): In 1997 a referendum endorsed a proposal to devolve powers within the UK to the Welsh nation. The enabling legislation was enacted the following year Government of Wales Act 1998 (legislation.gov.uk) . It entrenched sustainable development within the constitutional settlement, In 2006 the settlement was broadened and deepened, and the duty was reaffirmed within the new institutional arrangements and this process has continued since Devolution settlement: Wales - GOV.UK (www.gov.uk) . In 2015 S79 of the Government of Wales Act 2006 covering the sustainable development duty was extended to the public sector within Wales and social partners were encouraged to take on the same duty voluntarily. The duty is specified in the following terms:

“ . . . to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.”

(Well-being of Future Generations (Wales) Act 2015 (legislation.gov.uk))

The WfG 2015 was preceded by a conversation with the people of Wales, and it enjoys broad cross-party support. This dialogue was

conducted against the backdrop of the Millennium Development Goals, however it is perfectly possible to map the 17 SDGs onto the 7 Well-being goals delineated in the Act. These goals each represent at least two of the four “dimensions” of personal well-being set down, viz Cultural, Social, Environmental and Economic. So for example the goal of a Prosperous Wales is unpacked as follows:

“An innovative, productive and low carbon society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately (including acting on climate change); and which develops a skilled and well-educated population in an economy which generates wealth and provides employment opportunities, allowing people to take advantage of the wealth generated through securing decent work”.” (Well-being of Future Generations (Wales) Act 2015 (legislation.gov.uk)

The UK has treaty obligations to promote sustainable development and in 2019 the British Government submitted a voluntary progress report to the UN High Political Forum (UK’s Voluntary National Review of the Sustainable Development Goals - GOV.UK (www.gov.uk)) and the Welsh Government insisted on appending an Annex dealing with the commitment in Wales to the Global Goals, which includes a mapping from the 7 Well-being goals to the 17 SDGs (supplementary-report-to-the-uk-review-of-progress-towards-the-sustainable-development-goals-2030_0.pdf (gov.wales))

The WfG 2015 established a number of institutions, including the Office of the Futures Generations Commissioner appointed for a seven year term and Public Services Boards, charged with the responsibility of producing Well-being Assessments at a local scale, and then Well-being plans based upon those assessments on a five year cycle. The third sector is invited to attend PSB’s and is in practice represented on all of them. Some public sector bodies are similarly not obliged to attend, and generally do not, but the core services including Local Authorities and Health Boards are obliged. NRW as a Wales wide public body with local delivery is an active participant in all PSB’s and the NRW Board takes seriously its responsibility to approve Well-being Assessments and Plans.

NRW was established in 2013 to integrate the delivery activities of three institutions, the Countryside Council for Wales (our Nature Conservation Body with powers to designate protected sites), the Environment Agency in Wales (our Environmental Protection Agency) and the Forestry Commission Wales (our manager of the Welsh Government’s woodland estate). In 2016 NRW’s statutory general purpose was redefined in the Environment (Wales) Act 2016 in accordance with the same sustainable development principle used in the WfG 2015 to be the Sustainable Management of Natural resources (SMNR). Additional responsibilities were placed on NRW, including a quinquennial assessment of SMNR approximately six months before the scheduled Senedd general election, and the production of Area Statements at various a spatial scales within Wales after the publication of a Natural Resources Policy (NRP) by the incoming administration after the election, based on the evidence provided by the assessment.

Our assessment uses a number of systems approaches, including DPSIR analysis, and the NRP constitutes a choice set within the intersection of the feasible and desirable interventions identified by the Response part of DPSIR. The assessment criteria agreed with Welsh Government under secondary legislation are fourfold but interlinked:

- ☑ Natural resources are being safeguarded and enhanced
- ☑ Ecosystems are resilient to expected and unforeseen change
- ☑ Wales has healthy places for people, protected from environmental risks
- ☑ Contributing to a Regenerative Economy, having sustainable levels of production and consumption

Recently we have collaborated with Welsh Government in Natur a Ni / Nature and Us (Natural Resources Wales / Nature and Us - a national initiative on the future of the Welsh natural environment ; Tips on developing a collective futures vision with the public - Futures, Foresight and Horizon Scanning (blog.gov.uk)), a programme designed to inform a vision for 2050 using mixed methods of engagement including a People’s Assembly involving c.50 people selected by a careful process (undertaken by Sortition Foundation) to be broadly representative of the people of Wales (which has a population of c.3 million people) to deliberate upon evidence and participate in futures approaches including the Three Horizons Approach. This is due to produce its final report shortly. We have also just published our latest corporate plan to 2030 , Natural Resources Wales / Our corporate plan to 2030 - Nature and People Thriving Together which is seen as a staging post to the attainment of a just transition to a Nature Positive and NetZero society and economy by 2050, which is a key message emerging from the Natur a Ni visioning

Wales has already made extensive use of the tools identified in the WSTT guidance for assessing current Well-being and we understand both their strengths and weaknesses Wellbeing of Wales: national indicators | GOV.WALES . Recognising the need to transition to an inclusive wealth approach as a matter of urgency the Welsh Government joined Well-being Economy Government Network (WEGo) in May 2020.

We recognise that this is also a long-haul for us. Once we have played our part in addressing the global impact inequality (aggregate demand upon the biosphere exceed aggregate supply) we have to clear a huge ecological debt within Wales. We led the transition from an organic economy to one based upon the huge energy potential of fossil fuels. As a consequence we have some of the most biologically depleted ecosystems to be found anywhere with a BII of around 51% About the Biodiversity Intactness Index | Natural History Museum (nhm.ac.uk) 48398rspb-biodiversity-intactness-index-summary-report-v4.pdf

Q3A. Do you feel the recommendations of the specific elements in the underlying guidance notes are properly reflected in this note?

Q3A	Frequency
Yes	51
No	5
Don't know	6
No response	0

Q3B. Please specify where you feel that the recommendations have NOT been properly reflected:

Germany (Deutsche Bundesbank): On page 19 the split asset approach is labeled as optimal approach for assigning the economic owner. On the other hand, it is then written on page 20 under 88 to WS.7 that emission certificates should be financial assets. Why is the split asset approach previously advocated in the GN WS.1 not also advocated for the WS.7? In my view, no prior decisions should be made in WS.1 for WS.7.

Portugal (Statistics Portugal): ?

Sweden (Statistics Sweden, NSI): We have not been able to follow up on AEG proposals on the GN after the first round of global consultations.

United Kingdom (UK Statistics Authority): The UK wishes to highlight the recommendations on emissions permits recognise the atmosphere as an asset. In combination with the recommendation to use a split asset approach, the carbon tax or emissions permit could be considered the government-owned part of the asset and the damage caused by degradation to be owned by all impacted sectors. The UK feels that the basic principle that the atmosphere is an asset in these recommendations is worth inclusion.

The shifts to recognise environmental taxes and permits as a wider move towards a sense of marketisation of the environment may have some impact on production estimates as prices rise. The UK raises the issue of comparability here, for example, as nations which control emissions through other means may consider whether there is some way to impute equivalent values.

The UK also notes that the paper could cover classifications and the wider changes in classifications more thoroughly. If nations are to meet their greenhouse gas emissions and other environmental goals, the next two decades will witness dramatic changes in our economies. Without these classification shifts, much of this change will be hidden within older industry and produce classes. With these changes, the national accounts will be able to support, for example, e.g. global efforts to decarbonise by monitoring physical changes and their economic consequences.

The UK also considers that, as noted in other papers, these changes are likely to overwhelm many in the environmental policy sector. There will be no dramatic changes in GDP and the main impacts on assets will be seen in Net measures that are not regularly measured.

On the other hand, the UK notes that these changes are likely to be seen as quite dramatic by traditional national accountants. As such, these changes may fail to fully satisfy either those focused on the environment or on traditional production measures. The UK suggests that either expectations are managed or more radical changes be proposed.

Moreover, the UK disagrees with point 38.4 as the ONS publishes data quarterly through a single composite index. In paragraphs 36-37, the guidance note is suggesting that this data be compiled every three to five years, but this is something the ONS publishes quarterly. Similarly, paragraph 67 refers to publishing data every five years, but the ONS has plans to move to quarterly publication shortly. The threat is clear that many countries may find the text underwhelming in a small number of years. As a document which may last until the 2040s, the UK wishes to propose that more ambition be considered.

Wales/United Kingdom/Northern Ireland (Cyfoeth Naturiol Cymru / Natural Resources Wales): The approach adopted eschews an integrated systems approach to an area characterised by its complexity and uncertainty. So the wrong questions are posed and the proposed interventions seem to be an unhappy compromise between those who do not wish to change the status quo and those who do want transformative structural change. Some of the underlying guidance notes explicitly state this. Similarly there is no proper exploration of the dependencies even between the modest recommendations that are advanced. Ignoring the varying capacities and capabilities of National Statistical Organisations, which needs to be addressed irrespective of this work stream, all the interventions are technically feasible, if not now then within the near future, and all are relevant to well-being and sustainability. It is just that collectively they are inadequate to the task in hand.

Transitioning from gross to net metrics in terms of market based national income and domestic product, seems to have a broad groundswell of support in the underlying guidance. Guidance note CM4 (Use of net measures in the presentation of National Accounts) starts with the following recognition:

“The role and prominence of the focus on Net measures has increased significantly through greater user needs and analytical uses as well as policy uses, particularly related to sustainability and the statistical measurement of climate change, its impact and related policies.”

However net metrics are necessary but by no means sufficient to achieve sustainability. Market consumption must also be kept beneath the net measures so that the impact inequality mentioned above can be reversed and the ecological debt accumulated since 1970 in global terms (and from much earlier in Wales) reduced to levels consistent with a nexus between the three bounded systems of nature-society-economy that is resilient to unknowable future perturbation.

With respect to the issue of rents in general and natural resource rents in particular, we are aware of few NSO's which try to calculate them. The British ONS does apply a residual value methodology, estimating the present value of future natural resource rents by projecting earnings and deducting depreciation and the cost of capital. However the ONS calculates the cost of capital in terms of a risk free proxy (government bonds, called Gilts in the UK) without consideration of the equity risk premium. We would argue that the appropriate measure should be the earnings yield of the broad stock market (which is the reciprocal of its Price-Earnings Ratio, so the higher the PER the lower the earnings yield). In practice we feel this is one of the more challenging of the recommendations.

The recommendation to shift the SNA boundary to include household service work excluded (except for an estimate of accommodation value for owner occupiers) by the SNA 2008 is presented as a tidying up an exclusion that had been retained for "pragmatic reasons," and yet there is no similar appetite to include ecosystem assets within the boundary. Guidance note AL1 states:

"In discussions around the endorsement of international standards for ecosystem accounting, the System of Environmental-Economic Accounting (SEEA) Ecosystem Accounting, the principles and methodologies for valuing ecosystem services and ecosystem assets raised quite strong controversies. The debate circles around the introduction of some new techniques for valuing ecosystem services and assets (see section 6 of this Guidance Note), and whether or not these techniques were consistent with the valuation principles applied in the System of National Accounts (SNA). In the end, it was decided to include the guidance in SEEA Ecosystem Accounting, albeit without giving this guidance the status of international standards."

From this it is concluded in the guidance note:

"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 economic accounts and associated production and asset boundaries." (paragraph 74).

There is clearly no consensus on this issue and there is a circularity in the argument that the divergent boundaries of the SEEA-CF and the SEEA-EA cannot be reconciled because that is inconsistent with the boundary of the SNA 2008. The guidance note actually states that "stocks of land do not have an economic value." We suggest the authors try to convince land-owners of that. Both the exploitation of common pool resources and the production of ecosystem goods and services that are non-excludable in consumption are clearly economic, but not economic within the definitions of the SNA, which privileges goods and services that are excludable in consumption, and that can therefore command a market price.

The original SNA published in 1953 essentially marked a fusion between the Keynesian macroeconomics, and the circular flow of income identities it involves e.g. $Y = C + I + G + (E - M)$ and general equilibrium conditions such as $S = I$, with Marshallian microeconomics, especially production functions and the calculation of value added between them up until the final consumption of the goods and services

they produce.

Marshall's scissors have no problem with utilitarianism, nor with inter-personal utility comparisons. The problem with these arose out of positivism in general, and G.E. Moore's *Principia Ethica* in particular. Moore wanted to achieve for ethics what Newton achieved for natural science, and he advanced the positivist contention that it is impossible ever to derive a statement involving an "ought" from a statement involving an "is," which he termed the "naturalistic fallacy."

This is a position that is unlikely to appeal to others such as neo-Aristotelian thinkers, nor to thinkers like Amartya Sen. Sen's own position is very close to that of the impartial spectator able to apply both consequentialist and intentionalist criteria to appraise behaviour advocated by Adam Smith in the *Theory of Moral Sentiments* (1759) and it arises out of a particular pluralistic reading of Indian culture. Smith was not a utilitarian, unlike Marshall who was a follower of the later Victorian thinker Henry Sidgwick. Nevertheless the naturalistic fallacy was taken up by many Anglophone economists during the first half of the Twentieth Century, including Lionel Robbins at the LSE who insisted that inter-personal utility comparisons were therefore illegitimate.

In a Coasian world of non zero-transaction costs, incomplete markets, and divergence between market prices and social prices that cannot be simply treated as "externalities", the resolute defence of the 2008 production boundary looks decidedly odd. Coase wrote his much referenced, but less often actually read, paper the "Problem of Social Cost" (*Journal of Law and Economics*, October 1960) as an attack on Pigou's *The Economics of Welfare* (1920). Arthur Pigou replaced Marshall in the chair of Political Economy at Cambridge in 1908.

Commenting in *The Firm, the Market and the Law* published in 1988 Coase argues:

"Economists, following Pigou whose work has dominated thought in this area, have consequently been engaged in an attempt to explain why there were divergences between private and social costs and what should be done about it, using a theory in which private and social costs were necessarily equal. It is therefore hardly surprising that the conclusions reached were often incorrect. The reason why economists went wrong was that their theoretical system did not take into account a factor which is essential if one wishes to analyse the effect of a change in the law on the allocation of resources. This missing factor is the existence of transaction costs." p175.

As a consequence the argument put forward by Rutger Hoekstra (paragraphs 29 and 30), for example, is given inadequate attention. As he said in his speech to the General Assembly on April 12th this year

"People should not work for the economic system, the economic system should work for the people."

He was echoing the sentiments of a group of distinguished economists assembled in the UK nearly a century ago in a commission brought together by the Liberal leader and former PM of the wartime coalition government, Lloyd George. Those economists, whose number included Keynes, argued:

"Financial and industrial reforms, international trade and national development, the juster distribution of wealth, the worker's right to be a citizen, and not merely a subject, in the world of production – the measures we advocate in relation to all these things spring from one

clear purpose. We believe with a passionate faith that the end of all political and economic action is not the perfecting or perpetuation of this or that piece of mechanism or organisation, but that individual men and women should have life, and that they should have it abundantly.” Britain’s Industrial Future, 1928.

The British Government established a National Economic Advisory Council and appointed Colin Clarke as their statistician in 1930. He provided granular estimates of output as well as detailed reports on the Government’s finances. He discussed how to adjust nominal figures to take account of inflation, and also the distribution of income amongst different groups of people. His work, along with that of the National Bureau of Economic Research led by Simon Kuznets in the USA, fed into the preparatory work by the League of Nations that culminated with the adoption of the SNA in 1953.

Q4A. Do you agree with how the topics are linked to current and future well-being in the figure in Section 4.1 of the guidance note?

Q4A	Frequency
Yes	51
No	4
Unsure	6
No response	1

Q4B. Please explain where you disagree:

Malaysia (Department of Statistics Malaysia): We suggest including new components: environment, family, social welfare, housing, and public safety.

Netherland (Statistics Netherlands (CBS) and De Nederlandsche Bank (DNB)): It should be made clear that these are the topics that can be covered from the SNA perspective. For example for current well being, there are obviously also environmental aspects, which are not covered in the SNA, but are covered with SEEA. The same is true for social capital (social relations, civic participation, volunteer work etc. in current well-being; trust and social cohesion in future well-being). The elements concern those aspects of current and future well-being that have a direct relationship with the SNA, that may be expressed in monetary terms or interpreted from an economic perspective. Following Hoekstra recommendation to distinguish between observation of activities and the valuation thereof, it might be recommended to included environmental, social, cultural and other aspects, also within the SNA.

Norway (Statistics Norway): Generally, the figure is a nice summary of the topics under discussion. However, the linkages between well-being as a flow, and the theoretical stocks defined as capital, are challenging. At each future point in time the flow of well-being depends on productive flows, not on the assessed stocks. Moreover, the measurement of the stock of e.g. human capital or natural capital depends on the assumed productive capacity of labour.

Portugal (Statistics Portugal): The link is not clear at all...

South Korea (Bank of Korea/Economic Statistics Department): It is important to provide a more systematic distinction between current well-being and future well-being (sustainability). By clearly delineating these two, readers can better understand the different factors and considerations involved in assessing the well-being of a country.

Sweden (Statistics Sweden, NSI): The issue is more complicated than shown by the simple illustration in section 4.1. One important issue not included is the distribution of resources both domestically and between regions of the world. The distribution regards both income, education, health care, wealth, economic assets and natural resources. Furthermore, well-being does not just depend on what resources there are at hand but also how the resources are used to promote well-being and sustainability.

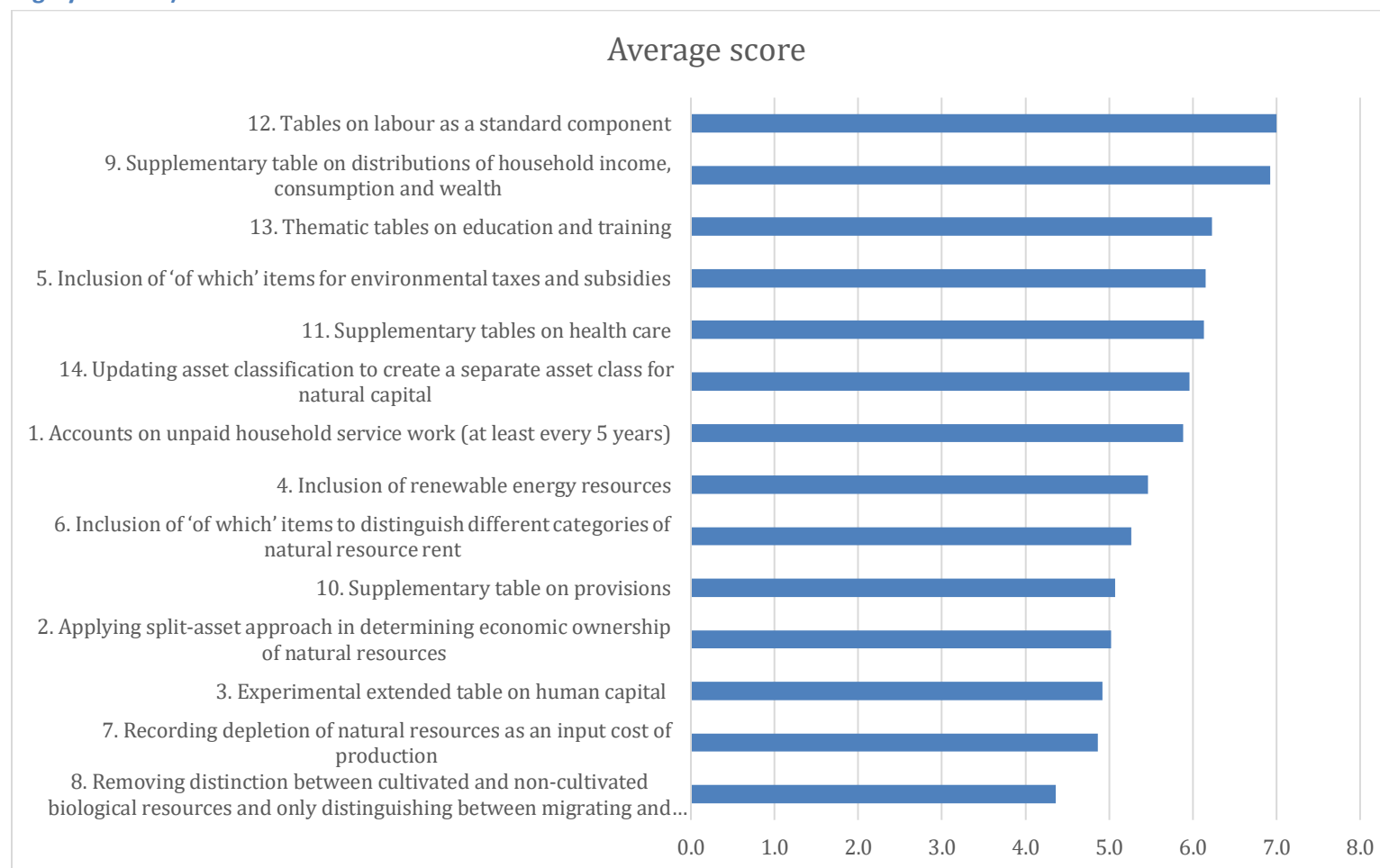
United Kingdom (UK Statistics Authority): The UK identifies a lack of clarity in the definitions and wording. For example, paragraphs 1 and 2 provide a definition for 'economic wellbeing', but thereafter, this concept is not returned to, and instead the discussion drifts to a concept of wellbeing. The UK views this as confusing and makes it difficult to understand what the guidance note is hoping to achieve.

Wales/United Kingdom/Northern Ireland (Cyfoeth Naturiol Cymru / Natural Resources Wales): We do not accept the rationale for distinguishing de jure rather than de facto between metrics for current and future well-being set out by the Stiglitz-Sen-Fitoussi Report commissioned in 2008. We would want the future metrics available as soon as possible so that accurate assessment of progress can be made by all countries from baselines they can evidence. The Future Well-being Capital Stocks form the basis of assessing a Well-being Economy, we would want the entire System of Economic Accounts organised around these stocks sooner rather than later. The dashboard metrics advanced in that report are also very nature and environment deficient.

We can state the positive case better when answering the later question "Please provide additional suggestions for enhancing and broadening the SNA framework" however in the interim we would want to argue that whilst inclusive Wealth and Well-being are not the same thing, they are two sides of the same coin, and the Brundtland Sustainable Development Principle can be operationalised as:

Inter-generational well-being increases over time if and only if inclusive wealth also increases over that same period of time.

Q5A. Please rate each proposal (for new and/or adjusted estimates) in terms of their feasibility to compile (0 is not at all feasible and 10 is highly feasible).



Q5 – Detailed table	0 - Not at all feasible	1	2	3	4	5	6	7	8	9	10 - Highly feasible	Don't Know	Average score
1. Accounts on unpaid household service work (at least every 5 years)	1	3	3	4	5	8	8	5	4	4	8	4	5.9
2. Applying split-asset approach in determining economic ownership of natural resources	2	6	4	4	4	8	6	5	5	2	4	7	5.0
3. Experimental extended table on human capital	2	5	4	3	6	9	10	3	3		5	8	4.9
4. Inclusion of renewable energy resources	1	4	4	5	4	9	6	4	8	2	5	6	5.5
5. Inclusion of 'of which' items for environmental taxes and subsidies	1	3	2	5	2	9	5	6	4	9	6	7	6.2
6. Inclusion of 'of which' items to distinguish different categories of natural resource rent	2	7	2	6	4	7	4	7	5	4	5	6	5.3
7. Recording depletion of natural resources as an input cost of production	3	7	4	5	5	7	3	2	8	3	4	7	4.9
8. Removing distinction between cultivated and non-cultivated biological resources and only distinguishing between migrating and non-migrating resources	4	7	4	6	1	13	3	5	3	1	3	8	4.4

Q5 – Detailed table (continued)	0 - Not at all feasible	1	2	3	4	5	6	7	8	9	10 - Highly feasible	Don't Know	Average score
9. Supplementary table on distributions of household income, consumption and wealth		1	2	1	2	9	10	4	12	7	8	1	6.9
10. Supplementary table on provisions	1	1	2	7	6	9	7	2	3	2	2	17	5.1
11. Supplementary tables on health care		2	2	6	4	8	7	9	4	2	9	5	6.1
12. Tables on labour as a standard component			2	3	2	7	6	7	12	3	10	5	7.0
13. Thematic tables on education and training	1		4	2	7	8	6	7	6	5	7	4	6.2
14. Updating asset classification to create a separate asset class for natural capital		3	5	1	4	14	3	5	9	1	8	5	6.0

Q5B. Please provide any explanations to support your ratings:

Armenia (Central Bank of Armenia): The main problem to complete such kind of tables in our country is lack information about data of natural resources.

Australia (Australian Bureau of Statistics): Inclusion of environmental taxes and subsidies- have entered a rating of 5 however there are different ratings for taxes and subsidies.

We would have difficulty recording a separate category for environmental subsidies (would rate a 2) however taxes would be more feasible (rating 7).

Azerbaijan (The State Statistical Committee of the Republic of Azerbaijan): Ответы составлены по итогам обсуждений с пользователями на предмет расширения охвата данных официальной статистики

Responses are based on discussions with users to improve coverage of official statistics.

Belgium (National Bank of Belgium): Feasibility is based on our current available sources. The majority of the proposals require a fundamental change of our processes and a significant broadening of the data collection.

Brazil (IBGE - Instituto Brasileiro de Geografia e Estatística): Removing distinction between cultivated and non-cultivated biological resources and only distinguishing between migrating and non-migrating resources 5??? We don't agree with the proposals, as explained in Guidance Note WS.8. It would be important to first develop such methodologies more comprehensively within the scope of SEEA-CF and, only after we have solid practical results, introduce them into the SNA. The valuation part within ecosystem services is still experimental, including in SEEA-EA.

- Currently supplementary tables on health care doesn't include socio-demographic breakdowns such as by gender and age).

- Average costs per hour paid cannot be measured directly in household surveys or administrative records.

Supplementary table on distributions of household income, consumption and wealth: IBGE can provide supplementary table on distributions of household income and consumption. So far wealth cannot be measured.

Canada (Statistics Canada): We do not support treating all biological resources as cultivated. Canada's timber resources do not fit that suggestion.

Environmental taxes and subsidies are feasible, but we do not support the inclusion of the of which ESG/Green in the core classification due to definitional shortcomings. Subjective categorisation of subsidies is also a concern.

Chile (Central Bank of Chile): The availability of data

Colombia (DANE): The feasibility rating has been based on the experience of the National Administrative Department of Statistics (DANE) in the implementation of the different measurements. Thus, for the proposals in which the institution has already made progress, the feasibility has been rated with values equal to or higher than 5.

- The monetary valuation of different elements of natural capital.

- The measurement of the number of available jobs and some specific characteristics of the Colombian labor market, such as informality

and child labor (current welfare-work).

- The measurement of investments in education outside the government's institutional sector, such as non-formal education and especially online courses and training provided by companies to their employees (current well-being-education).
- The measurement of the positive impact of investments in education on the behavior of the Gross Domestic Product (sustainability-human capital).
- The estimation and use of deflators and depreciation rates to calculate the stock of human capital (sustainability-human capital).
- The availability of economic resources to strengthen the technical capacity of the institutions and the consolidation of work teams for the implementation of the recommendations.
- Specialized technical assistance to guide the solution of problems during the implementation process.
- The availability of information sources required for the implementation of the different proposals.

Germany (Destatis (Federal Statistical Office)): We tried to make optimistic assumptions.

Indonesia (BPS - Statistics Indonesia): -

Ireland (Central Statistics Office): Some are possible as data already exists - some areas I am not exactly sure what is required.

Lithuania (State Data Agency. Statistics Lithuania): To carry out such estimations not only the clear guidances that are easy to apply in practice, are necessary. The biggest obstacles are lack of some data sources and also the human resources (experienced professionals able to carry out such exercises, not only within the institution itself, but also on the national labor market). For smaller countries this can be a challenge.

Malaysia (Department of Statistics Malaysia): It is feasible to compile a supplementary table on the distributions of household income and consumption. The measurement of wealth is a constraint with uncertainty and various different aspects to illustrate the distribution of wealth.

Mexico (INEGI): Supplementary tables on health care: it is feasible to carry them out, but a very detailed information base is required on the operations of the institutions that make up the health sector.

Unpaid domestic service work accounts (at least every 5 years): It is feasible, since there is a Time Use Survey that is carried out regularly every 5 years.

Renewable energy. Detailed information on types and amounts of renewable energy already exists in the countries, such as national energy balances.

Biological resources. The difference between produced and non-produced biological resources can be established for the main species.

Asset classification. Even though countries currently have regular information on some types of natural assets, for compilers of national accounts it may be a significant reprocessing of algorithms and sequences of accounts to harmonize national data with this new classification. It could be done gradually.

Ownership of natural assets. Although it can be carried out in practice, it is necessary to study each particular case and, of course, have timely information.

The registration of the depletion of natural resources as intermediate consumption. In Mexico's environmental accounting scheme, the costs of depleting natural resources are charged to GDP, generating a net and environmentally adjusted measure of GDP.

Provisions. The green taxonomy of financial records has barely been disseminated and no records are yet available. Although many projects record expected compensations in the environmental impact statements, formats need to be integrated to financially record these provisions.

Netherland (Statistics Netherlands (CBS) and De Nederlandsche Bank (DNB)): Natural capital is currently not defined in SEEA or the SNA. We need overall agreement on its definition and scope. Now the proposed asset classification suggests that natural capital = natural resources, which is not correct, as in SEEA EA ecosystem assets are part of natural resources. This is an important topic that requires more work both from the SNA and SEEA point of view.

Health care is supported by a lot of information, but national systems of health care provision and insurance are very different. This will complicate the production of comparable statistics without bias towards the particular systems of some countries. Also, the proposal is to provide further breakdown of expenditure. I would recommend adding comparable data on the volume of health care use (number of person, duration, etc.). Informal health care provided on a voluntary (unpaid) basis by family members or other volunteers will become a more important aspect of health care with ageing and should be included as well."

Norway (Statistics Norway): We underline that the responses given above relate to whether the proposal is technically feasible, not whether it is conceptually correct. For several of the proposals, specific parts may be challenging, but other parts may be unproblematic. For instance, the treatment of fish under management of international quotas seems challenging, but other elements of the distinction between migrating/non-migrating resources seems quite feasible.

The three proposals marked "1" are both technically and conceptually challenging. Exactly how severe the technical challenges are, depend on how the proposals end up conceptually. The measurement of depletion may for instance be less problematic if it is treated as a separate item affecting disposable income rather than being included in the production account.

Singapore (Department of Statistics): The ratings are provided after assessment on resources, data availability and requirements needed for implementation. Singapore has a decentralised statistical system and in the interest of time, the inputs provided are solely based on Singapore Department of Statistics' assessment (as the National Statistical Office), without consultation with other statistics producing public agencies.

South Africa (South African Reserve Bank and Stats SA): All source data is not readily available, and it is difficult to determine how possible certain proposals will be as the micro data first needs to be sourced.

South Africa is currently busy with the development of distributional household data, so the proposal linked to that can be possibly met soon. However, there might also be some challenges with reference to the availability of microdata sources for the compilation of household wealth distributional data.

Misalignments with reference to the treatment of provisions in the monetary survey and SNA may cause some data compilation challenges.

The inclusion of 'of which' items for environmental taxes and subsidies" can possible be implemented as we have comprehensive tax data.

Work on renewable energy has become important in South Africa so the proposal of inclusion of renewable energy sources will be investigated.

The unpaid household work has recently become the one of the most desired items, but all the data needed is not available.

South Korea (Bank of Korea/Economic Statistics Department): In most cases, the feasibility of compiling comprehensive data depends on the availability of related micro-data (or accessibility to data sources). For instance, if more detailed administrative data, such as micro-data from the national health insurance, is not provided for healthcare, we may only be able to compile a limited number of tables. Additionally, when it comes to classifying the "of which" item in natural resources, there may be compatibility issues with the existing data due to differences in classification methods.

Spain (INE - NATIONAL STATISTICS OFFICE): Feasibility increases when said tables or projects are already implemented or in the process of being implemented within the INE, as marked in the table.

Sweden (Statistics Sweden, NSI): Some of the GN:s in the sustainability field are not very clear on the distinctions or the extension of the GN regarding what to include in the accounts. This is in particular the case for WS.8 and WS.11.

United Kingdom (UK Statistics Authority): On inclusion of 'of which' items for environmental taxes and subsidies, the UK can feasibly compile data on taxes but is currently very early on in our work on subsidies, so it is hard to accurately say at this time.

On supplementary tables on the distributions of household income, consumption and wealth, the UK has previously produced similar estimates for income and consumption. We have not yet explored feasibility of producing similar estimates for wealth.

Similarly, more detail on the experimental extended table on human capital is needed to evaluate whether the UK could feasibly do this.

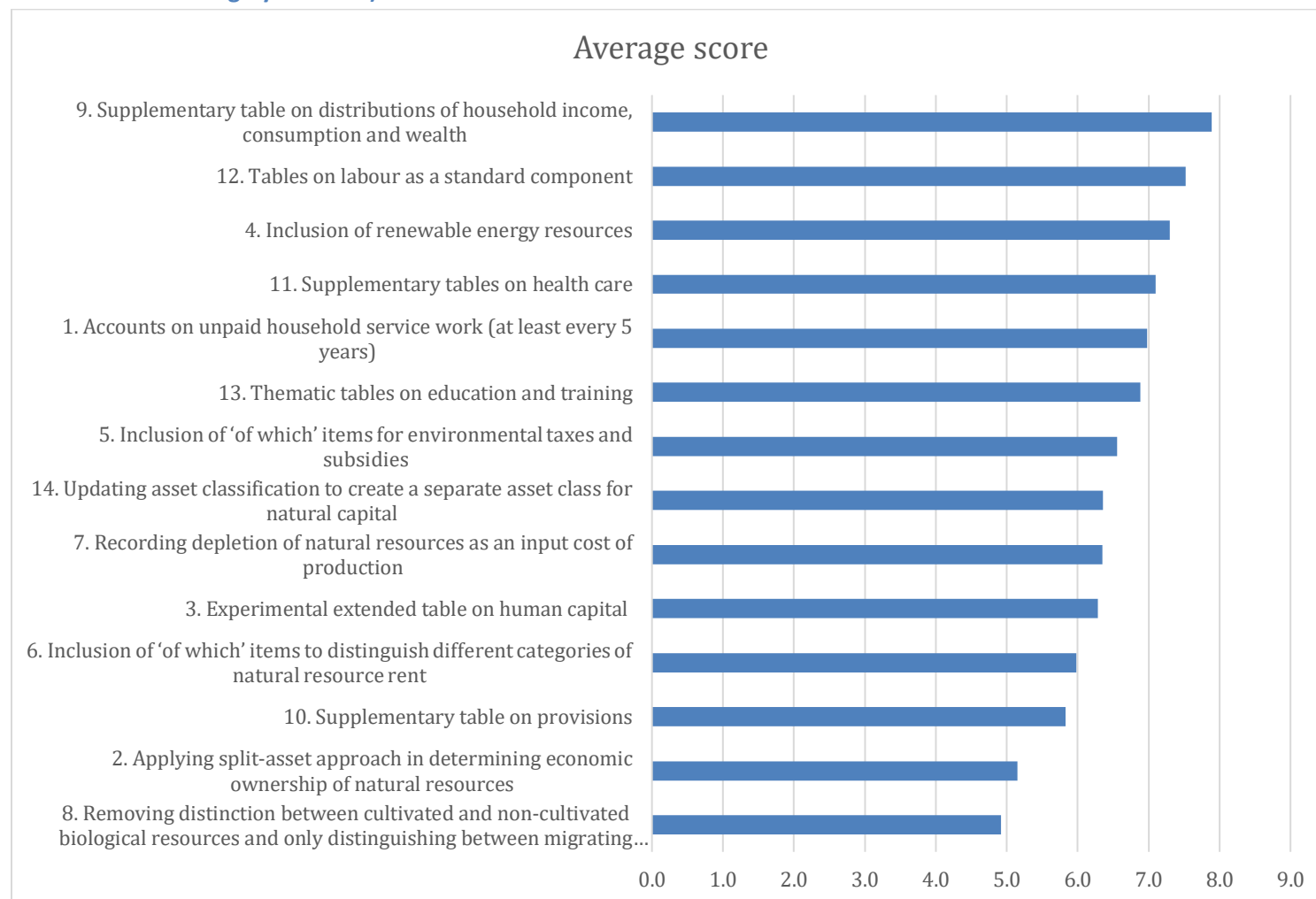
United States (Bureau of Economic Analysis): The measurement challenges for renewables and human capital makes their inclusion difficult. BEA currently produced health expenditure accounts with orientation toward disease-treatment as opposed to provider-based.

Wales/United Kingdom/Northern Ireland (Cyfoeth Naturiol Cymru / Natural Resources Wales): We ran a workshop attended by 15 colleagues, which included a mural board, part of which is extracted below:

Graph..

The group were agreed that abstracting from the general need to support capacity building within NSO's, the proposals were either completely or very nearly feasible now. Hence even the least feasible attracted a Likert scale rating of 5.

Q6A. Please rate each of the following proposals (for new and/or adjusted information) in terms of their relevance for users (0 is not at all relevant and 10 is highly relevant).



Q6 – Detailed table	0 - Not at all relevant	1	2	3	4	5	6	7	8	9	10 - Highly relevant	Don't Know	Average score
1. Accounts on unpaid household service work (at least every 5 years)	2	2	1		1	7	5	9	11	7	9	3	7.0
2. Applying split-asset approach in determining economic ownership of natural resources	5	5		4	5	7	4	4	3	6	4	11	5.1
3. Experimental extended table on human capital	2	1	1	5	3	8	7	8	4	7	7	6	6.3
4. Inclusion of renewable energy resources	1	1		1	2	8	5	4	11	11	9	5	7.3
5. Inclusion of 'of which' items for environmental taxes and subsidies	1	1	3	1	5	9	2	5	11	9	5	7	6.6
6. Inclusion of 'of which' items to distinguish different categories of natural resource rent	4	1	2	4	3	6	3	7	8	7	4	10	6.0
7. Recording depletion of natural resources as an input cost of production	4	1	1	2	5	7	2	5	12	7	6	7	6.3
8. Removing distinction between cultivated and non-cultivated biological resources and only distinguishing between migrating and non-migrating resources	3	6	3	2	3	13	7	3	4	4	2	9	4.9

Q6 – Detailed table (continued)	0 - Not at all relevant	1	2	3	4	5	6	7	8	9	10 - Highly relevant	Don't Know	Average score
9. Supplementary table on distributions of household income, consumption and wealth	1		1		3	2	7	5	9	9	18	3	7.9
10. Supplementary table on provisions	2	2		3	3	11	3	3	7	4	3	17	5.8
11. Supplementary tables on health care	1	1	1	1	1	8	3	12	7	6	10	7	7.1
12. Tables on labour as a standard component	1	1		1	1	5	4	5	13	10	9	6	7.5
13. Thematic tables on education and training	1	1	1		1	12	5	10	4	8	8	6	6.9
14. Updating asset classification to create a separate asset class for natural capital	2	4	1	1	2	9	6	4	11	7	6	7	6.4

Q6B. Please provide any explanations to support your ratings:

Armenia (Central Bank of Armenia): As our country is not rich with natural resources, the main interest among policy makers and researchers are concentrated on issues about human capital, education and distributional analyses of income, consumption and savings.

Australia (Australian Bureau of Statistics): Users have not yet been consulted on their priorities in this area.

Azerbaijan (The State Statistical Committee of the Republic of Azerbaijan): Ответы составлены по итогам обсуждений с пользователями на предмет расширения охвата данных официальной статистики

Responses are based on discussions with users to expand the coverage of official statistics.

Belgium (National Bank of Belgium): While most of the items are very relevant, it is especially necessary to be able to produce qualitative statistics on them. For certain items (e.g. human capital, unpaid household service work), we see great difficulties in doing this in a good and harmonised way.

Canada (Statistics Canada): It is unclear in some cases if there is user demand for these items, so the relevance is difficult to estimate.

Chile (Central Bank of Chile): .

Colombia (DANE): For the qualification of relevance, the information requirements requested by the users during the development of the needs detection and analysis and evaluation phases, defined in the statistical production model Generic Statistical Business Process Model (GSBPM) implemented in the entity, were considered.

Regarding the specific proposals related to natural capital, the importance of measuring the interrelations between the economy and the environment is recognized, in order to provide useful information for decision-making regarding the future well-being (sustainability) of the Colombian population.

Germany (Destatis (Federal Statistical Office)): These ratings are rather speculation than even rough estimations.

Ireland (Central Statistics Office): Most items are of interest in the wider policy areas of Government and to the user communities.

Mexico (INEGI): Supplementary tables on health care: It is relevant to know the financing in health. The information is already available from the Ministry of Health, the contribution of the proposal could lie in standardizing some terms between said information and the SCN.

Unpaid domestic service work accounts (at least every 5 years): The information is already presented annually, with an estimate of the time series, and every 5 years it is updated with information from the survey. The contribution of the proposal lies in the complementary tables of paid and unpaid employment, as well as in the measurement of care as a simultaneous activity.

Thematic tables on education and training. Information on education is always on the discussion table for public policies because it comprises a significant amount of the public budget, as well as the time and resources that households spend for this purpose, but the information is dispersed and hidden within macroeconomic information. In 2013, a census of basic and special education schools,

teachers and students was carried out. This source of information adds to the vast economic information that exists on the subject. But, all this is not integrated in such a way that economic or sociodemographic indicators of education in Mexico can be generated. An integrated table on these aspects will allow knowing the main economic variables, additional indicators on establishments and the sources of financing.

Expanded experimental table on human capital. Human capital is an issue that is becoming increasingly relevant in discussions on issues of productivity and sustainable development due to the impacts on the labor market and on the development of the industry of new information and communication technologies; but it has also gained interest within households due to its positive relationship with the issue of better prospects in the standard of living.

Renewable energy. This type of information is timely, from the commercial (capital investment) and governmental (collection) point of view.

Biological resources. Information on migratory and non-migratory biological resources is necessary given their characteristics and the need for monitoring indicators for the Global Framework for Biological Diversity.

Asset classification. Current environmental accounting accounts for this type of asset, so its records are already part of the theoretical set of accounts.

Ownership of natural assets. For the public sector and the private initiative, it is relevant, since this type of information can support them in making decisions about investments or for collection or distribution purposes.

The registration of the depletion of natural resources as intermediate consumption. In Mexico's environmental accounting scheme, the costs of depleting natural resources are charged to GDP, generating a net and environmentally adjusted measure of GDP. The main users (environmental sector of Mexico) take this indicator as a reference.

Provisions. The inclusion of provisions will make it possible to include the risks associated with the natural capital of financial operations.

Netherlands (Statistics Netherlands (CBS) and De Nederlandsche Bank (DNB)): Human capital is highly relevant from the perspective of sustainable well-being. The focus in HC valuations is on the value of accumulated skills, knowledge and experience for the individual in the workplace and for the economy at large. A fundamental question is how the intrinsic value of work and non-economic benefits of human capital can be captured (e.g. HC in volunteer work).

Norway (Statistics Norway): It is not at all clear to us that the split asset approach or treating depletion as a cost of production will be helpful to users. It is quite likely that it will be conceptually challenging (cf. the responses to the proposals), and they will entail reduced comparability of national accounts between countries and over time.

Singapore (Department of Statistics): The ratings are provided after assessing the relevance to Singapore's context. For example, Singapore has limited natural resources. Singapore has a decentralised statistical system and in the interest of time, the inputs provided are solely based on Singapore Department of Statistics' assessment (as the National Statistical Office), without consultation with other statistics producing public agencies.

South Africa (South African Reserve Bank and Stats SA): To varying degrees, data related to all these proposals are very relevant for users as integrated economic accounts compilers, policy makers, social scientists, environmental scientists etc. The renewable energy and unpaid household work have recently become the most desired.

Supplementary table on provisions are highly relevant for net worth analysis.

Supplementary table on distributions of households are also highly relevant for South Africa with has high level of income and wealth inequality.

South Korea (Bank of Korea/Economic Statistics Department): Apart from feasibility, if the tables are compiled, users would have the opportunity to broaden and deepen their analysis and inform decision-making processes. The availability of comprehensive data can enable users to explore various dimensions of the economy and gain deeper insights into the relationships and interdependencies between different factors.

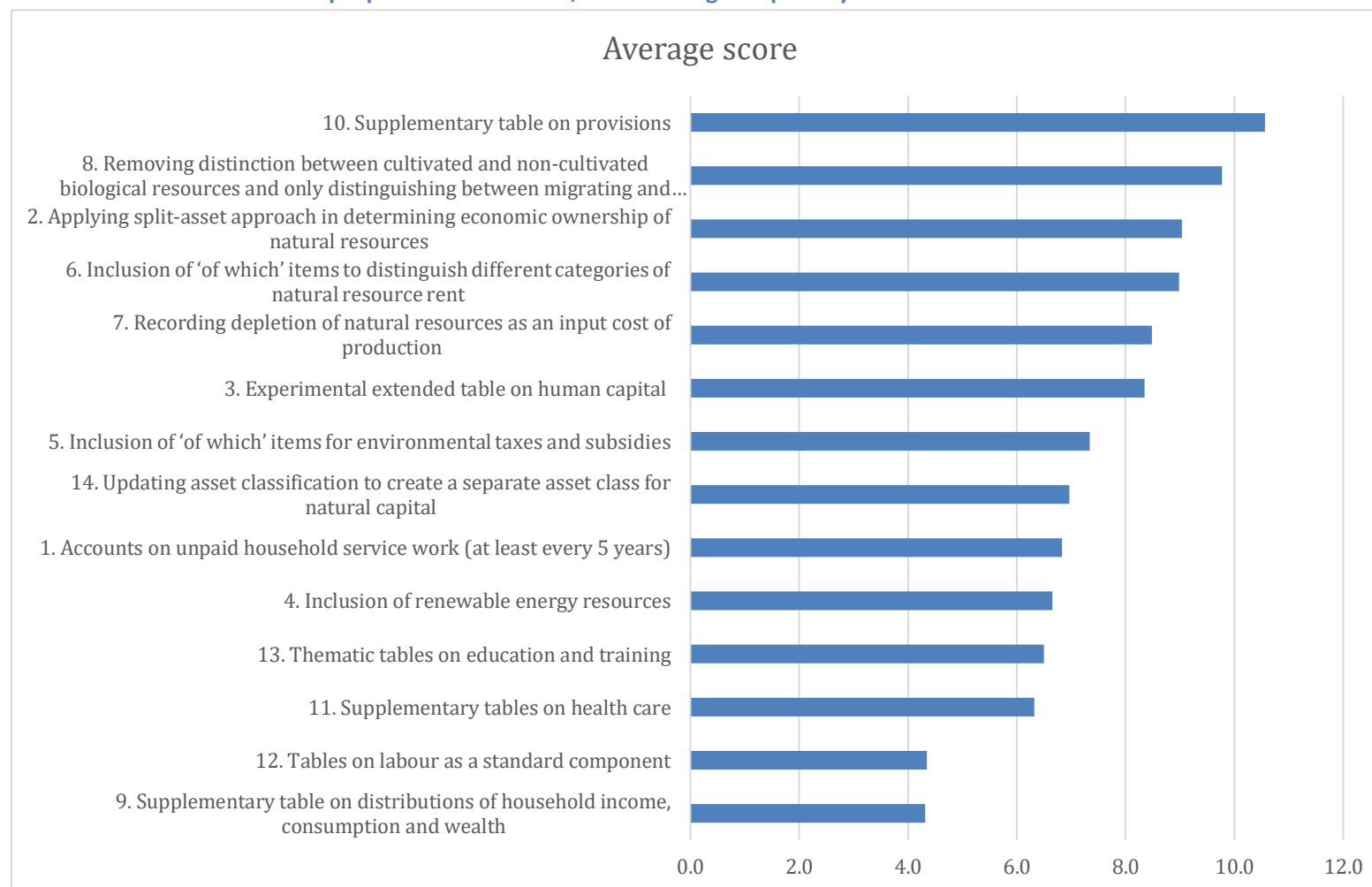
Spain (INE - NATIONAL STATISTICS OFFICE): Relevance is evaluated based on the number of inquiries or proposals received in the National Accounts Department by other organizations or users.

Sweden (Statistics Sweden, NSI): The interest in general information on depletion and human capital mainly comes from academic researchers. Government institutions are more interested in assessing and evaluating specific government policy projects.

United Kingdom (UK Statistics Authority): The UK does not find the proposed developments for the supplementary health tables to reflect areas of user need for the UK. The additional proposed items would not enable us to further answer user questions that we are currently unable to.

Wales/United Kingdom/Northern Ireland (Cyfoeth Naturiol Cymru / Natural Resources Wales): We used the same mural exercise to examine the importance of the recommended interventions (they were all considered to be relevant, but we did not think a uniform rating of 10 would be very helpful).

Q7A. On the basis of your responses to questions 5A and 6A, how would you prioritize the following proposals for new and/or a adjusted information? Please rank the proposals from 1 to 14, with 1 as highest priority and 14 as lowest.



Q7-Detailed table	1 - Highest priority	2	3	4	5	6	7	8	9	10	11	12	13	14 - Lowest priority	Average score
1. Accounts on unpaid household service work (at least every 5 years)	6	5	3		9	6	6	2	2	5		4	2	5	6.8
2. Applying split-asset approach in determining economic ownership of natural resources	3		2	2	3	2	6	3	3	6	7	6	2	7	9.0
3. Experimental extended table on human capital	1	3	4	4	2	5	5		5	5	4	4	3	7	8.3
4. Inclusion of renewable energy resources	2	5	2	7	4	10	3	6	3	1	3	4	2	1	6.7
5. Inclusion of 'of which' items for environmental taxes and subsidies	1	4	7	2	1	5	7	4	5	5	4	3	3	1	7.3
6. Inclusion of 'of which' items to distinguish different categories of natural resource rent	1			5	6	1	3	4	8	4	7	6	7	1	9.0
7. Recording depletion of natural resources as an input cost of production	3	2	1	5	4	3	3	2	2	7	4	7	6	3	8.5

Q7-Detailed table (continued)	1 - Highest priority	2	3	4	5	6	7	8	9	10	11	12	13	14 - Lowest priority	Average score
8. Removing distinction between cultivated and non-cultivated biological resources and only distinguishing between migrating and non-migrating resources		1	2		4	4	1	3	9	4	8	5	6	7	9.8
9. Supplementary table on distributions of household income, consumption and wealth	18	8	5	4	3		1	7		1	1	2	1	2	4.3
10. Supplementary table on provisions		1	1	1	2	1	5	2	3	6	4	4	10	11	10.6
11. Supplementary tables on health care	2	5	9	7	6	2	2	3	5	1	2	2	3	3	6.3
12. Tables on labour as a standard component	14	10	2	9	5		1	5	1	2	4			1	4.4
13. Thematic tables on education and training	1	2	11	7	4	6	6	2	4	2	1	2	4	2	6.5
14. Updating asset classification to create a separate asset class for natural capital	2	7	4		2	8	4	10	3	4	4	2	2	1	7.0

Q7B. Please provide any explanations to support your ranking:

Australia (Australian Bureau of Statistics): Priorities are highly subjective, the users of this information are highly varied and have not yet been consulted.

Priorities here are based on the feasibility now and may change as users are more widely consulted. These priorities should not be taken as very definitive at all.

Azerbaijan (The State Statistical Committee of the Republic of Azerbaijan): Ответы составлены по итогам обсуждений с пользователями на предмет расширения охвата данных официальной статистики

Responses are based on discussions with users to expand the coverage of official statistics.

Belgium (National Bank of Belgium): Although relevant, human capital has the lowest priority because of the difficulties around the estimation. Distributional results are given the highest priority, given their feasibility and high relevance.

Canada (Statistics Canada): It is very difficult to provide a ranking here. A topic of analytical interest is highlighted (1) and one that we do not agree with is indicated as lowest (14).

Chile (Central Bank of Chile): .

Colombia (DANE): The priority rating was made taking into account the rating of the feasibility of data compilation and relevance to users.

France (NSI): It is too difficult to class each issue. It would be easier to classify between "high priority" or "weak priority".

Germany (Destatis (Federal Statistical Office)): Feasibility played a major role.

Ireland (Central Statistics Office): I have tried to prioritize those areas where we might make the most progress initially

Mexico (INEGI): Supplementary tables on health care; and Unpaid domestic service work accounts (at least every 5 years): Information that is already disseminated and available to users.

Thematic tables on education and training and Expanded experimental table on human capital. The development of a country is a

reflection of progress in various fields, but above all in the degree of development of the people/households that make it up. One of the most important aspects that support these advances are educational achievements, since professional preparation allows for advances in all fields of knowledge, as well as assimilating current knowledge and its practical application. Knowing the production and use of resources in the educational aspect, as well as sociodemographic indicators, will allow us to answer the question of whether the corresponding resource investments have been made or whether monetary elements, physical infrastructure or material resources are missing.

Renewable energy. The public agendas of the countries are already considering the use of renewable energy for decision-making, in addition, it is a key issue on the SDG agenda.

Biological resources. There are proposals in environmental matters with higher priority.

Asset classification. Current environmental accounting accounts for this type of asset, so its records are already part of the theoretical set of accounts.

Ownership of natural assets. For the public sector and the private initiative, it is relevant, since this type of information can support them in making decisions about investments or for collection or distribution purposes.

The registration of the depletion of natural resources as intermediate consumption. Recognizing the value that natural inputs contribute to production will make it possible to generate public policies focused on sustainability and changes in the production pattern towards less invasive schemes with the environmental border.

Provisions. An important area of opportunity is foreseen in terms of the generation of information in a standardized manner by the industry that makes it possible to identify and measure the respective provisions, coupled with the little respective current accounting guidance.

Portugal (Statistics Portugal): The new proposals from SNA represent a huge enlargement of the statistical requirements in terms of developing new methodologies and create new data sources, which ultimately represents a significant human and financial investment. Is the society really prepared for such a huge investment for an enlarged SNA which includes many new requirements that may serve only a limited number of users?

In particular in the case of the environmental and ecosystem domains, we consider that methodological work is not yet mature at the level of the physical accounts (SEEA). Further improvements for measurement in physical terms should be the priority and only at a latter stage be included in monetary terms in the SNA.

Singapore (Department of Statistics): The ratings are provided based on the rankings of questions 5 and 6. Singapore has a decentralised statistical system and in the interest of time, the inputs provided are solely based on Singapore Department of Statistics' assessment (as the National Statistical Office), without consultation with other statistics producing public agencies.

South Africa (South African Reserve Bank and Stats SA): The rankings are generally biased as they are based on what we urgently need to compile macroeconomic statistics, especially in integrated economic accounts.

Through the development of new monetary survey South Africa is working towards harmonising the treatment of provisions with the SNA.

South Africa is part of Expert Group on Distributional Household Income and Wealth and has committed to adhering to G20 DGI recommendation 8 and 9 requirements on the compilation of household distributional wealth results

In SA it will be motivated by the availability of input data or the possibility to obtain source data in the medium term.

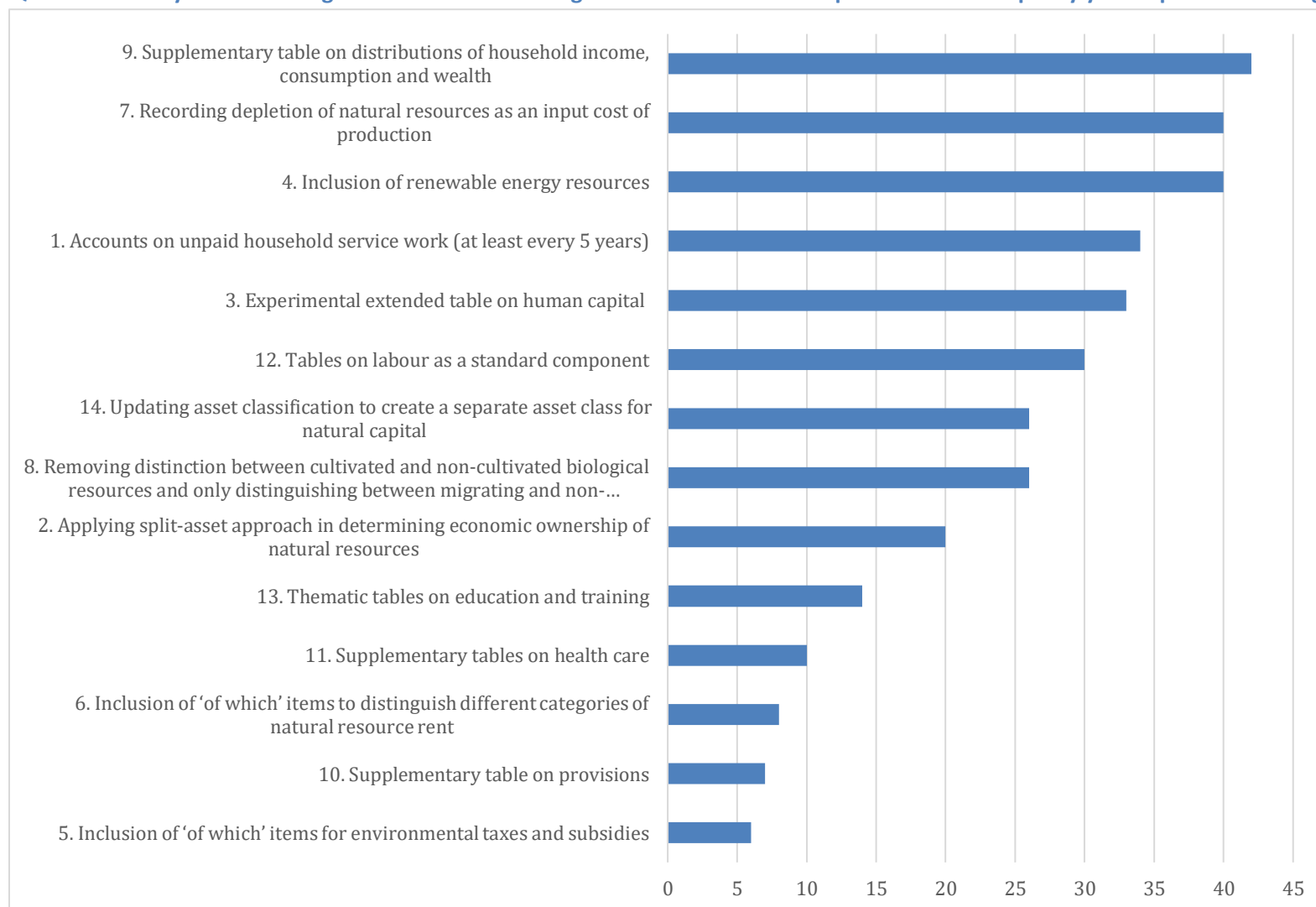
South Korea (Bank of Korea/Economic Statistics Department): We prioritize the items based on their feasibility in order to ensure that the most readily available and reliable data is compiled and analyzed first.

Sweden (Statistics Sweden, NSI): Priorisations is a matter of available resources.

Ukraine (State Statistics Service of Ukraine): -

Wales/United Kingdom/Northern Ireland (Cyfoeth Naturiol Cymru / Natural Resources Wales): We were a little frustrated at the requirement to come up with a strict ordering rather than have indifference between recommendations in terms of their importance as an option. We also felt that, given the narrow scope of the recommended interventions, it was a less than useful exercise, along the lines of “your boat is sinking and we have identified 14 of the leaks, which do you think are most important to plug?” when you are going to sink anyway by the combination of the identified leaks left unplugged and the unidentified leaks.

Q8A. Where do you see the largest need for additional guidance to facilitate compilation? Please specify your top 3 with 1 as highest priority.



Q8 – Detailed table	1	2	3	Total points
1. Accounts on unpaid household service work (at least every 5 years)	7	6	1	34
2. Applying split-asset approach in determining economic ownership of natural resources	2	3	8	20
3. Experimental extended table on human capital	6	4	7	33
4. Inclusion of renewable energy resources	6	10	2	40
5. Inclusion of ‘of which’ items for environmental taxes and subsidies		3		6
6. Inclusion of ‘of which’ items to distinguish different categories of natural resource rent	1	1	3	8
7. Recording depletion of natural resources as an input cost of production	10	3	4	40
8. Removing distinction between cultivated and non-cultivated biological resources and only distinguishing between migrating and non-migrating resources	3	6	5	26
9. Supplementary table on distributions of household income, consumption and wealth	9	5	5	42
10. Supplementary table on provisions	1		4	7
11. Supplementary tables on health care	1	2	3	10
12. Tables on labour as a standard component	6	3	6	30
13. Thematic tables on education and training	2	3	2	14
14. Updating asset classification to create a separate asset class for natural capital	4	5	4	26

Q8B. Please provide any explanations to support your raking:

Azerbaijan (The State Statistical Committee of the Republic of Azerbaijan): Необходимо иметь согласованные на международном уровне исчерпывающие руководства для составления расширенных таблиц по человеческому капиталу

There is a need for internationally agreed comprehensive guidelines for the development of extended human capital tables.

Brazil (IBGE - Instituto Brasileiro de Geografia e Estatística): 1. It would be important to first develop such methodologies more comprehensively within the scope of SEEA-CF and, only after we have solid practical results, introduce them into the SNA. The valuation part within ecosystem services is still experimental, including in SEEA-EA.

2. It is important that manuals explore in more detail recommendations for methods such as matching, combining sample surveys with administrative records, and adjusting the data distribution tip by a Pareto distribution (Pareto tail adjustment). Mainly detailing how to implement the Pareto distribution at the end of the series and gather fiscal data to account for the underrepresentation income households top percents in household surveys .

Canada (Statistics Canada): Once our comments are taken into account on the various guidance notes, the additional guidance should be sufficient. We have indicated unpaid household work as a priority for more guidance given the difficulty of measuring it.

Chile (Central Bank of Chile): It is based in our prioritization and the availability of current guidance documents

Colombia (DANE): The prioritization was carried out taking into account the available conceptual frameworks.

Egypt, Arab Republic (The Central Agency for Public Mobilization & Statistics): Unemployment is a big problem for all policymakers worldwide. To create jobs and generate income is an important issue for wellbeing and sustainability and to achieve many goals of sustainable development.

Germany (Destatis (Federal Statistical Office)): In general we see considerably higher challenges in the proper accounting of today's (and tomorrow's!) natural resources than in the – albeit also very complex – amplification of social statistics.

Germany (Deutsche Bundesbank): Would be number 4: Recording depletion of natural resources as an input cost of production.

Mexico (INEGI): The accounts of human capital and capacity are relevant to public agendas, with less methodological development. Similar case to the theme of provisions, as it may have been mentioned, there will be an important area of important opportunity in the

field of information generation in a manner standardized by the industry that allows identifying and targeting the relevant provisions, despite the lack of orientation accountant actual respectiva.

Netherland (Statistics Netherlands (CBS) and De Nederlandsche Bank (DNB)): We ranked them from the perspective of environmental/NC. From the perspective of sustainable well-being the top 3 would be:

- 1) Accounts on unpaid household service work (at least every 5 years)
- 2) Experimental extended table on human capital
- 3) Supplementary tables on health care

Portugal (Statistics Portugal): Assuming that structural choices have already been taken in recording depletion in NA...

Singapore (Department of Statistics): These topics have less guidance available.

South Africa (South African Reserve Bank and Stats SA): The most important is the distributional accounts and we need some guidance on collecting administrative microdata. For policy makers the distributional effect of household income consumption and wealth will be the most important, especially in a country where the Gini coefficient is very high.

Unpaid household services are a relevant topic that would assist policy makers. Some guidance will be welcomed. The suggested areas are based on current user needs however there is a lack of capacity to be able to implement it. To calculate depletion, we will need to collect the applicable source data and receive some guidance on what to use.

Spain (INE - NATIONAL STATISTICS OFFICE): Ranking first issues related to the core of National Accounts, or with possible/potential impact on GDP and GNI, than satellite or extended accounts.

Sweden (Statistics Sweden, NSI): These we think are the least developed proposals in the list. Regarding depletion there is information in SEEA-CF on the point estimate. Data for time series are less developed.

United States (Bureau of Economic Analysis): Regarding renewables, because their inclusion is fraught with measurement challenges more guidance is needed. For example, wind generates electricity—how is one to separate the wind resource from the electricity generated, in order to avoid double-counting?

Wales/United Kingdom/Northern Ireland (Cyfoeth Naturiol Cymru / Natural Resources Wales): We wish to see a speedy transition to a fundamentally different structure of economic accounts which would support a transition to a System of Integrated Wealth Accounting in which the Central Frameworks for the System of Market -Economic Accounts (on a net National Income and Domestic Product basis), the System of Cultural - Economic Accounts (that would include Human Capital) and for Environmental - Economic Accounts (that would include Natural Capital) would co-exist on the basis of equal status, and in which there would be satellite accounts that would provide a home for GDP and Social Capital Accounting.

The systems of Cultural-Economic Accounts and Environmental Economic Accounts would be based upon robust guidance covering the calculation of dynamic shadow prices that would not be forced into the constraints of the System of Market-Economic Accounts and it would give due weight flows of goods and services that are not excludable in consumption (i.e. common goods that are rival in consumption and public goods that are not). This guidance would reflect:

1. A descriptive model of the production possibility frontier for the economy in question
2. An account of the institutions and practices that shape the social choices made by people living within the territorial extent of that economy
3. The size and distribution of the inclusive wealth capital stocks within that economy

These shadow prices would be evaluated in terms of an agreed conception of inter-generational well-being. We would suggest the formulation mentioned earlier:

Inter-generational well-being increases over time if and only if inclusive wealth also increases over that same period of time.

The guidance would also recognise that in the Nature-Society-Economy nexus, nature is a bounded system where some safe boundaries have already been exceeded, human society is bounded by nature, and the economy is bounded by society. The assumption that the economy is unbounded has to be abandoned. As the Professor for Global History at Oxford University, Peter Frankopan, notes in his recent book *The Earth Transformed: An Untold History* (Bloomsbury 2023)

“Writing this book has taught me a great deal about how we conceptualise the world around us. But it has also made me realise that the reason we are in such a dangerous intersection is the result of trends that have a deep root in the past. As far back as written records go people have worried about human interactions with nature and warned of the dangers of overexploitation of resources and the long-term damage to the environment. It may now be that we are becoming victims of our own success as a species, and the stresses and strains that our behaviour has put on ecosystems has pushed us close to or even beyond the tipping point that has catastrophic consequences. We cannot say, however, that we were not warned.”

António Guterres made a very similar point in his State of the Planet speech at Columbia University in December 2020:

“Humanity is making war on Nature . . . Let’s be clear: human activities are at the root of our descent toward chaos. But that means

human action can help solve it. Making peace with nature is the defining task of the 21st century. It must be the top priority for everyone, everywhere.”

Secretary-General’s address at Columbia University: “The State of the Planet” | United Nations Secretary-General

The boundary of what is or is not “in the economy” is a matter of societal choice, and it is very important that UN accredited statistics do take the SNA 2025 refresh to respond to the emergence of new cultural values and societal preferences driven by “the descent into chaos”. These considerations influenced our choices, but we would prefer that limited resources be focussed upon the transition to the System of Inclusive Wealth Accounting as well as the provision of a broader and richer set of non-economic accounts to support policy making. We would further suggest adopting a mission approach to this transition, in line with OECD MOIP guidance (The design and implementation of mission-oriented innovation policies (oecd-ilibrary.org) with a target conclusion date no later than 2030.

The broader range of non-economic accounts would support, amongst other things, research into both the “natural resource curse” and “the Dutch disease.” Resource rents have a role in both weak and failed states and for well governed states that seek to have a vibrant manufacturing sector but are hampered by a periodically over-valued currency (nrgi_Resource-Curse.pdf (resourcegovernance.org)) (Dutch disease: An economic illness easy to catch, difficult to cure (brookings.edu). It would also support the areas of research and innovation interest identified by key institutions such as finance ministries (see the response by HM Treasury to the Dasgupta Review) and central banks, including concern about medium and long- term trends in matters such as productivity that provide the context for short term decisions about the management of aggregate demand through taxation and monetary policy. So for example the Bank of England has published its areas of research and innovation interest for 2023 which includes (inter alia):

- What are the determinants and impediments of long-run growth in productivity, labour input and investment?
- What is the impact of inflation on different types of consumers, workers and firms?
- What are the macroeconomic and financial stability implications of climate change and policies to mitigate its impact?
- What role can the different financial actors play in distributing, managing and mitigating risks arising from structural economic changes and extreme events?

+ Other work on long-term trends and tail risks.

(Bank of England Agenda for Research | Bank of England)

Q9. Please provide any additional suggestions for enhancing and broadening the SNA framework to provide more insights on current or future well-being or to present the information to facilitate integrated analysis.

Armenia (Central Bank of Armenia): I think it will be better to enhance suggestions and recommendations in the field of natural capital, human capital and education, and try help countries to create more detailed and comprehensive statistics in mentioned areas.

Armenia (Statistical Committee): NC

Bangladesh (Bangladesh Bureau of statistics): No comment's yet

Chile (Central Bank of Chile): .

Colombia (DANE): A section on issues under development or to be resolved could be included in the SNA, establishing the possibilities of incorporating relevant issues that are not yet ready to do so, for example, for social capital. This leaves open the possibility for research and development.

Colombia has expressed in several of the consultations the practical challenges of the application, therefore, it considers valuable the inclusion of the practical issues referred to in chapter 5.

Egypt, Arab Republic (The Central Agency for Public Mobilization & Statistics): To focus on beyond GDP sprint themes.

Germany (Destatis (Federal Statistical Office)): We cannot provide anything further because you were pretty successful in embracing every thinkable measure on WB+S discussed in the current fields of national accounting.

Lithuania (State Data Agency. Statistics Lithuania): The guidances should focus also on possible data sources or alternative assessments (when sources are not available and surveys are not feasible), rather than only on methodological reasoning.

Malaysia (Department of Statistics Malaysia): Measure informal and non-standard employment. Traditional labour statistics often overlook the informal sector and non-standard forms of work, such as gig work and part-time employment. Integrating data on these types of employment into the SNA framework can provide a more accurate picture of the labour market by capturing the experiences of a broader range of workers. This data can help identify vulnerabilities, assess job security, and explore the well-being implications of different forms of employment.

Mexico (INEGI): No additional comments

Netherland (Statistics Netherlands (CBS) and De Nederlandsche Bank (DNB)): "Links to the SEEA EA are mentioned in the beginning of the note but not further elaborated. Based on what is in SEEA EA, this could be included in the new SNA.

Hoekstra notes that for a better perspective on sustainable well-being and to support broader notions of value, it is advisable to provide

separate information on volumes of activity (e.g. volunteer work, participation in education, health care use, etc.) in addition to monetary values."

Norway (Statistics Norway): The changes related to natural capital are the most far-ranging in the SNA update, and there are many open issues that need to be addressed. If conceptual and technical challenges cannot be solved, the fall-back solution should be to use the SEEA as the relevant statistical framework for measuring natural capital. Currently, Statistics Norway is leaning towards including parts of the proposals in the SNA update - but this depends on the discussions over the coming months.

Singapore (Department of Statistics): Nil.

South Africa (South African Reserve Bank and Stats SA): The subject of incidences of incurable diseases, which may reduce human well-being.

Spain (INE - NATIONAL STATISTICS OFFICE): Depletion of national accounts should be treated as either an impact on net aggregates or a production cost, but not both at the same time. If it is included as one more production cost, this would increase non-market production due to sum of costs and would affect the net balances in a manner contrary to what is intended to be reflected.

Sweden (Statistics Sweden, NSI): We think a broader set of data is needed to support different approaches in describing the economy in relation to climate policy.

Ukraine (State Statistics Service of Ukraine): No

United Kingdom (UK Statistics Authority): The UK would like to propose the following suggestions. The SNA framework should take into consideration the critical aspects of consistency with additional breakdowns to enable understanding of inequalities. For example, talking about options for distributional accounts on income, consumption and wealth with respective focus on breakdowns of the labour account, human capital and household unpaid service work. Consistency is also required with statistical guidance outside the SNA, specifically in relation to social statistics.

The UK would like to see more explicit alignment to the breakdowns coming through SDGs.

Although the UK acknowledges it is currently out of scope, much more needs to be done in frameworks to align wider concepts of current

well-being beyond economic impacts (e.g. on people's lives and prosperity) as well as for future well-being for people (e.g. on their life satisfaction). The authors are advised to look to the recent UNNES research prospectus, which gives a more up to date perspective than the research cited.

Wales/United Kingdom/Northern Ireland (Cyfoeth Naturiol Cymru / Natural Resources Wales): As we noted in A8 we advocate replacing the SNA by a System of Integrated Wealth Accounting, with the transition to the SIWA to be achieved by 2030 at the latest. This transition would be underpinned by institutional changes, with the UN Statistical Commission being replaced by a UN Statistical Authority reporting on a day to day basis to the Secretary General and periodically accountable (say annually) to the General Assembly. The new UN Statistical Authority would aim to provide guidance and delivery on a diverse range of high quality statistics in collaboration with NSO's and other actors, potentially including private sector organizations that have been collecting social and cultural data on a cross border basis. This should be backed by resources, both human and financial, to increase the capacity and capability of NSO's, and by at least the consideration of innovation to protect the independence of NSO's, for example by considering the case for according diplomatic status to their leaders to protect them from arbitrary arrest and imprisonment by those who do not want high standards of truthfulness in the data their organisations produce.

Q10. Please provide any additional comments on this guidance note.

Armenia (Statistical Committee): NC

Bangladesh (Bangladesh Bureau of statistics): It's ok

Canada (Statistics Canada): The ranking questions in this consultation are quite difficult to answer. Relevance to users is also difficult to assess without user consultation on the newer topics.

Chile (Central Bank of Chile): .

Colombia (DANE): No additional comments

Germany (Destatis (Federal Statistical Office)): In principle we agree that – beyond the restrictive GDP/GNI perspective – the SNA should if possible address important aspects of well-being, wealth and sustainability. But we are convinced that “possible” must not mean “available by heroic assumptions, reckless modeling and insubstantial expert knowledge”. Hence, we refuse in particular all changes that could peril NA data and especially GDP/GNI as indicators for economic performance,

economic growth and business cycles. Therefore, we decline e.g. the inclusion of unpaid work or resource depletion into the GDP calculation and the core system of national accounts.

Instead, we support the perpetuation and extension of suitable satellite systems. The Environmental-Economic Accounts (EEA) and the System of Health Accounts (SHA) set excellent examples. More extensive households satellite accounts, updated every ten or, for our sake, every five years would be helpful and sufficient as well. They could and maybe should contain data on household work and on distributions of household income, consumption and wealth. In any case the representation of social indicators of well-being in the form of a dashboard could combine incommensurable sources and could avoid ranking and offsetting between the indicators or their subjacent goals.

If so-called human and/or social capital should be part of these satellite accounts remains to us as an open question: On the one hand, their computation requires the mentioned heroic assumptions, reckless modeling and insubstantial expert knowledge. On the other – this as a personal opinion – we should be wary of the temptation to count all human achievements that are precious and worthwhile as some kind of “capital”, allegedly measurable down to the last penny.

Another open question seems the role that the existing international satellite systems like EEA, SHA or UOE should play in a future SNA that incorporates all these aspects: Should a broader SNA obtain the respective data from the existing satellites? Or should the new SNA replace the previous reporting systems? Or should they coexist, possibly inconsistent due to dissenting methodologies? At least the last-mentioned option would be confusing and could unsettle the trust of the public in the validity of official statistics.

Last not least we dare to mention that the tangled mass of additional data and tables intended for the new SNA implies a lot of additional work and expense that would call for an extension of resources in the statistical offices. Nowadays, policymakers tend to react less than enthusiastic to such demand.

Clarification to question 3A: The matter of fact that the elements of the guidance notes seem to be properly reflected does not mean that we share the opinion of the authors concerning the necessity and/or feasibility of many of the suggested changes.

Additional comment to Q4A: The figure in section 4.1 is rather unspecific so there is not much to be adverse to.

Israel (Central Bureau of Statistics): Please include in the list of References WS.1 the guide: United Nations Economic Commission for Europe (2020), Satellite Account for Education and Training: Compilation Guide, New York, United States and Geneva, Switzerland. The tables from this guide are presented in Appendix G of WS.1.

Mexico (INEGI): No additional comments

Singapore (Department of Statistics): Nil.

South Africa (South African Reserve Bank and Stats SA): This guidance note is a good picture of what must be done to improve the measurement of household wellbeing and sustainability. The information contained in these well-being and sustainability data items can equip a country to have a wide vision and good pre-warning of future economic crisis. However, many of the concepts require very granular data that is difficult to source. Countries will have to be given significant support and guidance to get the required information to compile the proposed accounts.

Spain (INE - NATIONAL STATISTICS OFFICE): In our opinion, those open topics that have a future potential impact on GDP or GNI should be closed before those that are extended tables.

Ukraine (State Statistics Service of Ukraine): No

United Kingdom (UK Statistics Authority): The UK would like to raise the interchangeable use of terms such as well-being, economic well-being, and household well-being, which are not equivalent. There is still fundamental action required to address household well-being, and to consider alignment with guidance such as the National Time Transfer Accounts (NTTA) which consider wellbeing from an individual perspective.

The UK strongly supports the ambition to address the importance of measuring inclusive and sustainable well-being, and the fact the SNA cannot take sole responsibility for this agenda, which is a credible and realistic phrasing, and that the SNA should focus on economic well-being. Our instinct is the paper should either say a lot more in terms of how economic well-being links with wider measures of well-being or less, focusing purely on how we understand economic well-being.

United States (Bureau of Economic Analysis): Measurement challenges for renewable energy assets or human capital are substantial although we recognize their importance. Importance, however, should not be a substitute for sound economic measurement and accounting.

Many of the recommendations may require detailed micro data, which are difficult and expensive to compile.

Wales/United Kingdom/Northern Ireland (Cyfoeth Naturiol Cymru / Natural Resources Wales): The question is a little ambiguous since it could be taken to refer to either the draft guidance published by the WSTT or to this questionnaire about the guidance, since the referencing does not seem to be consistent in this respect.

Concerning the former. As we have made clear we do not wholly agree with the framing of the guidance. We believe this reflects the contradictory aspirations underlying the whole SNA 2025 refresh. We are concerned by the lack of attention given to the environmental, as well as the cultural and social, dimensions of well-being in the proposed dashboard to assess current well-being. We also note the absence of any reference to developments in both the lived experience of people and the economic theory addressing contemporary issues within the economy.

The Keynesian-Marshall nexus that underpinned the original SNA broke down in the 1970's, not least because of the emergence of simultaneous stagnation and inflation- compressed to the term "stagflation," although there were theoretical developments in the 1960's that also played a role. This set in train developments that sought to explain macroeconomics in terms of microeconomics. Such an approach similarly seems to have run into the sand as its nostrums have failed to prevent the recrudescence of stagflation. Again there are theoretical developments going on under the bonnet as well (see for, example, Geoge Akerlof's *The Missing Motivation in Macroeconomics* - American Economic Association (aeaweb.org) , March 2007).

The tsunami that precipitated the nuclear accident at Fukushima in March 2011 propagated shocks across the Japanese economy which caused Toyota to shut down production in facilities far away from the accident within 24 hours because of disruption to its just-in-time supply chain. This has generated a large volume of research into what might be termed the meso-economy. This uses graph theory to examine the relationships between firms and clusters of firms in the context of tail risks that are highly uncertain, because they are largely beyond experience that can be adduced with respect to correspondence in truth claims. These studies examine "cascade effects" that can amplify initially small perturbations to the system. So there has been growing interest in highly skewed and thick tailed distributions of both threats and opportunities and the role of radical uncertainty in the tail as well as risk around the median. For example John Kay, who founded the respected Institute for Fiscal Studies in the UK, and Mervyn King who is a former Governor of the Bank of England, published *Radical Uncertainty: Decision-making for an unknowable Future* in 2020.

Likewise Minouche Shafik, the current director of the LSE, published an influential work on the role of reciprocity in the economic system *What we owe Each Other: A New Social Contract*, 2021 *What We Owe Each Other: A New Social Contract for a Better Society* by Minouche Shafik – IMF F&D. Perhaps the most surprising absence, from NRW's point of view, was any reference to the Dasgupta Review Final Report – *The Economics of Biodiversity: The Dasgupta Review* – GOV.UK (www.gov.uk); *The Economics of Biodiversity: the Dasgupta Review* | Royal Society; *The Economics of Biodiversity: The Dasgupta Review (Abridged Version)* | System of Environmental Economic Accounting

Concerning the questionnaire, we view the question design as being somewhat biased. Its effect is to misdirect attention from the need for transformative change. In the months following the State of the Planet speech at Columbia, the UNEP published an evidence synthesis report Making Peace With Nature | UNEP - UN Environment Programme. That report provides a hierarchy of interventions as follows:

- Transformative enablers are important actions that facilitate broader systemic change
- Incremental enablers are actions that yield small changes whose accumulated impact contributes to transformative change
- Necessary measures are actions to protect nature and its contributions to people in the short term, but which may not contribute to transformative change
- Insufficient measures are interventions that may contribute somewhat to environmental protection in the short term, but which detract from longer term efforts towards transformative change

The example of a transformative enabler given in the document is “replacement of GDP by better measures of sustainability such as inclusive wealth.” That is the context for the WSTT recommendations. At present the prioritisation of a few necessary measures and incremental enablers threatens to turn it into an insufficient measure that contributes somewhat to advancing the “GDP and Beyond debate” but which detracts from longer term efforts toward transformative change into something that is fit for purpose.