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Long–Term Research Program in Consultation with ISWGNA

**Prepared by the
United Nations Statistics Division on behalf of the ISWGNA**

**Long-Term Research Program in Consultation with ISWGNA:
Review of the SNA Research Agenda by UNSD, on behalf of the ISWGNA**

I. Introduction

1. Annex 4 of the System of National Accounts 2008¹ (2008 SNA) lists research issues that have emerged during the update of the 1993 SNA, for which more extensive consideration was needed than what was possible in the course of the update process. These issues are grouped under four topics, namely: basic accounting rules; the concept of income; issues involving financial instruments; and issues involving non-financial assets.

2. The website of the Intersecretariat Working Group on National Accounts (ISWGNA), hosted by the United Nations Statistics Division (UNSD), contains a page dedicated to the SNA research agenda. This page lists the research issues and is updated with new items that emerge and with recommendations on existing items as agreed. In assessing the priority to be given to an item, three questions need to be addressed:

- a. How urgent and important is the topic to ensure that the SNA continues to be relevant to the users?
- b. How widespread are the consequences of change and how complicated will implementation be?
- c. Is the topic completely new or has much of the preparation for considering the item been completed?

3. At its 7th meeting in 2012, the Advisory Expert Group on National Accounts (AEG) agreed with the ISWGNA to focus only on issues related to practical implementation, clarifications and interpretation of the 2008 SNA, and not touch upon issues beyond the 2008 SNA. Issues related to the implementation of the 2008 SNA that were considered as high priority included: global production, the recording of investment income of pension funds and investment funds, stability fees, measurement of land and non-financial assets, research and development, pension liabilities, and financial intermediation services indirectly measured (FISIM).

4. Since then a number of additional issues were brought to the attention of the ISWGNA that go beyond the 2008 SNA recommendations. They include, among others: the financial instrument and unit scope of FISIM; whether the capital income derived from the investment of insurer's own funds should be included in the calculation of the output and value added of insurance; and the treatment of statistical units in the supply and use tables and institutional sector accounts.

5. This note aims to provide an overview of the 2008 SNA research agenda. Following the introduction in the first section, the mechanisms for resolving research issues are described in Section II. Issues that have been resolved so far and current issues under consideration are

¹ <http://unstats.un.org/unsd/nationalaccount/sna2008.asp>

respectively presented in Section III and IV. Research issues beyond the 2008 SNA are presented in Section V. The SNA research agenda website is described in Section VI.

II. Mechanisms for resolving research issues

6. The mechanism for resolving research issues is the same as the procedure for updating the SNA as described in the mandate of the ISWGNA which was endorsed by the United Nations Statistical Commission (<http://unstats.un.org/unsd/nationalaccount/docs/mandate.pdf>). This mechanism is briefly described below.

7. The process of selecting items for investigation comprises widespread consultation and involvement of both compilers and users in the review process. The work on the research agenda of the 2008 SNA is coordinated under the auspices of the ISWGNA and with the support from the AEG to ensure a worldwide representation in the deliberation on the research agenda issues and the proper implementation of the results in international standards or handbooks.

8. Proposals for task forces or expert groups to do research on specific topics are submitted to the ISWGNA. The ISWGNA may convene technical expert groups to advance research on particular normative and methodological matters. The technical expert groups consist of relevant experts in national accounts, with a balanced regional representation. These groups have limited life spans and focus on particular issues. The terms of reference for the tasks related to the subject are formulated with every group. They include specifications on deliverables, timelines and work arrangements for monitoring the technical discussions and for reporting recommendations to the ISWGNA.

9. The work programs of existing city groups and other technical expert groups may fall within the scope of the national accounts and supporting statistics, but have their own mandates and governance structures. Examples of such groups are: Delhi group, IMF Committee on Balance of Payments, Intersecretariat Working Group on Price Statistics and the Inter Agency Group on Economic and Financial Statistics. The ISWGNA coordinates, within its mandate, with these city groups and other expert groups to take account of their work in the work program of the ISWGNA. Specific tasks and responsibilities of these groups are agreed upon in a terms of reference between these groups and the ISWGNA. They include specifications on deliverables, timelines and work arrangements for monitoring the technical discussions and for reporting recommendations to the ISWGNA.

10. For large projects, such as the revision of the SNA or the implementation of the SNA, it may be necessary to develop separate project management frameworks.

11. The ISWGNA in consultation with the AEG will assess the results of research in accordance with the update procedures for the SNA established by the Statistical Commission at its thirtieth session in 1999 and reaffirmed at its forty-second session. When the outcome would necessitate a change to the SNA, the ISWGNA presents it to the Commission for adoption. The update procedure is described in the table presented in Annex 1 to this paper.

III. Issues resolved so far

12. Since the adoption of the 2008 SNA a number issues have been addressed to facilitate the implementation of the relevant recommendations. They are listed below.

FISIM

13. Clarifications were agreed on a number of measurement issues of FISIM, such as: including liquidity transformation services in FISIM; using a single reference rate; estimating imports and exports; the calculation of the reference rate; the calculation of volume measures; and estimating FISIM during volatile movements in reference rates. The handbook: Financial production, flows and stocks in the SNA reflects these clarifications.

(<http://unstats.un.org/unsd/nationalaccount/docs/FinancialHB-wCover.pdf>).

Emission permits issued under cap and trade schemes

14. The 2008 SNA does not fully address the recording of tradable emission permits, but recognised that further guidance was needed and therefore included this issue in the 2008 SNA Research Agenda (2008 SNA, paragraph A4.4). The issue was considered by a Task Force established by the ISWGNA in 2009. Since the subsequent conclusions by the ISWGNA were considered to be an interpretation of the SNA, the AEG and the United Nations Statistical Commission was also consulted on the issue, in accordance with the update procedures of the SNA. The outcome of the consultation on the treatment of payments for emission permits issued under cap and trade schemes in the national accounts is presented in SNA News and Notes issue 32/33 (<http://unstats.un.org/unsd/nationalaccount/sna/nn32-33-En.pdf>).

15. The ISWGNA recognises that the approach for dealing with emission permits is not perfect but it has come to the view that it is the best of all the possible options at the present time

Output of central banks

16. The recommendations for measuring the output of central banks in the 2008 SNA and ESA 2010 are slightly different. The difference mainly relates to whether or not the central bank services are to be considered market output, and to identify which sector consumes the relevant services. A clarification on this issue is presented in SNA News and Notes issue 36

(<http://unstats.un.org/unsd/nationalaccount/sna/nn36-en.pdf>).

Treatment of land

17. Guidance was developed to ensure consistent application of the 2008 SNA recommendations on the treatment of land. The guidance includes the distinction between volumes and prices when recording changes in the value of land. This guidance will be published in the forthcoming Compilation Guide on Land Estimation by the OECD and Eurostat.

Delineation of holding companies, head offices and SPEs

18. The 2008 SNA defines financial services more explicitly than the 1993 SNA and introduces a more detailed classification of the financial corporations' sector. Additional explanation of the delineation of the more detailed sub-sectors with the financial sector and the classification of head offices, holding companies and SPEs was considered necessary in order to implement the 2008 SNA. Practical guidance on the delineation of holding companies, head offices and SPEs was developed and will be presented in the forthcoming SNA News and Notes issue 37.

Research and development

19. Detailed guidance for the implementation of the concept of research and development (R&D) as capital formation is provided in the OECD Handbook on Deriving Capital Measures of Intellectual Property Products (<http://www.oecd.org/std/na/44312350.pdf>) and in the Eurostat manual on measuring R&D (http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-GQ-14-004/EN/KS-GQ-14-004-EN.PDF).

Global production

20. The UNECE/OECD/Eurostat Working Group on the Impact of Globalisation on National Accounts developed guidance on the impact of globalization on the compilation of the national accounts.

(http://www.unece.org/fileadmin/DAM/stats/publications/Guide_on_Impact_of_globalization_on_national_accounts_web_.pdf).

21. The guide highlighted a number of conceptual and measurement issues that needed further investigation. Consequently, the ECE Task Force on Global Production was established to address the conceptual issues arising from the 2008 SNA and Balance of Payments and International Investment Position Manual, sixth edition (BPM6), in relation to global production as well as providing practical guidance on implementation aspects. This guidance is expected to be published by UNECE in the forthcoming Guide on Measuring Global Production.

Other issues

22. The AEG provided guidance on a number of other issues, which are reflected in the conclusions of its meetings (<http://unstats.un.org/unsd/nationalaccount/ramtg.asp?fType=2>). These issues include: stability fees; service lives of military weapons systems; defining of catastrophes in the measurement of non-life insurance; and the treatment of freight and insurance in the 2008 SNA.

IV. Current issues for consideration

FISIM

23. Three clarification issues on the measurement of FISIM remains on the list of current issues for considerations, namely:

- a. To either exclude or include credit default risk (CDR) in the calculation of FISIM. Particularly, the conceptual arguments to either include or exclude CDR in the calculation of FISIM, and in the case of the excluding CDR to develop methods and data that could support a possible exclusion of CDR in the future.
- b. Developing more clarity regarding FISIM (-related) references in the 2008 SNA, especially in relation to treatment of risk and definition of financial services.
- c. Consider possible hybrid approaches to price and volume measurement of FISIM.

Accounting for pensions

24. The delineation and measurement of pension entitlements and the articulation of when to record the transactions, other flows and positions of defined benefit pension schemes in the core accounts is under consideration.

25. As part of explaining the explicit recording of imputed property income on the liabilities between a pension manager and a defined benefit pension fund the AEG is deliberating on the classification of the imputed property income.

Table on household retirement resources

26. A table on household retirement resources was prepared to provide extensive and detailed information on the various household resources for retirement, including the scope of assets and cross border transactions. However, further work is required regarding the delineation of social assistance benefits and the possible inclusion of assets such as owner occupied dwellings. The table is presented in Annex 2 of this note.

Factoryless goods producers

27. The industry classification of factoryless goods produces (FGP) and the correct recording of transactions between the FGP and contractors is difficult to identify. Consequently, more research by the AEG, BOPCOM, classifications experts and business register experts is required to collect more practical experience on the treatment of FGPs.

V. Issues beyond the 2008 SNA

28. At its 9th meeting in September 2014 the AEG took note that a number of issues that have been brought to the attention of the ISWGNA that go beyond the 2008 SNA recommendations. The AEG then agreed that it is time to consolidate the list of new issues for the research agenda, and recommended to update the SNA research agenda webpage and identify ways to address the issues. The AEG also recommended to consult national accounts users and researchers in identifying research issues beyond the 2008 SNA, and took note of the IARIW-OECD Conference on the future of the SNA, Paris, 16-17 April 2015.

FISIM

29. The financial instrument and unit scope of FISIM and the connection between the recommendations on implementation of FISIM and the definition of income.

30. The measurement of the output of international financial institutions, taking into consideration the cost of funds approach and the valuation at cost (possibly including the full cost of capital) for the non-market part of output.

Capital income of insurer's own funds

31. Whether or not to include the capital income derived from the investment of insurer's own funds in the calculation of the output and value added of insurance.

The valuation of natural resources

32. Further research, in collaboration with groups working on similar issues such as the Ulaanbaatar Group would be useful to address volatile asset values where the valuation of natural assets exclusively relies on current commodity prices or their expected value in the future.

The treatment of statistical units in the supply and use tables and institutional sector accounts

33. A Task Force on Statistical Units (TFSU) will be established to assess the 2008 SNA recommendations on statistical units (including institutional units), and to identify whether or not the recommendations on statistical units need to be adjusted. The TFSU needs to provide a clear view of what needs to be measured in the economy in order to better identify ways to adjust the definitions, if necessary. The TFSU needs to take the following into consideration: taking stock of current country practices; regional accounts as well as productivity measurement; and to

include a broader community of experts, including business register experts, survey specialists and classification experts in the TFSU.

Accounting for pensions

34. The nature of investment income (holding gains and losses) related to pension funds and investment funds need to be further investigated under the broader issue of the concept of income.

Capital services of assets not contributing to production

35. Further research on the utilization of capital in the measurement of capital services is required, particularly the treatment of capital services of assets not contributing to production, such as those that are constructed over more than one accounting period or those that are temporarily inactive for one reason or another.

VI. The research agenda website

36. The research agenda website facilitates the sharing of information about the issues under discussion, progress with such discussions and the long term research agenda. The website comprises five parts: research issues under discussion; consultations; AEG and task force meetings; a list of research issues; and the SNA update procedure. The website is available at: <http://unstats.un.org/unsd/nationalaccount/research.asp>

37. Annex 4 of the 2008 SNA provides a general description of the research issues. These issues (see Annex 3 to this paper) are grouped under four topics, namely basic accounting rules; the concept of income; issues involving financial instruments; and issues involving non-financial assets;.

38. More specific issues have been identified for each of these themes, which are listed on the research agenda website along with a detailed description of the issues. The list originated from a paper, presented at the 5th meeting of the AEG, which reported on 20 research issues. Each topic is described under three headings: The issue – explaining the issue; reasons for inclusion in the research agenda; a proposed time horizon for resolving the issue; and references. These issues were all incorporated in Annex 4 of the 2008 SNA. An example of the description of a topic is provided in Annex 4 to this paper, which is also available at: <http://unstats.un.org/unsd/nationalaccount/rIssueList.asp>

Annex 1 - Updating procedure for the System of National Accounts

Type of amendment				
Stage	Editorial	Clarification beyond dispute	Interpretation	Change
Proposal	ISWGNA reviews proposed amendment and classifies it			
Preliminary drafting	ISWGNA	ISWGNA	ISWGNA assisted by the AEG	ISWGNA assisted by the AEG
First discussion	↓	↓	Working parties or regional panels of experts	Working parties or regional panels of experts
Second discussion			↓	National statistical offices in all regions and where relevant Central Banks
Final drafting			ISWGNA assisted by the AEG	ISWGNA assisted by the AEG
Approval	ISWGNA	ISWGNA	Member Countries of the Statistical Commission during a 30-day period	Member Countries of the Statistical Commission during a 30-day period
Publication	Errata	SNA news and Notes, SNA website	SNA news and Notes, SNA website	SNA news and Notes, SNA website

Annex 2 – Household retirement resources

Row number	Position / transaction / other flows	Liabilities appear in the core national accounts													Liabilities do not appear in the core national accounts						
		Not related to social insurance					Related to social insurance										N = E to M	O = D+N	P	Q	R = O+P-Q
		Annuities	Other (individual) life insurance policies	Specific schemes linked to tax incentives	Other (Please specify:)	Total resident and non-resident household retirement resources not related to social insurance (with liabilities in the domestic economy)	Non-general government		General government						Total resident and non-resident household retirement resources related to social insurance (with liabilities in the domestic economy) and related to social assistance						
							Defined contribution schemes	Defined benefit schemes	Defined contribution schemes	General government employee defined benefit schemes		Social security pension schemes	Social assistance schemes								
Column number	A	B	C	D	E = A to D	F	G	H	I	J	K	L	M								
	Opening balance sheet																				
1	Total household retirement resources																				
	Transactions																				
2 = 2.1 to 2.5	Social contributions relating to pension schemes																				
2.1	Employer actual social contributions																				
2.2	Employer imputed social contributions																				
2.3	Household actual social contributions																				
2.4	Household social contribution supplements																				
2.5	Less Service charges																				
3	Other (actuarial) accumulation of pension entitlements in social security funds																				
4	Pension benefits																				
5 = 2+3-4	Adjustment for the change in pension entitlements																				
6	Change in pension entitlements due to transfers of entitlements																				
7	Change in entitlements due to negotiated changes in scheme structure																				
8	Additions to less withdrawals from individual schemes not related to social insurance																				
	Other economic flows																				
9	Revaluations																				
10	Other changes in volume																				
	Closing balance sheet																				
11	Total household retirement resources																				
12	Household retirement resources owned by non-resident households in the domestic economy																				
13	Household retirement resources owned by resident households in the rest of the world																				
14 = 11-12+13	Total household retirement resources of resident households																				
	Related indicators																				
	Assets held by pension schemes at end-year																				
	Valuation Method for entitlements																				

Empty cells show where entries appear in the main ("core") accounts.
 Black cells show where no entry is appropriate.
 Grey cells show where information is provided in the supplementary table only.

Annex 3: List of issues for the research agenda according to annex 4 of the 2008 SNA

Basic accounting rules:

The relationship of SNA and IASB
 Consolidation of enterprise groups
 Trusts
 Final consumption of corporations
 Measuring the output of government services
 The treatment of social transfers in kind to the rest of the world
 Output of central banks: taxes and subsidies on interest rates applied by central banks
 The treatment of establishments in the SNA
 The inclusion of international organizations in the SNA

Issues involving financial instruments:

Issues arising from a financial crisis
 Recognition of social security entitlements as liabilities
 Wider use of fair value for loans
 Provisions
 Debt concessionality
 Equity valuation and its implications
 Reverse transactions

Issues involving non-financial assets:

Tradable emission permits
 Leases to use or exploit natural resources
 Broadening the fixed asset boundary to include other intellectual property assets
 Costs of ownership transfer of valuables and non-produced
 Distinction between current maintenance and capital repairs
 Treatment of Private-Public Partnerships
 Transfer of ownership of an asset during its life

The concept of income

Clarification of income concept in the SNA
 GDP at basic prices
 The role of taxes in the SNA
 Life insurance
 Reinvested earnings
 Accruing interest in the SNA

Calculation of FISIM

High inflation

The measurement of neutral and real holding gains and losses

Income arising from assets

Income from activities undertaken on an informal basis

Annex 4 –An example of a research issue

A.

B. Leases to exploit natural resources such as mineral deposits

I Author

OECD

II The issue

One of the items for review in the update of the 1993 SNA was the treatment of leases and licences to use and exploit natural resources. Three different types of natural resources were considered:

- a) Natural resources that have infinite lives and where use in production does not affect the nature or value of the asset. Examples include land and the radio spectrum.
- b) Natural resources that are subject to replenishment and which can be used indefinitely providing their use is restricted. Examples include non-cultivated forests and fish.
- c) Natural resources that are not subject to replenishment (at least on a human time scale) and whose use in production eventually exhausts them. Examples include mineral and petroleum deposits.

In respect of the first two types, the ISWGNA and AEG were able to reach what they considered a satisfactory conclusion, but in the case of the third type they were unable to do so. Finally, however, the ISWGNA concluded that the revised SNA should recommend that:

- d) economic ownership of the natural resource resides with the lessor;
- e) the lessee pays royalties (i.e. rent) to the lessor to use the natural resource; and
- f) only the lessee, and not the lessor, is undertaking production.

III Reasons for inclusion in the Research Agenda

Several members of the ISWGNA felt that this was not an entirely satisfactory treatment and it should be put on the long-term research agenda.

For the most part, inanimate natural resources other than land are mainly used for extractive purposes. The lessor retains ownership of the resource, though this diminishes as extraction takes place. The lessee takes control of the resource, in the sense of having power to make decisions on the rate of extraction (possibly within some limits laid down by the lessor), but does not acquire ownership of the whole resource.

The Canberra II Group took the view that this implies ownership of the resource is divided between the lessor and the lessee, and recommended a treatment that was subsequently rejected by the AEG. This was to treat leases on sub-soil assets as financial leases. The argument being that when the lease allows the lessee to exploit a mineral or energy deposit over many years the lessee effectively becomes the economic owner of the deposit and the royalty payments can be viewed as payments of principal and interest on a financial lease. A refinement of the financial lease treatment is to have two loans: one corresponding to the value of the asset that is used up by the lessor (either by depreciation for a fixed asset or depletion for a sub-soil asset) and the other corresponding to the residual value of the asset when ownership reverts back to the lessee, but this received little support from the AEG.

This approach has the advantage of recording the value of the sub-soil asset on the balance sheet of the extractor (i.e. the lessee) that is consistent with commercial accounting and a financial asset on the balance sheet of the lessor equal to the present value of the expected future royalty payments and the remaining value of the resource at the end of the lease. A major practical problem with the financial lease approach for sub-soil assets is the need to make revisions to the flows as revisions are made to its estimated remaining value.

A second alternative is to have the extractor working as if "on contract" to the owner without taking ownership of the deposit. The lessee retains some of the resource rent, enough to cover costs and make some profit and hands the rest over to the lessor. However, this is not how commercial accounting is done where the deposits are recorded in the extractor's accounts. It also implies that the lessor is a producer, and so it would lead to government being recorded as engaged in mining activity. Furthermore, it does not provide an ideal interface to environmental accounting.

A third alternative is to treat the resource as inventories and to treat the lease as a contract for the sale of the resource. Hence, as the resource is extracted it would be recorded as a sale from the owner to the extractor. Appearances and disappearances of sub-soil assets would be made via the other changes in volume account as estimates of the volume of resource were revised. This would be a substantial change to the SNA, as there is currently no concept of inventories of non-produced assets and no concept of non-produced assets as intermediate inputs. Payments for the use of sub-soil assets would be treated as payments for a good, while payments for the use of resources not subject to depletion, such as land, would continue to be treated as rent.

IV **Timeline**

The topic should be put in one Long-Term Research Agenda

IV References

Apart from the first alternative, all the above options were considered at length during the preparation of the 1993 SNA. The first alternative is described in detail in Leases and Licences (Part 2), prepared by Anne Harrison, <http://unstats.un.org/unsd/nationalaccount/AEG/papers/m4LeasesPart2.pdf> and a worked example comparing it with the recommendation in 1993 SNA Rev. 1 can be found on the UNSD website.