

Workshop on measuring the non-observed economy (NOE) in National Accounts
25-27 April 2007, Bishkek, Kyrgyz Republic

SNA Update: Challenges in the Implementation of the SNA

By
Carol S. Carson
Project Manager, SNA Update

This paper should be considered part of the series of papers being presented in regional workshops and meetings for the purpose of exploring views on the implementation of the updated SNA. Earlier papers, by R. W. Edwards (Director, Statistics Department, IMF) and Ivo Havinga (Chief of Branch, Economics Statistics, UNSD), were presented at the APEX II meeting, in Korea (September 2006), and the ESCWA Workshop on National Accounts, in Egypt (December 2006). To facilitate the consolidation of views across regions, the author has purposefully (and with permission) drawn on these two papers and makes no claim of originality. The author of this paper thanks the IMF and UNSD for preparing the tables for the Central Asia countries.

A. Introduction

1. Now that the UN Statistical Commission has adopted a set of recommendations for the update of the *System of National Accounts 1993 (SNA 1993)*, attention will increasingly turn to questions about how and when countries will implement the updated *1993 SNA*. (For information about the update, see the author's "SNA Update: Background on the Process, Issues, and Recommendations" prepared for this workshop.) This paper seeks country views to help shape a strategy for the implementation. The Inter-secretariat Working Group on National Accounts (ISWGNA) has committed to presenting such a strategy, along with the volume incorporating the updated SNA framework, to the Statistical Commission in early 2008.

2. As background, the paper first summarizes some relevant information about the implementation of the *1993 SNA* by countries in Central Asia. In section C, the paper summarizes some reflections on the implementation approaches taken in the years since the *1993 SNA* was adopted. Section D presents some first thoughts about an implementation strategy going forward and poses some questions to bring out countries' views.

B. Progress on Implementation of the 1993 SNA in Central Asia

3. The UN Statistics Division (UNSD) monitors countries' implementation of the *1993 SNA* in terms of conceptual compliance and scope of reporting. The IMF uses its Data Quality Assessment Framework (DQAF) to assess the quality of national accounts and other macroeconomic statistics. The Annex describes these assessment efforts and then presents tables drawn from these efforts. In addition to showing these output aspects of implementation, the Annex samples some information on inputs of training and technical assistance in national accounts for the countries participating in this workshop.

4. The following are some highlights about the extent of implementation of the *1993 SNA* in Central Asia countries and about the training and technical assistance in national accounts they have received.

- Of the six countries from Central Asia participating in this workshop, three responded to UNSD for the 2005 National Accounts Questionnaire. All responded to one or more questionnaires during the 2002-2005 period.
- Based on a 2006 assessment conducted by UNSD, all six countries are regarded as implementing the *1993 SNA*. This means that they apply major *1993 SNA* concepts such as gross capital formation, volume estimates using a chaining procedure, social contributions, reinvested earnings in the rest-of-the-world account, and foreign workers' remittances.
- Of the six countries, three have been able to extend the scope of the national accounts statistics to milestone 2 or higher. This means that they are able to report, at least, GNI and other primary indicators in addition to basic indicators of GDP at current and constant prices. This percentage is roughly the same as for transition countries as a group.
- Data module Review of Standards and Codes (ROSC) assessments have been published for four countries participating in this workshop. The assessments are undertaken at the invitation of the country and in accordance with the IMF's Data Quality Assessment Framework (DQAF). Shortcomings in the area of accuracy and reliability were found in all four countries, and especially in two. The adequacy of resources for national accounts work was seen to be an issue in all four of the countries.
- National accounts seminars and workshops targeted to the transition countries have been conducted by the ECE. All six of the countries participating in this workshop have received IMF training on national accounts and quarterly national accounts during the period 1997-2006, concentrated in the early years. In the period since the *1993 SNA* was published, all six of the countries received technical assistance from the IMF in national accounts, although for three countries the assistance was in the first decade.

C. Implementation Following the Adoption of the 1993 SNA

5. To assist countries in implementing the *1993 SNA*, the member organizations of the ISWGNA developed a program of implementation. The program, submitted to the UN Statistical Commission in 1994, consisted of four key components:

- (i) publication of a series of manuals and handbooks;
- (ii) research to support the conceptual development of national and satellite accounting;
- (iii) organization of meetings, training seminars, and workshops in national accounts; and
- (iv) technical cooperation in individual countries.

Subsequently, a monitoring process was set up. From 1995 onwards, the ISWGNA reported to the Statistical Commission on activities under each of the four components.

6. In addition, at regular intervals, the ISWGNA reported to the Statistical Commission on the scope and compliance of countries' implementation of the *1993 SNA*. These reports are based on the harmonized National Accounts Questionnaire (NAQ), which was adopted by the Statistical Commission in 1999 for international transmission. The most recent of these reports was in 2005. (See the Report of the ISWGNA, E/CN.3/2005/4, available at <http://unstats.un.org/unsd/statcom/sc2005.htm> .)

7. At the request of the Statistical Commission, the 2005 report also included the results of a special survey on the impediments to implementation. The survey showed that, among the countries that do not implement the *1993 SNA*, data inadequacy is the main impediment, followed in importance by the lack of knowledge of the *1993 SNA* and inadequate number and continuity of staff.

8. Over the years, the most tangible outputs from the ISWGNA program were the handbooks and manuals to support the implementation. Collectively or individually, the member organizations of the ISWGNA prepared handbooks covering input-output table compilation, links to business accounting, policy use of national accounts, national accounting in economies in transition, tourism satellite accounts, nonprofit institutions, quarterly national accounts, producer and consumer price indices, non-observed economy, measurement of capital stocks, measurement of productivity, and inflation accounting. They also prepared classifications by purpose, namely the *Classification of the Functions of the Government (COFOG)*, *Classification of individual consumption by purpose (COICOP)*, and *Classification of outlays of production by purpose (COPP)*). In addition, the IMF published related international macroeconomic standards, all harmonized with the *1993 SNA*. These included the *Balance of Payments Manual*, the *Government Finance Statistics Manual*, the *Monetary and Financial Statistics Manual*, and the *External Debt Statistics: Guide for Compilers and Users*. (For an overview of these and related publications, see Carol. S. Carson and Lucie Laliberté, *Manuals on*

Macroeconomic Statistics: A Stocktaking to Guide Future Work, IMF Working Paper (2001) available at <http://www.imf.org/external/pubs/cat/longres.cfm?sk=15484.0> .)

9. In terms of training programs and technical cooperation in national accounts, each of the member organizations of the ISWGNA developed its own program of work. Early on in the implementation of the *1993 SNA*, it was noted by some members of the Statistical Commission that the resources available to the ISWGNA organizations were far outweighed by the assistance provided on a bilateral basis by developed countries and regional institutions. However, no reporting system was put in place to monitor the bilateral and regional assistance programs even though the overlap and duplication of the programs of bilateral donors and multilateral donors was recognized. In the second half of 1990s, a more comprehensive monitoring of bilateral and multilateral technical assistance and training was considered desirable, but it has proven to be elusive.

D. Towards a Strategy for Implementation of the Updated SNA

10. *Motivation and first thoughts.* By and large, it can be said that there was limited coordination in the *1993 SNA* implementation, and individual countries were left to decide on the scope and timing of implementation.¹ In addition, it has been argued that an internationally-led advocacy program could have assisted in coaxing national governments in committing additional resources and would have assisted in promoting stakeholder collaboration. Looking ahead to the challenges of implementing the updated SNA that will be embodied in the *1993 SNA, Rev. 1*, some members of the Statistical Commission have argued that a different approach is needed. They have called for a global strategy, including timeframes, for implementation to be formulated by the ISWGNA and then monitored over the years ahead. Such a strategy to guide and support country implementation efforts would be designed to take best advantage of international resources available and to promote international comparability.

11. Some first thoughts on an implementation strategy for the *1993 SNA, Rev. 1* have been brought forward. The basic idea is that an internationally-led implementation strategy could be formulated and adopted by the Statistical Commission. It could consist of five key components:

(i) publication of a series of manuals and handbooks for measuring newly introduced concepts like research and development expenditures, capital services, unfunded pension schemes as well as revisions to existing manuals on basic source data;

(ii) research to support the conceptual development of national and satellite accounting;

(iii) organization of meetings, training seminars, and workshops in national accounts;

(iv) technical cooperation in individual countries; and

¹ By contrast, in the European Union, a work program of implementation of the *1995 European System of Accounts (ESA)* became a legally binding process for the Member States.

(v) advocacy activities to assist the national statistical offices in generating additional resources and establishing stakeholder consultations.

12. It has been proposed that, starting in 2007, the member organizations of the ISWGNA, in collaboration with five Regional Commissions and perhaps others, should organize regional seminars to formulate regional implementation programs for the *1993 SNA Rev.1*. These seminars could facilitate countries providing direct input in how to tailor the above five components to their region. Moreover, these regional seminars could be catalysts for seeking collaboration with regional stakeholders and in mobilizing regional institutions such as regional development banks, regional training institutions, and other regional institutions.

13. Based on the outcome of the regional consultations and subsequent development of the regional implementation programs, a comprehensive monitoring process with integrated presentations for the components of the implementation strategy could be set up to track the progress of implementation. With web-based technology, it would be possible to develop centrally-based knowledge platforms for each of the five components of the overall implementation strategy.

14. **Workshop participants' views.** Participants' views are welcome on the current state of implementation, the key factors determining progress on implementation, and the way forward. The following questions are intended to stimulate the discussion:

- a. Are participants satisfied with the current state of implementation of the *1993 SNA* in their countries? Do the national accounts of their countries meet the needs of users and potential users? How and when should the new recommendations be introduced when work toward higher levels of the implementation milestones is still a challenge?
- b. Do participants agree with the views expressed in section C on the experience of implementing the *1993 SNA*? What lessons have been learned?
- c. Do participants agree with the proposals for the basic elements of an implementation strategy for the *1993 SNA, Rev. 1*? Since most of the elements were part of the program after the *1993 SNA*, in what ways should they be updated to fit the evolving situation?
- d. Does a regional orientation provide the possibility of more tailored and relevant assistance?
- e. How can the links between national accounts and other statistics be made to strengthen the statistical program? Can the International Comparison Program (ICP) be used more in the future to strengthen the national accounts? Can the synergies between national accounts and other macroeconomic standards, such as balance of payments, be further developed to encourage implementation of both?

- f. What subject areas should be considered for compilation guidance to support the implementation of the *1993 SNA, Rev.1* ?
- g. For meeting and workshops, are there topics that are not strictly about the SNA itself that should be covered? Are there modules, such as on data development, that should come early? Should modules on best practices in revisions be introduced?
- h. How can better coordination of technical assistance and training be achieved?

**Annex: Assessments of National Accounts
and
Technical Assistance and Training in National Accounts**

I. Assessments of National Accounts

1. The UN Statistical Commission, at its meeting in March 2001, decided that three main dimensions would be examined in monitoring implementation of the SNA:
 - a. Compliance with the *1993 SNA* concepts
 - b. Scope of the accounts
 - c. Quality issues.

2. To assess conceptual compliance, the UNSD uses a set of questions embodied in a survey² and other sources of information. See table 1 below for the 2006 assessment.

3. To assess scope of the national accounts, a benchmark developed by the ISWGNA, the Minimum Requirement Data Set (MRDS), is used.³ (This approach is subject to several limitations; see the Report of the ISWGNA to the Statistical Commission in 2004 (E/CN.3/2004/10). The MRDS is supplemented by application of the earlier “milestone” approach.⁴ See table 2 below in which the two are combined.

4. Quality is assessed using the IMF Data Quality Assessment Framework (DQAF).⁵ The DQAF recognizes prerequisites of quality (conditions within an agency in charge of producing statistics that have an impact on quality—the legal and institutional environment, resources, and quality awareness) and five dimensions of data quality:
 - 1.0 assurance of integrity;
 - 2.0 methodological soundness;
 - 3.0 accuracy and reliability;
 - 4.0 serviceability; and
 - 5.0 accessibility.

² See Annex 1 of the Report of the ISWGNA to the Statistical Commission in 2004 (E/CN.3/2004/10) at <http://unstats.un.org/unsd/statcom/sc2004.htm> .

³ See Annex II of the above-mentioned Report of the ISWGNA.

⁴ See Annex III of the above-mentioned Report of the ISWGNA.

⁵ For more information on the DQAF, see <http://dsbb.imf.org/Applications/web/dqrs/dqrsdqaf/> .

Quality assessments are conducted at the invitation of the country.⁶ See table 3 below for the published results for four of the countries participating in this workshop.

II. Technical Assistance and Training

5. A number of organizations have supported training and technical assistance in national accounts and related statistics in Central Asia. The ECE promotes the methodology of the *1993 SNA* in its member countries with a special emphasis on the West Balkan and Commonwealth of Independent States (CIS) countries. Among the ECE activities targeted to countries participating in this workshop were the following: Special Session on national accounts for transition countries in September 1999, the Joint ECE-OECD-CIS Meeting on national accounts for CIS countries in May 2001, the Seminar on national accounts for transition countries in April 2002, the Special Session on national accounts for transition countries in October 2003, and the Session on national accounts for CIS and other transition economies in April 2004. This activity, which is carried out in cooperation with Eurostat, OECD, UNSD, ESCAP, and CIS-Committee, is largely financed from the regular budget; the technical assistance is financed from extrabudgetary funds (UN Development Account Project on Strengthening Statistical Capacity of Central Asian Countries).

6. Tables 4 and 5, below, about IMF training and technical assistance, are but a sample of other efforts in national accounts and related areas. The work has been partly funded from the IMF's own resources, but also with significant funding being provided by the government of Japan and other donors.

⁶ For more details on data module ROSCs, see <http://dsbb.imf.org/Applications/web/dqrs/dqrsrosocs/>; or <http://www.imf.org/external/np/rosc/rosc.asp>

Table 1. Reporting and Conceptual Implementation of 1993 SNA by Member Countries

<i>Fiscal Years 2002 to 2005</i> <i>(Assessment in 2006, based on NAQ replies)</i>	<i>No. of Countries</i>	<i>SNA 1993 implemented (2006)</i>	<i>% of Total</i>	<i>Replied to NAQ once 2002-2005</i>	<i>% of Total</i>	<i>Replied to NAQ 2005</i>	<i>% of Total</i>
UN Member Countries	192	101	53%	149	78%	117	61%
Developed ¹	37	35	95%	36	97%	35	95%
Transition Economies ²	19	19	100%	19	100%	16	84%
Developing	136	47	35%	94	69%	66	49%
Africa	53	9	17%	22	42%	14	26%
Caribbean and Latin America	33	19	58%	31	94%	23	70%
Western Asia	15	7	47%	14	93%	11	73%
Eastern, Southeastern, Southern Asia	23	10	43%	17	74%	15	65%
Oceania	12	2	17%	10	83%	3	25%
Central Asia workshop participants²	6	6	100%	6	100%	3	50%

Source: Information provided by UNSD, March 2007.

¹ Europe, Northern America, Japan, Australia, New Zealand

² CIS and South-Eastern Europe

² Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

Table 2. Availability of Tables of the “Minimum Requirement Data Set” and “Milestone” Levels 1 and 2

<i>Fiscal Years 2002 to 2005 (Assessment in 2006, based on NAQ replies)</i>	<i>No. of Countries</i>	<i>Tables of the Minimum Requirement Data Set</i>							<i>Six or more tables</i>	<i>% of Total</i>	<i>Seven tables</i>	<i>% of Total</i>	<i>Milestone Level</i>			
		<i>1.1</i>	<i>1.2</i>	<i>2.1</i>	<i>2.2</i>	<i>2.3</i>	<i>1.3/ 4.1</i>	<i>4.2</i>					<i>1 or higher</i>	<i>% of Total</i>	<i>2 or higher</i>	<i>% of Total</i>
UN Member Countries	192	132	109	135	129	98	114	65	88	46%	59	31%	131	68%	113	59%
Developed	37	35	34	35	33	32	33	26	31	84%	25	68%	35	95%	33	89%
Transition Economies	19	18	13	19	18	10	11	10	10	53%	10	53%	18	95%	11	58%
Developing	136	79	62	81	78	56	70	29	47	35%	24	18%	78	57%	69	51%
Africa	53	19	17	21	19	14	16	7	11	21%	7	13%	19	36%	16	30%
Caribbean and Latin America	33	25	19	24	24	18	24	11	17	52%	10	30%	25	76%	24	73%
Western Asia	15	13	10	14	13	13	12	3	8	53%	2	13%	13	87%	12	80%
Eastern, Southeastern, Southern Asia	23	17	13	16	16	9	14	6	9	39%	4	17%	17	74%	14	61%
Oceania	12	5	3	6	6	2	4	2	2	17%	1	8%	4	33%	3	25%
Central Asia workshop countries	6	5	3	6	6	3	3	3	3	50%	3	50%	5	83%	3	50%

Source: Information provided by UNSD, March 2007

For regional composition, see table 1.

Notes:

Minimum Requirement Data Set

Table 1.1 Expenditures on the GDP in current prices

Table 1.2 Expenditure on the GDP in constant prices

Table 2.1 Value added and GDP in current prices by industry

Table 2.2 Value added and GDP in constant prices by industry

Table 2.3 Value-added components by industry, current prices/employment by industry

Table 1.3/4.1 Accounts for the total economy

Table 4.2 Rest of the world account (until net lending)

Milestones

1 Basic indicators of GDP: final expenditures on GDP at current or constant prices, GDP by industry at current or constant prices

2 Gross national income and other primary indicators: External account of primary incomes and current transfers; capital and financial accounts of the rest of the world

Table 3. Summary of ROSC Assessments in National Accounts in Selected Countries

	Azerbaijan	Kazakhstan 1/	Kyrgyz Rep.	Tajikistan
0. Prerequisites of Quality				
0.1 Legal and institutional environment	O	O	O	LO
0.2 Resources	LO	LO	LO	LO
0.3 Relevance	LO	LO	O	O
0.4 Quality awareness	LO	O	O	LO
1. Integrity				
1.1 Professionalism	O	O	O	LO
1.2 Transparency	LO	LO	O	LO
1.3 Ethical standards	O	O	O	O
2. Methodological Soundness				
2.1 Concepts and definitions	O	O	O	O
2.2 Scope	LO	LO	O	LNO
2.3 Classification/sectorization	O	O	LO	LNO
2.4 Basis for recording	LO	LO	O	LNO
3. Accuracy and Reliability				
3.1 Source data	LO	LO	LO	LO
3.2 Assessment of source data	O	LO	LO	LO
3.3 Statistical techniques	LNO	LO	LO	LNO
3.4 Assessment/validation of intermediate data and statistical outputs	O	LO	O	O
3.5 Revision studies	O	O	O	O
4. Serviceability				
4.1 Timeliness and periodicity	O	O	O	O
4.2 Consistency	O	LNO	LO	LO
4.3 Revision policy and practice	O	O	O	O
5. Accessibility				
5.1 Data accessibility	LO	O	O	LO
5.2 Metadata accessibility	O	LO	O	LNO
5.3 Assistance to users	O	O	O	LO

Notes:

O = Practice Observed; **LO** = Practice Largely Observed; **LNO** = Practice Largely Not Observed;
NO = Practice Not Observed;

1/ The assessment for Kazakhstan reflects the findings of the mission undertaken in March 2003. There has been a subsequent reassessment, but it has not been yet published.

Table 4. Participants from Central Asian Countries in National Accounts Courses
Through the IMF Institute Training Program, CY 1997-2006¹

Participant Country	Course Location	Course ID ^{1/}	Calendar Year										Total
			1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	
Total			7	5	1	5	0	1	6	0	0	1	26
Azerbaijan	Austria ^{2/}	NAS	1	1	-	1	-	-	-	-	-	-	3
		QNA	-	-	-	-	-	-	1	-	-	-	1
Kazakhstan	Austria ^{2/}	NAS	1	1	-	1	-	-	-	-	-	-	3
		QNA	-	-	-	-	-	-	1	-	-	-	1
	Washington	NAS	1	-	1	-	-	-	-	-	-	-	2
		QNA	-	-	-	-	-	1	-	-	-	-	1
Kyrgyz Rep.	Austria ^{2/}	NAS	1	1	-	1	-	-	-	-	-	-	3
		QNA	-	-	-	-	-	-	1	-	-	-	1
Tajikistan	Austria ^{2/}	NAS	1	-	-	1	-	-	-	-	-	-	2
		QNA	-	-	-	-	-	-	1	-	-	-	1
Turkmenistan	Austria ^{2/}	NAS	1	1	-	-	-	-	-	-	-	-	2
		QNA	-	-	-	-	-	-	1	-	-	-	1
Uzbekistan	Austria ^{2/}	NAS	1	1	-	1	-	-	-	-	-	-	3
		QNA	-	-	-	-	-	-	1	-	-	-	1
	Washington	NAS	-	-	-	-	-	-	-	-	-	1	1

Source: PATS System, IMF Institute

1/ Includes National Account Statistics (NAS) and Quarterly National Accounts (QNA)

2/ Refers to Joint Vienna Institute

Table 5. Technical Assistance in Statistics Provided by IMF Statistics Department
(field time, person-years)

Country/Region	Calendar Year Period	Topic				Total
		National Accounts	Real Sector	Multi- sector	Other	
Azerbaijan	1993-2003	0.423	0.023		1.280	1.726
	2004	0.243			0.042	0.285
	2005	0.127			0.077	0.204
	2006	0.015			0.142	0.157
	<i>Total</i> 1993-2006	<i>0.808</i>	<i>0.023</i>	<i>0.000</i>	<i>1.541</i>	<i>2.372</i>
Kazakhstan, Republic of	1993-2003	0.141	0.145	0.369	1.121	1.776
	2004					0.000
	2005					0.000
	2006	0.088		0.057		0.145
	<i>Total</i> 1993-2006	<i>0.229</i>	<i>0.145</i>	<i>0.426</i>	<i>1.121</i>	<i>1.921</i>
Kyrgyz Republic	1993-2003	0.168		3.050	0.908	4.126
	2004			0.046	0.161	0.207
	2005					0.000
	2006					0.000
	<i>Total</i> 1993-2006	<i>0.168</i>	<i>0.000</i>	<i>3.096</i>	<i>1.069</i>	<i>4.333</i>
Tajikistan	1993-2003	0.042			0.646	0.688
	2004			0.027		0.027
	2005					0.000
	2006				0.114	0.114
	<i>Total</i> 1993-2006	<i>0.042</i>	<i>0.000</i>	<i>0.027</i>	<i>0.760</i>	<i>0.829</i>
Turkmenistan	1993-2003	0.177			0.767	0.944
	2004					0.000
	2005					0.000
	2006					0.000
	<i>Total</i> 1993-2006	<i>0.177</i>	<i>0.000</i>	<i>0.000</i>	<i>0.767</i>	<i>0.944</i>
Uzbekistan	1993-2003	0.130	0.104		0.554	0.788
	2004	0.112				0.112
	2005					0.000
	2006					0.000
	<i>Total</i> 1993-2006	<i>0.242</i>	<i>0.104</i>	<i>0.000</i>	<i>0.554</i>	<i>0.900</i>