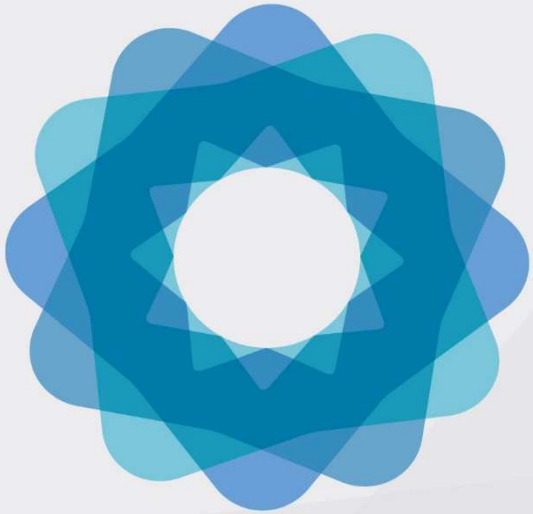

System of Environmental Economic Accounting

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COMBINED PRESENTATIONS

Leila Rohd-Thomsen

United Nations Statistics Division

(Based on a presentation by Sjoerd Schenau, Statistics Netherlands)

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United Nations

Content

- Integrating information with SEEA
- Key areas of integration
- Combined presentations
  - > Monetary and physical supply and use
  - > Asset accounts and supply and use
- Exercise – Combined presentation for water

Integrating information with SEEA

- A primary motivation for SEEA-CF is effective integration of environmental and economic data
- Various SEEA-CF accounts capture different types of information
- Need to understand how the information in these accounts link together into one integrated system of information
- A key **strength of the SEEA** is the consistent application of accounting rules, principles and boundaries in the organization of physical and monetary information

Four key areas of integration

1. Linking flows of goods and services in physical and monetary terms
2. Linking changes in the stock of environmental assets with use of extracted natural resources as inputs to economic production, consumption and accumulation.
3. Connecting the measures of production, consumption and accumulation in monetary terms and measures of flows of income between sectors
4. Identifying specific economic activities undertaken for environmental protection or resource management purposes

Integrating physical & monetary SUT

Supply table in monetary terms							
	Production --Industries (ISIC)--				*Rest of the world*		
Products	**OUTPUT**				**IMPORTS**		
Use table in monetary terms							
	Int. Consumption- --Industries (ISIC)--	*Final Consumption Households*	*Governments*	*Accumulation*	*Rest of the world*		
Products	**INTERMEDIATE CONSUMPTION**	**FINAL CONSUMPTION EXPENDITURE**		**GCF**	**EXPORTS**		
Supply table in physical terms							
	Production ; Generation of Residuals -- Industries (ISIC) --	*Households*		*Accumulation*	*Rest of the world*	*From the environment*	
Natural Inputs						**FLOWS FROM ENVIRONMENT**	
Products	**OUTPUT**				**IMPORTS**		
Residuals	**RESIDUALS GENERATED**	**RESIDUALS GENERATED**		**LANDFILL / SCRAPPING**	**RESIDUALS RECEIVED**	**RESIDUALS RECOVERED**	
Use table in physical terms							
	Int. Consumption; Use of natural inputs; collection of residuals --Industries (ISIC)--	*Household Final Consumption*		*Accumulation*	*Rest of the world*	*To the environment*	
Natural Inputs	**EXTRACTION FROM ENVIRONMENT**						
Products	**INTERMEDIATE CONSUMPTION**	**FINAL CONSUMPTION**		**GCF**			
Residuals	**COLLECTION /TREATMENT OF RESIDUALS**			**LANDFILL**	**RESIDUALS SENT**	**RESIDUALS TO ENVIRNMENT**	

Integrating physical & monetary SUT

Supply table in monetary terms						
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Residuals	COLLECTION /TREATMENT OF RESIDUALS			LANDFILL	RESIDUALS SENT	RESIDUALS TO ENVIRNMENT

Same product classification

Same groupings of economic units

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Connecting asset accounts and SUT

		Industries	Households	Govern-ments	Rest of the world	ASSET ACCOUNTS	
						PRODUCED ASSETS	ENVIRONMENTAL ASSETS
						OPENING STOCK	
Monetary SUT	**Product (Supply)**	Output			Imports		
	Product (Use)	Intermediate consumption	Final consumption expenditure	Final consumption expenditure	Exports	Gross capital	
Physical SUT	**Natural Inputs (Supply)**						**EXTRACTED NATURAL RESOURCES**
	Natural Inputs (Use)	Inputs of natural resources					
	Products (Supply)	Output			Imports		
	Products (Use)	Intermediate consumption	Final consumption		Exports	Gross capital formation	
	Residuals (Supply)	Residuals generated by industry	Residuals generated by households		Residuals received from rest of world	Residuals from scrapping & demolition of produced assets; emissions from landfill	
	Residuals (Use)	Collection and treatment of waste and residuals			Residuals sent to rest of world	Accumulation of waste in controlled landfill	**RESIDUAL FLOWS TO THE ENVIRONMENT**
						Other changes in volume of asset	
						Revaluations	
						CLOSING STOCK	

Technical Notes

- Set of seven technical notes on specific modules
  - > EGSS, EPEA, MFA, Air Emissions, Water, Energy & Land
- Core accounts: simplified version of the SEEA CF tables – a minimum set
- Combined presentation tables: Key information in one table for dissemination and calculation of indicators
- Compilation guidance

Example: Energy table

		Industries (by ISIC)							Rest of the World	Final Consumption	TOTAL
		Agriculture Forestry & Fishery (ISIC A)	Mining & Quarrying (ISIC B)	Manufacturing (ISIC C)	Electricity, gas, steam & air conditioning supply (ISIC D)	Transport-ation & Storage (ISIC H)	Other Industries	**Total Industry**		Households	
MONETARY FLOWS	**1. Supply of energy and non-energy products (currency):**										
	Total energy products	113	17203	6322	19403			43041	43375		86416
	Total (energy & non-energy products)	59780	72669	38288	39765	304401	6608640	7123543			
	2. Intermediate consumption and final use (currency):										
	Total energy products	10081	24519	20512	8726	14293	256077	334208		63362	397570
	Total (energy & non-energy products)	51121	62143	32742	18358	269338	5869950	6303652		491935	6795587
	3. Gross value added (currency)	8659	10526	5546	21407	35063	738690	819891			819891
	4. Employment (thousands)	145	148	78	165	374	9921	10831			10831
PHYSICAL FLOWS	**5. Total energy from natural inputs (from the environment) (PJ)**										
	of which: from renewable sources										
	6. Supply of energy products (PJ):										
	Coal								225		225
	Peat and peat products										
	Oil shale / oil sands										
	Natural gas		395		369			764			1528
	Oil		721	347				1068	930		3066
	Biofuels	5			2			7			14
	Waste	39		55				94	17		205
	Electricity				212			212	22		446
	Heat				79			79			158
	Nuclear fuels and other fuels										
	7. End use of energy products (PJ):										
	Coal	2		17				20	2	1	42
	Peat and peat products										
	Oil shale / oil sands										
	Natural gas	2		39			12	53	201	26	333
	Oil	34	2	326		621	49	1032	441	102	2607
	Biofuels				2			2		5	9
	Waste	3		4	37		1	45	1	33	124
	Electricity	7	1	22	50	10	15	105	100	29	339
	Heat	2		11	2	1	19	35		44	114
	Nuclear fuels and other fuels										
	8. Net domestic energy use (PJ)										
ENERGY ASSETS	**9. Closing stocks of natural energy resources (currency; Class A)**		111750								
	10. Closing stocks of natural energy resources (PJ; Class A)		244000								
	11. Depletion of natural energy resources (PJ)		1161								
	12. Gross fixed capital formation for energy extraction and supply (currency)		27030		4230						

EXERCISE

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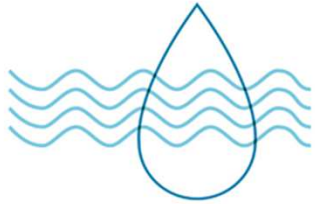
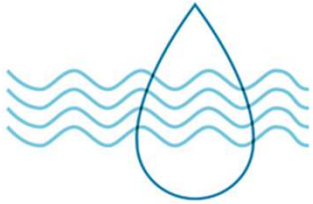
Exercise: Combined presentation for water



Environmental accountants should not only compile the accounts, they should also be able to present the data to users:

- Please assess the core table for water. Evaluate the main information that can be derived from the table
- Work in a group. Discuss the results. What are the 3 most important messages you deduce from this data? What indicators could be calculated from this table?
- Prepare a short presentation where you present some important messages and indicators from the table

Exercise: Combined presentation for water



		Industries (by ISIC)								Rest of the World	Actual Final Consumption		TOTAL
		Agriculture, Forestry & Fishery (ISIC A)	Mining and Quarrying (ISIC B)	Manufactur-ing (ISIC C)	Electricity, gas, steam & air condition-ing supply (ISIC D)	Water collection, treatment & supply (ISIC 36)	Sewerage (ISIC 37)	Other Industries	**Total Industry**		Households	Government	
MONETARY FLOWS	**1. Intermediate Consumption and Final Use (currency):**												
	Natural Water (CPC 1800)	406	193	450	88	1 004	100	1 229	3 470	4	3 074	60	**6 608**
	Sewerage Services (CPC 941)	3	69	160	1	13	1	1 406	1 653	3	3 316	66	**5 038**
	Other Products	145 597	38 454	89 727	180 683	2 360	1 718	5 842 990	6 301 529		605 817	50 096	**6 957 442**
	2. Gross Value Added (currency)	24 731	42 327	98 763	14 997	3 193	3 217	632 663	819 891				**819 891**
	3. Employment	371	663	1 548	61	41	43	8 204	10 931				**10 931**
PHYSICAL FLOWS	**4. Supply of water (million m3):**												
	Distribution of abstracted water	0	0	0	0	378	0	0	378	0			**378**
	Wastewater to treatment	18	35	82	6	1	0	49	192	0	236		**427**
	Total return flows of water	65	9	21	400	47	484	1	1 026		5		**1 031**
	5. Use of Water (million m3):												
	Total Abstraction of water	108	34	80	404	440	100	2	1 169				**1 169**
	of which: Own use of abstracted water	108	34	80	404	3	100	2	733		11		**744**
	Use of distributed water*	51	26	60	4	0	0	51	191	0	240		**431**
	TOTAL USE OF WATER*	159	60	140	408	3	100	53	924		251		**1 175**
	6. Water Consumption (million m3)	76	13	30	3	2	1	4	128		10		**138**
	7. Total Actual Renewable Water Resources (TARWR) (million m3)												
FIXED ASSETS FOR WATER	**8. Gross fixed capital formation (currency):**												
	For water supply	582	3	13	819	2 872			4 289				**4 289**
	For water sanitation						2 874		2 874				**2 874**
	9. Closing stocks of fixed assets for water supply (currency)	6 112	13	71	9 871	25 347		17	41 431				**41 431**
	10. Closing stocks of fixed assets for water sanitation (currency)						37 457		37 457		10		**37 467**

** Includes re-used water (distributed re-use) and excludes wastewater received (for treatment)*

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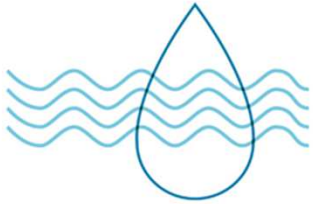
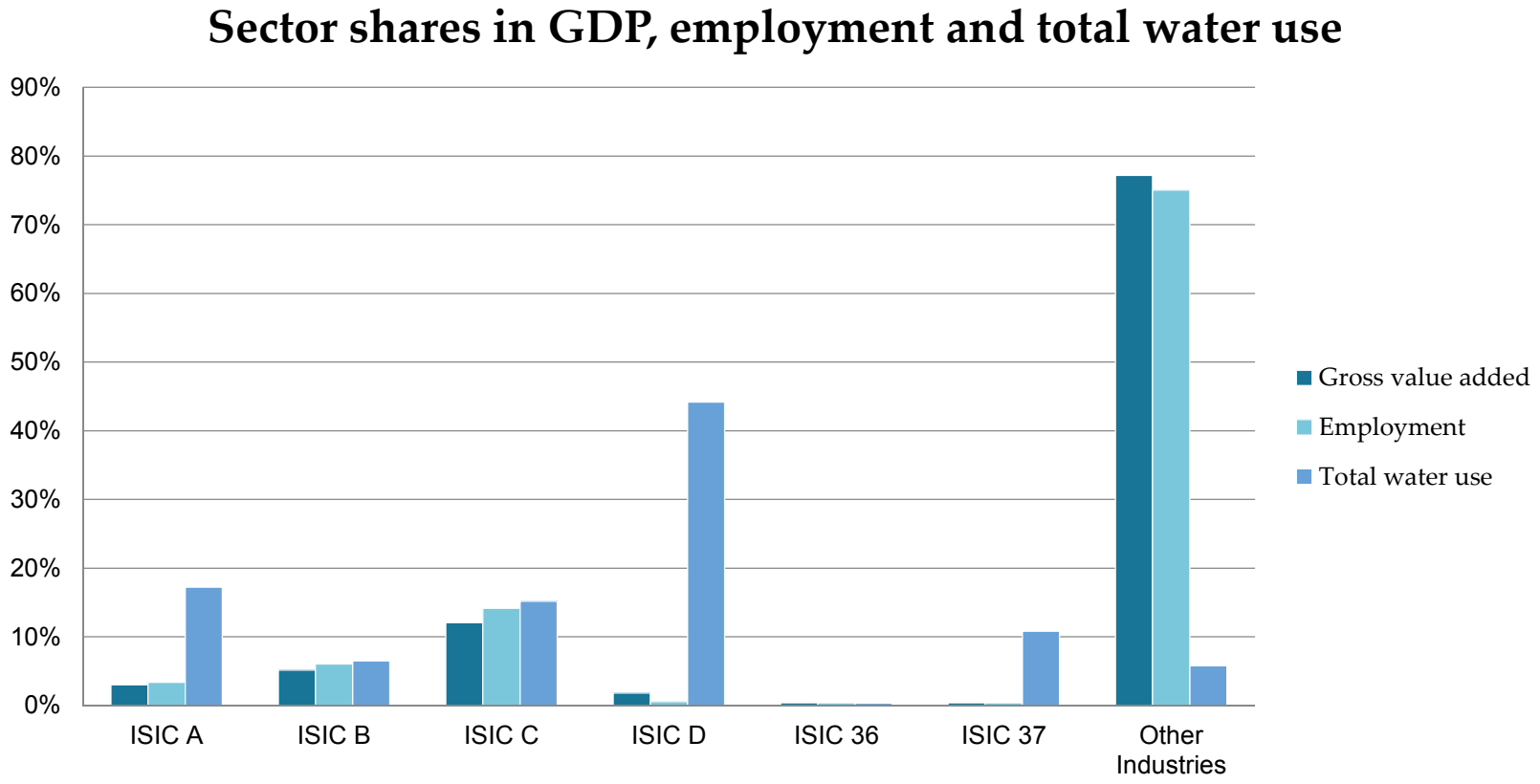
Key information for water





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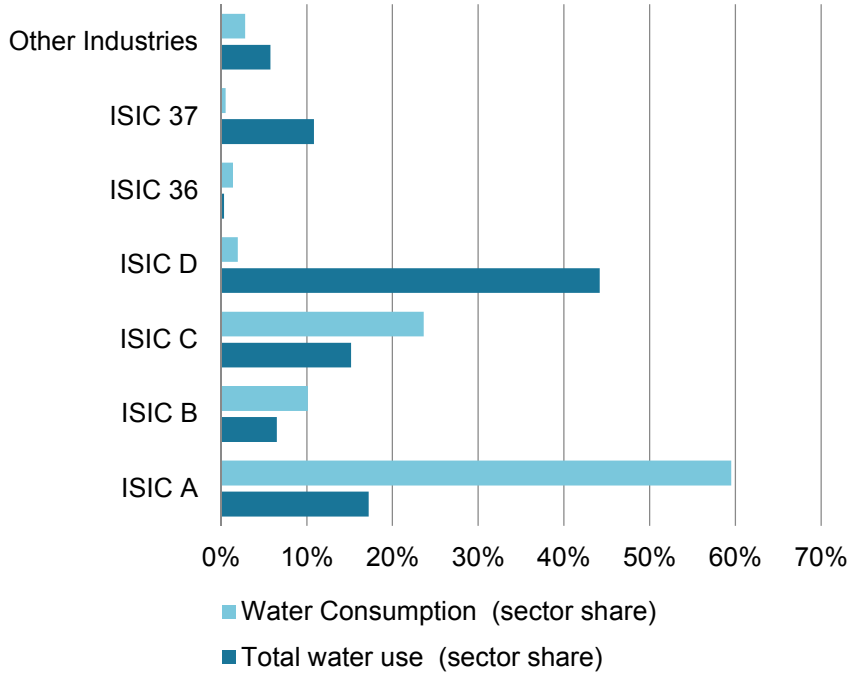
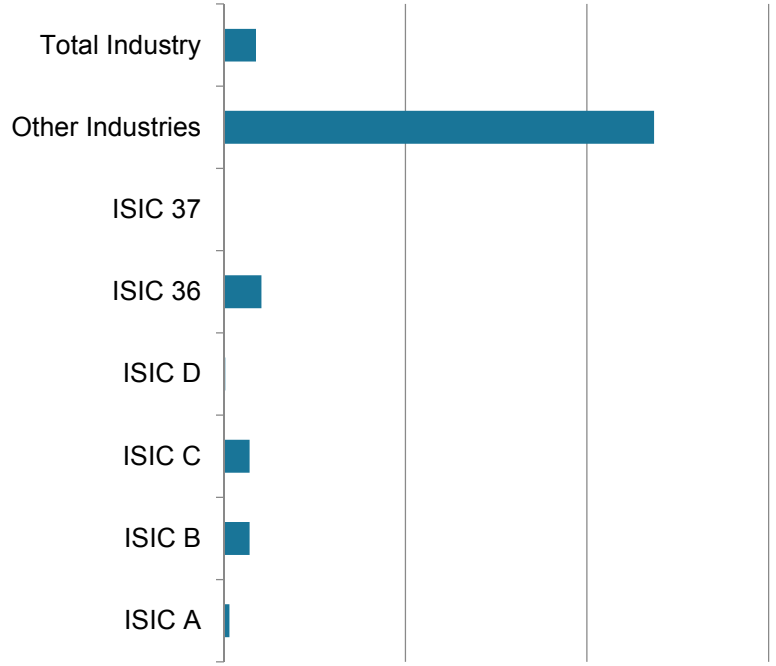
Key information for water

Total water use vs. water consumption



Water productivity (GVA/total water use)



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THANK YOU

seea@un.org