



Combined Presentations

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Integration within SEEA-CF

- 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**
- **Strength of SEEA-CF:** consistent application of accounting rules, principles and boundaries in organisation of physical and monetary information



Four Key Areas of Integration

- I. Linking flows of goods and services in physical and monetary terms
- II. Linking changes in the stock of environmental assets with use of extracted natural resources as inputs to economic production, consumption and accumulation.
- III. Connection between the measures of production, consumption and accumulation in monetary terms and measures of flows of income between sectors
- IV. Identifying specific economic activities undertaken for environmental protection or resource management purposes

I. Integration of Supply and Use Tables in Physical and Monetary Terms (1/2)

Supply table in monetary terms

	Production (incl. household production on own account) Industries – classified by ISIC	Flows from the Rest of the World	Total
Products	Output	Imports	
Total			

Use in monetary terms

	Intermediate consumption Industries – classified by ISIC	Final consumption Households Government	Accumulation	Flows to the Rest of the World	Total
Products	Intermediate consumption	Household final consumption expenditure Government final consumption expenditure	Gross capital formation	Exports	
Total					

Supply table in physical terms

	Production; Generation of residuals Industries (including household production on own account) – classified by ISIC	Generation of residuals by households	Accumulation	Flows from the Rest of the World	Flows from the Environment	Total
Natural inputs					Flows from the environment	
Products	Output			Imports		
Residuals	Residuals generated by industry	Residuals generated by household final consumption	Residuals from scrapping & demolition of produced assets Emissions from controlled landfill sites	Residuals received from rest of the world	Residuals recovered from the environment	
Total						

Use in physical terms

	Intermediate consumption; Use of natural inputs; Collection of residuals Industries – classified by ISIC	Final consumption	Accumulation	Flows to the Rest of the World	Flows to the Environment	Total
Natural inputs	Extraction of natural inputs					
Products	Intermediate consumption	Household final consumption	Gross capital formation	Exports		
Residuals	Collection and treatment of residuals		Accumulation of waste in controlled landfill sites	Residuals sent to the rest of the world	Residual flows to the environment	
Total						

I. Integration of Supply and Use Tables in Physical and Monetary Terms (2/2)

Same Groupings of Economic Units

Same Product Classification:										
	Production (incl. household production on own account) Industries – classified by ISIC					Flows from the Rest of the World			Total	
→ Products	Output					Imports				
Total										
Use in monetary terms		Intermediate consumption		Final consumption		Accumulation	Flows to the Rest of the World		Total	
	Industries – classified by ISIC	Households	Government							
→ Products	Intermediate consumption	Household final consumption expenditure	Government final consumption expenditure	Gross capital formation		Exports				
Total										
Supply table in physical terms		Production; Generation of residuals			Accumulation	Flows from the Rest of the World	Flows from the Environment	Total		
	Industries (including household production on own account) – classified by ISIC	Generation of residuals by households								
Natural inputs										
→ Products	Output					Imports				
Residuals	Residuals generated by industry	Residuals generated by household final consumption		Residuals from scrapping & demolition of produced assets Emissions from controlled landfill sites		Residuals received from rest of the world	Residuals recovered from the environment			
Total										
Use in physical terms		Intermediate consumption; Use of natural inputs; Collection of residuals		Final consumption	Accumulation	Flows to the Rest of the World	Flows to the Environment	Total		
	Industries – classified by ISIC									
Natural inputs	Extraction of natural inputs									
→ Products	Intermediate consumption	Household final consumption		Gross capital formation		Exports				
Residuals	Collection and treatment of residuals			Accumulation of waste in controlled landfill sites		Residuals sent to the rest of the world	Residual flows to the environment			
Total										

Same Industry Classification

II. Integration of Asset Accounts and Supply and Use Tables (1/2)

				Accumulation Column			Environment Column		
Supply table in monetary terms									
	Production (incl. household production on own account) Industries – classified by ISIC				Flows from the Rest of the World			Total	
Products	Output					Imports			
Total									
Use in monetary terms									
	Intermediate consumption		Final consumption		Accumulation	Flows to the Rest of the World			Total
	Industries – classified by ISIC		Households	Government					
Products	Intermediate consumption	Household final consumption expenditure	Government final consumption expenditure		Gross capital formation	Exports			
Total									
Supply table in physical terms									
	Production; Generation of residuals			Accumulation	Flows from the Rest of the World	Flows from the Environment		Total	
	Industries (including household production on own account) – classified by ISIC		Generation of residuals by households						
Natural inputs						Flows from the environment			
Products	Output					Imports			
Residuals	Residuals generated by industry	Residuals generated by household final consumption		Residuals from scrapping & demolition of produced assets Emissions from controlled landfill sites	Residuals received from rest of the world	Residuals recovered from the environment			
Total									
Use in physical terms									
	Intermediate consumption; Use of natural inputs; Collection of residuals		Final consumption		Accumulation	Flows to the Rest of the World	Flows to the Environment		Total
	Industries – classified by ISIC								
Natural inputs	Extraction of natural inputs								
Products	Intermediate consumption		Household final consumption		Gross capital formation	Exports			
Residuals	Collection and treatment of residuals				Accumulation of waste in controlled landfill sites	Residuals sent to the rest of the world	Residual flows to the environment		
Total									

II. Integration of Asset Accounts and Supply and Use Tables (2/2)

						Asset accounts	
						(Physical and monetary terms)	
		Industries	Households	Government	Rest of the world	Produced assets	Environmental assets
						Opening stock	
Monetary supply and use table	Product-supply	Output			Imports		
	Product-use	Intermediate consumption	Household final consumption expenditures	Government final consumption expenditures	Exports	Gross capital	
Physical supply and use table	Natural inputs-supply						Extracted natural resources
	Natural inputs-use	Inputs of natural resources					
	Product-supply	Output			Imports		
	Product-use	Intermediate consumption	Household final consumption		Exports	Gross capital formation	
	Residuals-supply	Residuals generated by industry	Residuals generated by household final consumption		Residuals received from the rest of the world	Residuals from scrapping and demolition of produced assets; emissions from controlled landfills	
	Residuals-use	Collection and treatment of waste and other residuals			Residuals sent to the rest of the world	Accumulation of waste in controlled landfills	Residuals flowing to the environment ^a
						Other changes in volume of assets (e.g., natural growth, discoveries, catastrophic losses)	
						Revaluations	
						Closing stock	



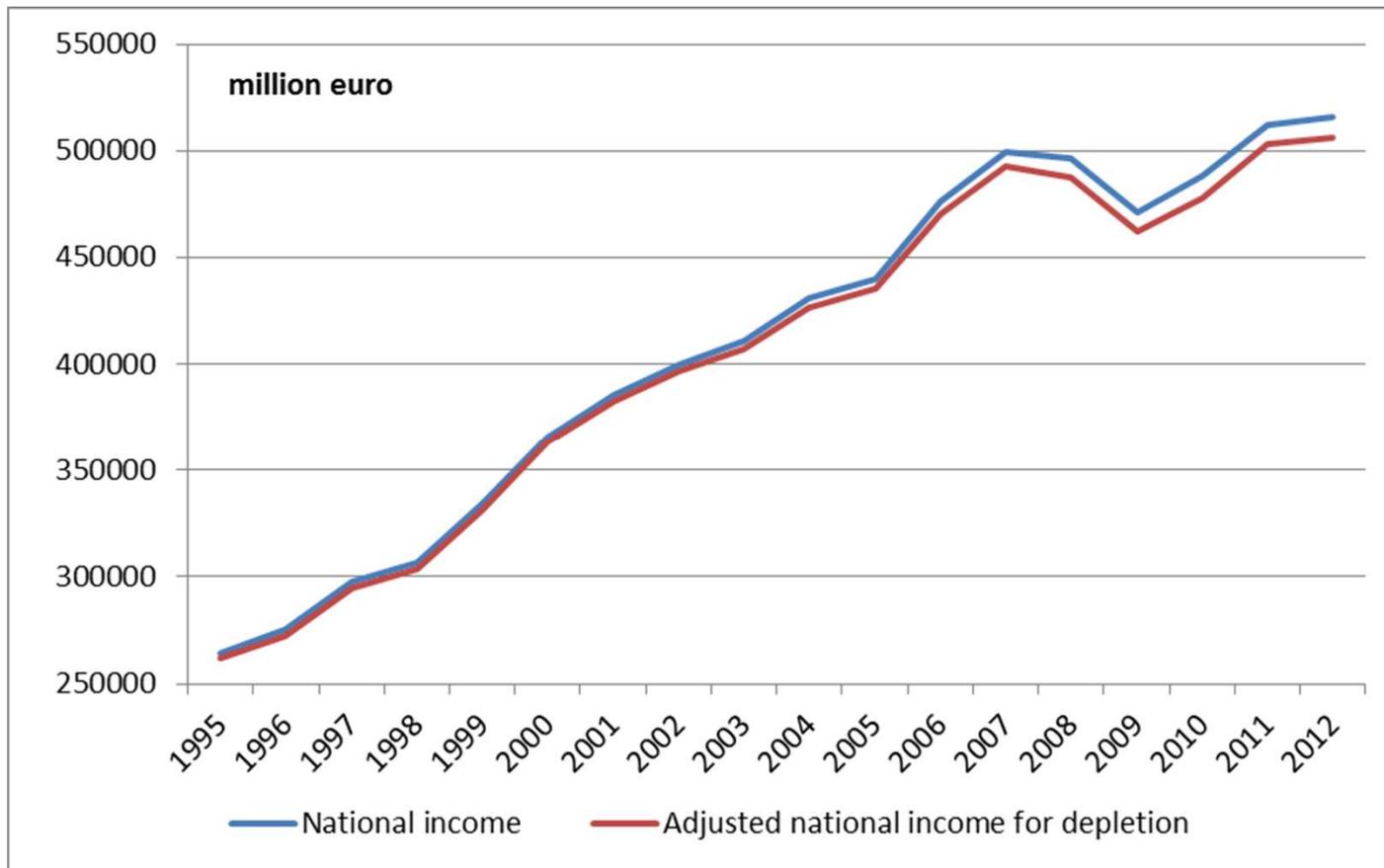
III. The Sequence of Economic Accounts

- SNA: Sequence of economic accounts
- Derivation of balancing items (GDP, GNI etc.)
- SEEA-CF Sequence of economic accounts: Balancing items can be defined so as to take into account the **depletion of natural resources**

→ **Calculation of depletion adjusted net value added, depletion adjusted net operating surplus, etc.**



Adjusted National Income for Depletion





Questions ?



Exercise

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

- Please assess the two core tables for water for 2005 and 2010. Evaluate the main changes that occurred between these two years.
- Work in a group. Discuss the results. What are the 5 most important messages you deduce from this data? What indicators could be calculated from these tables?
- Prepare a short presentation where you present the 5 most important messages and also explain why you think this is important.



Water Core Table for 2005

	Industries (by ISIC categories)						Rest of the world	Taxes less subsidies on products, trade and transport margins	Actual final consumption			Total	
	ISIC 1-3	ISIC 5-33, 41-43	ISIC 35	ISIC 36	ISIC 37	ISIC 38,39, 45-99			Total industry	Households	Government		Capital Formation
1. Supply of water products (Currency units)													
Natural water		13	1	8 570	14	7	8 605	1	- 2				8 604
Sewerage services					5 022		5 022	2	14				5 038
2. Total supply of products	170 737	267 143	19 769	8 570	5 036	6 478 288	6 949 543						
3. Intermediate consumption and final use (Currency units)													
Natural water	596	643	58		40	1 029	2 366	4		6 174	60		8 604
Sewerage services	3	229	1	13	1	1 406	1 653	3		3 316	66		5 038
Other products	145 597	125 181	12 683	2 360	1 718	5 842 990	6 130 529			605 817	50 096		
4. Gross value added (Currency units)	24 541	141 090	7 027	6 197	3 277	632 863	814 995						814 995
5. Employment (1000 fte)	371	2 211	61	41	43	8 204	10 931						10 931
6. Supply of water (Millions m ³)													
Supply of water to other economic units				381			381						381
Supply of waste water for treatment	27	88	4	9		48	176			236			411
Total returns	64	29	400	47	417	1	958			5			963
7. Use of water (Millions m ³)													
Total Abstraction	208	115	404	465	10	2	1 204			11			1 215
Use of water received from other economic units	39	45	4		3	51	141			240			381
Use of waste water for treatment					411		411						411
8. Water consumption (Millions m ³)	156	42	4	28	7	5	242			10			252
9. Gross fixed capital formation (Currency units)													
For water supply	582	16	819	2 872			4 289						4 289
For water sanitation					2 874		2 874						2 874
10. Closing Stocks of fixed assets for water supply (Currency units)	6 112	84	9 871	25 347		17	41 431						41 431
11. Closing Stocks of fixed assets for water sanitation (Currency units)					37 457		37 457						37 457



Water Core Table for 2010

	Industries (by ISIC categories)							Rest of the world	Taxes less subsidies on products, trade and transport margins	Actual final consumption			Total
	ISIC 1-3	ISIC 5-33, 41-43	ISIC 35	ISIC 36	ISIC 37	ISIC 38,39, 45-99	Total industry			Households	Government	Capital Formation	
1. Supply of water products (Currency units)													
Natural water		27	2	8 444	16	7	8 496	1	- 4				8 493
Sewerage services					4 939		4 939	5	16				4 960
2. Total supply of products	205 274	271 086	17 420	8 444	4 955	7 237 420	7 744 598						
3. Intermediate consumption and final use (Currency units)													
Natural water	322	693	75		42	1 222	2 354	3		6 074	62		8 493
Sewerage services	4	245	1	12	1	1 506	1 769	4		3 116	71		4 960
Other products	170 421	128 663	11 781	2 302	2 062	6 418 280	6 733 507			655 817	61 096		
4. Gross value added (Currency units)	34 527	141 485	5 563	6 131	2 850	816 412	1 006 968						1 006 968
In prices of year 2005	29 260	127 464	4 598	5 677	2 639	722 488	892 126						
5. Employment (1000 fte)	335	2 018	59	45	49	8 673	11 179						11 179
6. Supply of water (Millions m ³)													
Supply of water to other economic units				350			350						350
Sup	31	112	3	49		51	246			203			449
Total returns	57	23	360	47	452	1	940			5			945
7. Use of water (Millions m ³)													
Total Abstraction	211	144	362	465	9	3	1 194			5			1 199
Use of water received from other economic units	23	53	5		3	54	138			212			350
Use					449		449						449
8. Water consumption (Millions m ³)	146	62	4	19	8	5	245			9			254
9. Gross fixed capital formation (Currency units)													
For water supply	723	28	612	3 742			5 105						5 105
For water sanitation					1 837		1 837						1 837
10. Closing Stocks of fixed assets for water supply (Currency units)	7 182	78	9 287	28 465		15	45 027						45 027
11. Closing Stocks of fixed assets for water sanitation (Currency units)					22 285		22 285						22 285



Possible structure for combined presentations

	Industries (by ISIC divisions)	Households	Government	Accumulation	Flows with the rest of the world	Total
Monetary supply and use: flows (currency units)						
Supply of products						
Intermediate consumption and final use of products						
Gross value added						
Depletion-adjusted value added						
Environmental taxes, subsidies and similar transfers						
Physical supply and use: flows (physical units)						
Supply of:						
Natural inputs						
Products						
Residuals						
Use of:						
Natural inputs						
Products						
Residuals						
Asset stocks and flows						
Closing stocks of environmental assets (currency units and physical units)						
Depletion (currency units and physical units)						
Closing stocks of fixed assets (currency units)						
Gross fixed capital formation (currency units)						
Related socio-demographic data						
Employment						
Population						