EUROPEAN FOREST INSTITUTE
MEDITERRANEAN REGIONAL OFFICE – EFIMED

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Forest Accounts in CREEA

Key findings and future perspectives

Final Conference

Brussels, 25th March 2014

CREEA

Statistiska centralbyrån Statistics Sweden

outline

- FORESTS, NATURAL CAPITAL AND WEALTH ACCOUNTING
- THE SEEA 2012
- FOREST ACCOUNTS IN CREEA: APPLYING THE SEEA CF 2012 TO FOREST ASSET ACCOUNTS
- REFLECTIONS
- WAY AHEAD

FORESTS,NATURAL CAPITAL and WEALTH ACCOUNTING

The crucial role forests play in our wellbeing is undervalued in the national accounts, often leading to degradation and biodiversity loss.

HOW DOES THE SNA ACCOUNT FOR FORESTS?
Resources under private property and
linked to a well established market

- Resources without a well-established market
- Contribution to other sectors, e.g. fodder for grazing
- Areas set aside for conservation

NOT REFLECTED IN THE NATIONAL ACCOUNTS

FORESTS,NATURAL CAPITAL and WEALTH ACCOUNTING

WEALTH

Traditionally

The value of a nation's produced and financial assets.

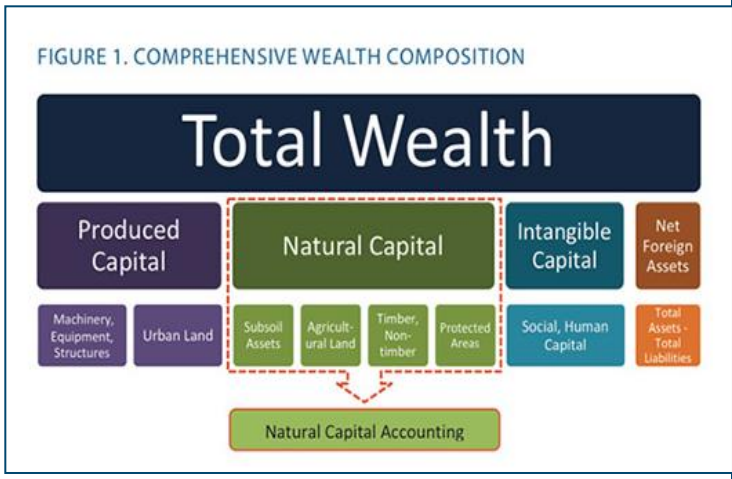
A more integrative definition: inclusive wealth

Considers all the assets that support human wellbeing

Produced and financial assets +

the value of natural, human and social capital

A change in our scope from current to the future state.



NATURAL CAPITAL

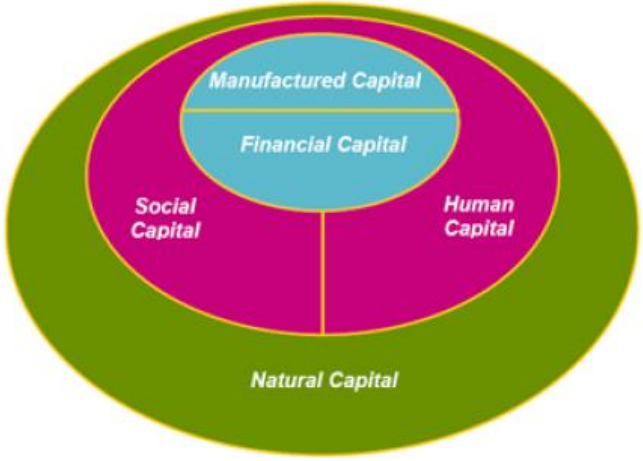
A stock on which people depend for wellbeing

but which we don't create or manufacture.

It includes resources as timber and also these services

produced by forest ecosystems that are often "invisible"

for people, such as flood protection or carbon storage.



http://www.forumforthefuture.org/project/five-capitals/overview#sthash.Xmo2hc70.dpuf

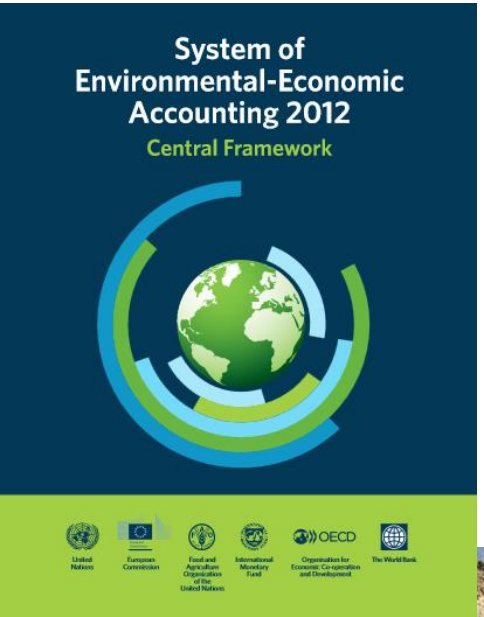
The SEEA 2012

The System of Environmental and Economic Accounting

❖ PREPARED UNDER THE AUSPICES OF THE UNITED NATIONS COMMITTEE OF EXPERTS ON ENVIRONMENTAL ECONOMIC ACCOUNTING (UNCEEA)

❖ IT IS THE FIRST INTERNATIONAL STATISTICAL STANDARD FOR ENVIRONMENTAL-ECONOMIC ACCOUNTING

❖ A MULTI-PURPOSE CONCEPTUAL FRAMEWORK FOR UNDERSTANDING THE INTERACTION BETWEEN THE ECONOMY AND THE ENVIRONMENT



❖ SERVES TO DESCRIBE STOCKS AND CHANGES IN ENVRONMENTAL ASSETS → FOCUS ON MATERIAL NATURAL RESOURCES

❖ PROVIDES WITH GUIDANCE ON THE VALUATION OF RENEWABLE AND NON-RENEWABLE RESOURCES

❖ PREVIOUS VERSIONS: SEEA 1993 & SEEA 2003

❖ THE ECOSYSTEM ACCOUNTING FRAMEWORK IS STILL EXPERIMENTAL AND NOT AGREED AS AN INTERNATIONAL STANDARD

The forest accounts in CREEA

EFIMED
Mediterranean Regional Office of the European Forest Institute

Statistiska centralbyrån Statistics Sweden

Statistiska centralbyrån Statistics Sweden

i. Revising the proposed SEEA CF 2012 methodology for forests

ii. Explore the possibilities of integrating the national forest data into the proposed SEEA CF 2012 framework

iii. Testing the SEEA CF 2012 methodology by data gathering for selected countries

THE SEEA CF ACCOUNTS FOR TIMBER AND WOODED LAND SEPARATELY

OUR FOCUS WAS ON THE ASSET ACCOUNTS of TIMBER AND WOODED LAND

ASSET ACCOUNTS FOR TIMBER RESOURCES: STRUCTURE AND MAIN CONCEPTS

TIMBER ASSET ACOUNT

	NATURAL timber resources		CULTIVATED timber resources
	Not Available for Wood Supply (Not AFWS)	Available For Wood Supply (AFWS)	

The terminology is confusing for the forestry people

"Cultivated! We manage forests, we don't grow corn!"
"Natural? I'm afraid in the Mediterranean we don't have anything such as "natural""

But in the accounting jargon it basically means:

- Cultivated: these forest resources where the management practices constitute a process of economic production → control of regeneration processes and regular and frequent supervision of the trees.
- Natural: where the previous doesn't apply.

ASSET ACCOUNTS FOR TIMBER RESOURCES: STRUCTURE AND MAIN CONCEPTS

WHY ESTABLISHING SUCH A CLASSIFICATION?

TO ALIGN TIMBER RESOURCES WITH THE SYSTEM OF NATIONAL ACCOUNTS

❖ Cultivated timber resources: because they are subject to an economic activity → their growth is recorded within the production boundary on an ongoing basis.

❖ Natural timber resources: their growth is not considered to take place within the production boundary and is recoded as entering it only at the time the tree is removed

❖ The type of land on which the timber resources are found is a good starting point (but it may not align completely with the SEEA production boundary!!!)

❖ Forest management practices vary considerably → countries should determine their own production boundary

The forest accounts in CREEA

THE CLASSES ARE CONSISTENT WITH THE DEFINITIONS IN THE FAO FRA 2010

It considers the forest land standing apart from the timber resources

(although of course some correspondence should exist between the two accounting tables)

	TYPE OF FOREST AND OTHER WOODED LAND			
	Primary forest	**Other naturally regenerated forest**	**Planted forest**	**Other wooded land**
OPENING STOCK OF FOREST AND OTHER WOODED LAND				
ADDITIONS TO THE STOCK				
Afforestation				
Natural expansion				
Total additions to the stock				
REDUCTIONS IN STOCK				
Deforestation				
Natural regression				
Total reductions in stock				
CLOSING STOCK OF FOREST AND OTHER WOODED LAND				

CREEA

The forest accounts in CREEA

MAIN FINDINGS

TIMBER: More flexible way for the countries to classify forests as cultivated/no cultivated based on their own production boundary considerations. → Timber from cultivated areas other than forests are allowed to be in.

FOREST LAND: Set a clear distinction between timber resources and forest land BUT makes it more difficult to align timber and forest land data

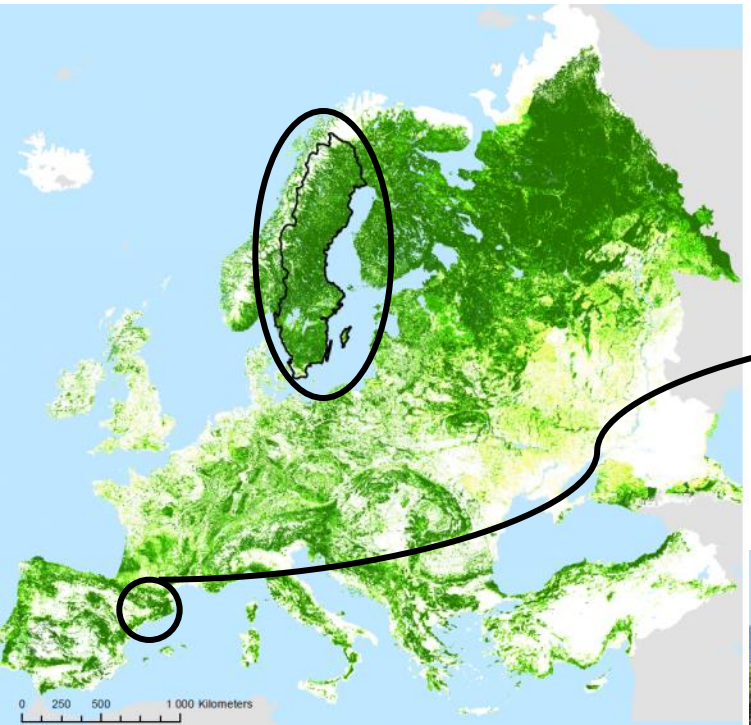
- Identical imprecision remains for OWL
- Focus on timber resources, hardly mentions any other aspects of the forest
- Lack of a convention on how incorporate non market G&S and other products apart from timber

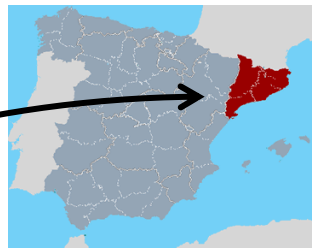
The forest accounts in CREEA

Task 5.3
TESTING THE METHODOLOGY BY DATA GATHERING FOR SELECTED COUNTRIES

SUBTASKS

Applying the proposed SEEA2012 forestry tables
(timber and forest land accounting tables)
for two testing regions: Catalonia (Spain) and Sweden





The forest accounts in CREEA

MAIN FINDINGS (or how to struggle with the forest accounts : -)

Main sources of information

- 1. National Forest Inventories (NFIs)
- 2. National (regional) registers for forest-related activities

(e.g. Timber extraction, forest fires records or private properties under management plans)

- 3. Land use maps

Different time frames, definitions, view or scales

The forest accounts in CREEA

MAIN FINDINGS (or how to struggle with the forest accounts : -)

PHYSICAL TIMBER ACCOUNTS

THE CULTIVATED AND NATURAL CATEGORIES

- Set a proxy to split the standing timber into them: having or NOT a management plan
- Once a proxy is chosen to set such a boundary, it was difficult to apply it

THE NATURAL CATEGORY: AVAILABILITY FOR WOOD SUPPLY

- Slope as a criteria, but it is rather inaccurate
- Studies on timber availability are just starting (Catalonia) ☺

The forest accounts in CREEA

MAIN FINDINGS (or how to struggle with the forest accounts : -)

PHYSICAL TIMBER ACCOUNTS

ADDITIONS AND REDUCTIONS IN THE STOCK

- Events like forest fires are recorded in terms of area, but not burnt m3
- Similarly with forestations or agricultural conversion of the land use
- How are these stands responding to theses events? (not all the trees die after a forest fire)
- NFI are not good at recording transitions such as colonization due to agricultural abandonment

THE FINAL RESULT

- Shows some trends that are already know from ecological research.
- Cast doubts due to the many assumptions made on the way (hinders comparability)
- Timber in the Mediterranean is far from being the main good provided by forests

The forest accounts in CREEA

	FINAL ACCOUNTING TABLE FOR TIMBER IN THE PERIOD 2000-2010					
	Type of timber resource (Thousands of m3)					
	Cultivated		Natural			
			Available for wood supply		Not available for wood supply	
	Conifers	Broadleaved	Conifers	Broadleaved	Conifers	Broadleaved
Opening stock 2000	25,111	9,041	25,434	14,545	35,600	21,517
Additions to stock						
Natural growth	9,804	4,276	6,770	3,469	11,583	7,059
Reclassifications	9,653					
Total additions to stock	19,457				83	7,059
Reductions in stock						
Removals	2,583				00	0,00
Felling residues	-					
Natural losses					36	318
Catastrophic losses					93	148
Reclassifications						
Total reductions in stock					1,128	466
Closing stock 2010					46,054	28,109

The reclassifications influence the figures on natural growth and stock reductions. But still the sum of losses and removals is always below 60% of the natural growth for all classes

Removals i
these in cul
fuel wood. Casting doubt on whether the lack of management plans will affect their sustainability

The forest accounts in CREEA

MONETARY TIMBER ACCOUNTS

- Net present value approach (NPV) : Assumption: mature irregular forest
- Opening stock = NPV under the hypothesis that
  i. the market price is the one at the date of opening, increasing with the inflation .
  ii. similar management practices
- Subtracting the value of land: an estimate of the Land Expected Value
- <u>Natural forests NOT available for wood supply are not considered</u>

THE FINAL RESULT

- Opening stock of cultivated forests is greater than in the natural forests AFWS → highly productive species (anticipated value for them)

The forest accounts in CREEA

	Monetary timber account for Catalonia, yearly average 2000-2010 Billion €			
	Cultivated		Natural	
			Available for wood supply	
	Conifers	Broadleaved	Conifers	Broadleaved
Opening stock 2000	139.7	94.1	94.1	53.5
Additions to stock	NA			
Natural growth	54.5	44.5	25.0	12.8
Reclassifications	35.2	29.2	-	-
Total additions to stock	*89.8*	*73.7*	*25.0*	*12.8*
Reductions in stock				
Removals	44.4	16.0	33.3	29.3
Felling residues	NA			
Natural losses	12.9	3.9	4.3	2.7
Catastrophic losses	1.1	0.6	1.5	0.3
Reclassifications	-	-	35.2	29.2
Total reductions in stock	*58.5*	*20.6*	*74.4*	*61.5*
Reevaluation	39.7	-15.8	18.9	37.1
Closing stock 2010	210.7	131.4	63.6	41.8

The forest accounts in CREEA

PHYSICAL LAND ACCOUNTS

❖Stocks are easy to track but the flows are more challenging → maps not directly comparable

❖In addition annual information has been compiled on forestations, burnt area, clearings... → difficult to fit into the classes

❖ Main changes: increase of coniferous forests

❖ The area of broadleaved species have decreased

❖ Secondary succession processes as the main reason for the increase of forests

	Type of forest and other wooded land (ha)					Total
	Other naturally regenerated forest		Planted forest		OWL	
	Conifers	Broadleaved	Conifers	Broadleaved		
Opening stock of forest and other wooded land (2005)	737,269	535,726	28,221	14,758	667,986	1,983,959
Additions to the stock						
Afforestation	846	273				
Natural expansion	35,820					
Total additions to stock	36,666		1601			
Reductions to the stock						
Deforestation						
Natural regression						
Total reductions in stock		4,988		324	51,773	18,817
Balance between the two land cover data maps (2009-2005)	**36,666**	**-4988**	**1,601**	**-324**	**-51,773**	**-18,817**
Closing stock of forest and other wooded						

FINAL REFLECTIONS

- The data collection process was very time consuming. Public administrations that are not used to update and use some of their yearly collected data
- Data providers don't readily perceive the importance of improving their data collection.
- Accounts are built upon existing data (i.e. It is not about producing data) but it can influence how data is gathered
- Problems in setting the boundaries, dealing with transitions...
- Aspects beyond timber should be considered and incorporated
- SEEA sets a minimum standard that countries should further develop
- The asset accounts may not be the most appealing part of it, but other parts of the accounts build upon them and relate to them, e.g. Taxes and subsidies, Flow accounts to track HOW FORESTS influence the economy

REFLECTIONS & WAY AHEAD

FOREST ACCOUNTS ARE BECOMING A STRATEGIC AND INCREASINGLY INTERESTING SECTOR

EUROSTAT initiatives

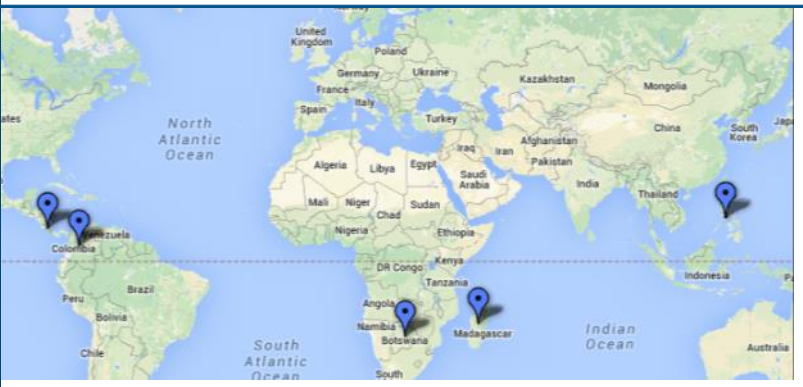
UPDATE OF THE FOREST ACCOUNTING FRAMEWORK→ POSSIBLE MANDATORY IN THE FUTURE.

EXPLORING THE POSISBILITIES OF MAKNG MANDATORY REPORTS FROM THE COUNTRIES,

REVISION OF THE EXISTING ACCOUNTING FRAMEWORK

THE GLOBAL PARTNERSHIP ON
Wealth Accounting and the Valuation of Ecosystem Services

WAVES



Global partnership facilitated by the WB

to mainstream natural capital accounting

into a country's national accounting system

- Develop approaches to ecosystem accounting methodology
- Develop a Sourcebook on Forest Accounts: resources and ecosystems' perspective

http://www.wavespartnership.org/en


THANKS FOR YOUR ATTENTION!
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