

SEEA EXPERIMENTAL ECOSYSTEM ACCOUNTS : ACCOUNTING FOR CARBON

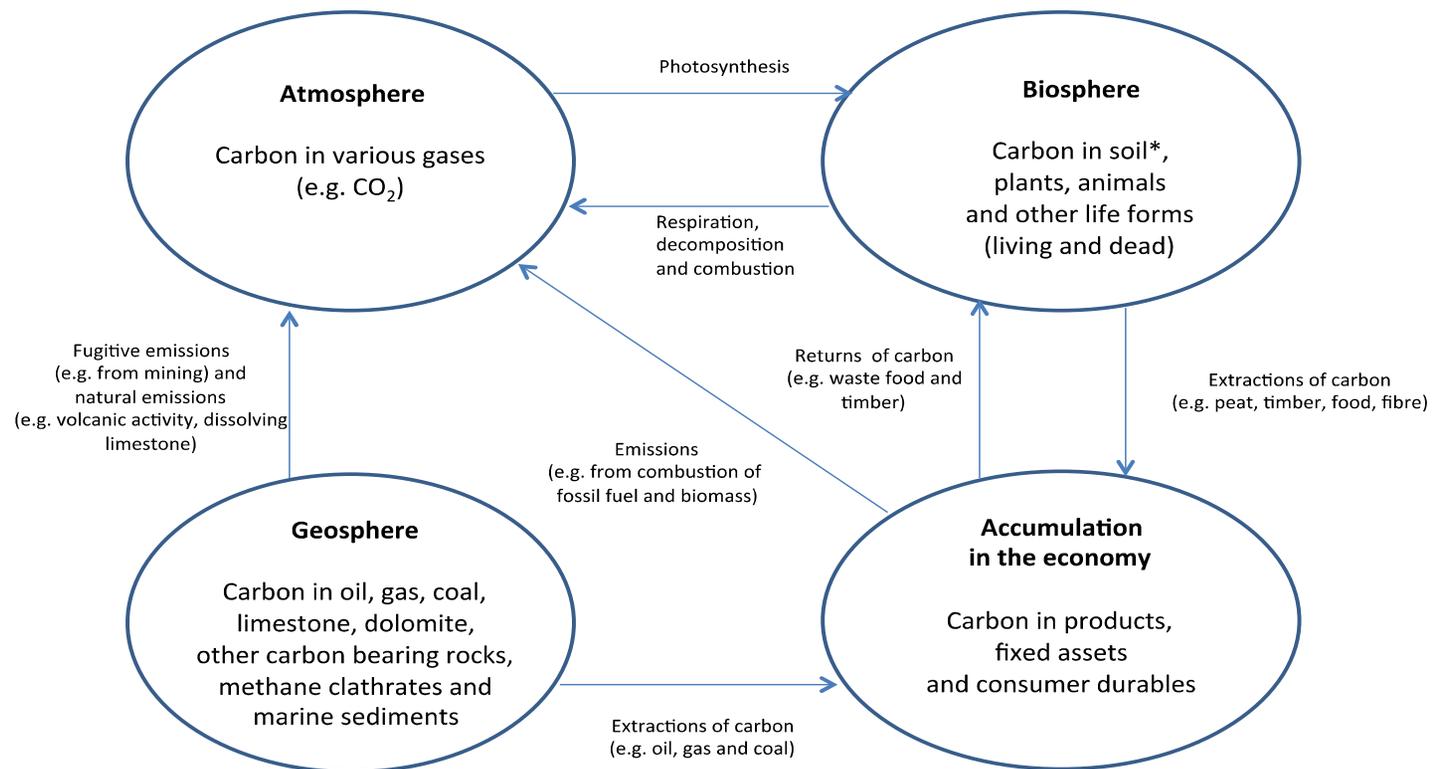
**Presentation by Carl Obst, SEEA Editor
18th London Group Meeting
2-4 October, 2012
Ottawa, Canada**

SIGNIFICANCE OF CARBON

- Underpins practically all life on Earth
- Abundant in the geosphere, biosphere, atmosphere and oceans
- Fundamental to the generation of ecosystem services and other environmental flows and relevant in the assessment of ecosystem capital
- Comprehensive approach to the stock and changes in stock required because where carbon is stored and how this changes can be significant



ELEMENTS OF THE CARBON CYCLE



*organic and inorganic soil carbon
Not shown: exchanges between ocean and other carbon stocks



ACCOUNTING APPROACH

- Hints at accounting for carbon in SEEA Central Framework in discussion of timber resources
- Accounting principles from SEEA CF can be applied directly
- Proposed carbon stock accounts complement flow inventories under UNFCCC and measurement approaches for REDD



Gigagrams carbon (GgC)	Geocarbon					Biocarbon			Atmosphere	Water in Oceans	Accumulation in economy				TOTAL
	Rocks	Oil	Gas	Coal	Other	Terrestrial ecosystems	Aquatic ecosystems	Marine ecosystems			Inventories *	Fixed assets	Consumer durables	Waste	
Opening stock															
Additions to stock															
Natural expansion															
Managed expansion															
Discoveries															
Upwards reappraisals															
Reclassifications															
<i>Total additions to stock</i>															
Reductions in stock															
Natural contraction															
Managed contraction															
Downwards reappraisals															
Reclassifications															
Total reductions in stock															
Imports and exports															
Imports															
Exports															
Closing stock															

*Excludes inventories included in biocarbon (e.g. plantation forests, orchards, livestock, etc)

CARBON STOCK ACCOUNT: KEY POINTS

- Follows structure and logic of asset accounts in SEEA CF
- Focus on geocarbon, biocarbon and carbon in economy
- Need to recognise qualitative differences in carbon stored in different ecosystems in terms of the stability of the stock and the role in the carbon cycle
- Can derive indicators such as the net carbon balance and analyse carbon stocks in relation to carbon carrying capacities
- Important links to ecosystem accounting more generally

