System of Environmental Economic Accounting

# 2019 Forum of Experts in SEEA Experimental Ecosystem Accounting, 26-27 June 2019, Glen Cove, NY

# SEEA EEA Glossary

*For discussion at the 2019 Forum of Experts*

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All documents related to the Forum of Experts can be found on the event website at:
https://seea.un.org/events/2019-forum-experts-seea-experimental-ecosystem-accounting



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B

**Basic spatial unit (BSU):** the spatial measurement unit used in ecosystem accounting as a basis for constructing the accounts. A BSU may be formed in various ways including via the use of a reference grid, or through the delineation of polygons. For measurement purposes, BSUs are assumed to be internally homogenous in terms of their biophysical properties.

**Beneficiaries:** Economic units (enterprises, households and individuals, governments and economic units in the rest of the world) that receive the benefits to which ecosystem services contribute.

**Benefits:** Goods and services that are ultimately used and enjoyed by people and which contribute to individual and societal well-being. Two broad types of benefits are described in SEEA Experimental Ecosystem Accounting - SNA and non-SNA benefits.

**Biodiversity:** The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems. (Convention on Biological Diversity, article 2, entitled “Use of Terms”)

**Biodiversity account**: This is one of the four thematic accounts as defined by the Technical Recommendations. The focus of the biodiversity account is on species-level biodiversity, given that ecosystem-level biodiversity is captured in the ecosystem extent account. Ideally, the development of a biodiversity account using species data should move beyond simple counts of the number of species (the species richness) and include the population size of each species (the species abundance) as this provides more information on the status of species.

**Biophysical modelling:** Biophysical modelling is defined as the modelling of biological and/or physical processes in order to understand the biophysical elements to be recorded in an ecosystem account. These elements are part of either ecosystem asset measurement (including ecosystem condition and the ecosystem’s capacity to generate services) or ecosystem services measurement.

C

**Carbon account:** This is one of the four thematic accounts as defined by the Technical Recommendations. The carbon account records stocks and changes in stocks of carbon among different reservoirs of carbon (e.g. geocarbon in limestone and fossil fuel reserves, biocarbon in terrestrial, freshwater and marine ecosystems, and in the atmosphere). Carbon accounts can be used to support the derivation of partial indicators of ecosystem condition such as net carbon balance and primary productivity. It can also provide information to support measures of the ecosystem services of carbon sequestration and storage of carbon.

**Condition account:** The ecosystem condition account captures, in a set of key indicators, the state or functioning of the ecosystem in relation to both its ecological condition and its capacity to supply ecosystem services. These indicators may reflect such aspects as the occurrence of species, soil characteristics, water quality, and ecological processes (e.g. net primary production).

**Cultural services:** ecosystem services relating to the activities of individuals in, or associated with, nature.

D

**Degradation**: See Ecosystem degradation

**Depletion:** In physical terms, this is the decrease in the quantity of the stock of a natural resource over an accounting period that is due to the extraction of the natural resource by economic units occurring at a level greater than that of regeneration. (SEEA Central Framework, 5.76)

E

**Ecosystem:** A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit (Convention on Biological Diversity, article 2, entitled "Use of terms"). Ecosystems may be identified at different spatial scales and are commonly nested and overlapping. For accounting purposes, ecosystem assets are defined through the delineation of specific and mutually exclusive spatial areas.

**Ecosystem accounting area (EAA)**: The area for which an account is produced. EAAs are geographical aggregations of EAs that can be grouped by ETs. Examples are administrative areas (e.g. provinces, states or countries), bioregions and river basins.

**Ecosystem asset (EA):** The distinct spatial areas that form the conceptual base for accounting and the integration of relevant statistics. They represent contiguous areas covered by a specific ecosystem type (e.g. a single deciduous forest).

**Ecosystem capability:** The basket of ecosystem services that would be obtained under optimal ecosystem management.

**Ecosystem capacity:** the ability of an ecosystem to generate an ecosystem service under current ecosystem conditions and uses at the maximum yield or use level that does not negatively affect the future supply of the same or other ecosystem services.

**Ecosystem characteristics:** elements such as vegetation, water, soil, biomass, habitat and biodiversity used to describe the condition of different ecosystem types

**Ecosystem condition:** The overall quality of an ecosystem asset in terms of its characteristics. Measures of ecosystem condition are generally combined with measures of ecosystem extent to provide an overall measure of the state of an ecosystem asset. Since ecosystem condition also underpins the capacity of an ecosystem asset to generate ecosystem services, changes in ecosystem condition will impact on expected ecosystem service flow.

**Ecosystem degradation:** The decline in the condition of ecosystem assets as a result of economic and other human activity.

**Ecosystem enhancement:** The increase and/or improvement in the condition of an ecosystem asset as a result of economic and other human activity.

**Ecosystem extent:** The size of an ecosystem asset in terms of spatial area.

**Ecosystem extent account**: The ecosystem extent account is the basis for ecosystem accounting. And ecosystem extent account organizes information on the area of different ecosystem types within a country.

**Ecosystem potential supply:** The ability of an ecosystem asset to supply ecosystem services independently from the potential use of those services by beneficiaries.

**Ecosystem services:** The contributions of ecosystems to benefits used in economic and other human activity. The definition of ecosystem services involves distinctions among (a) the ecosystem services, (b) the benefits to which they contribute and (c) the well-being that is ultimately affected. Ecosystem

services should also be distinguished from the ecosystem characteristics and functions and processes of ecosystem assets. Ecosystem services are considered to exist only when a contribution to a benefit is established.

**Ecosystem services supply and use account**: describe the supply of ecosystem services by ecosystem types, and their use by beneficiaries. They can be compiled in both physical and monetary units.

**Ecosystem type (ET):** aggregations of individual EAs of a specific type of ecosystem (e.g. deciduous forests).

**Environmental assets:** The naturally occurring living and non-living components of the Earth, together constituting the biophysical environment, which may provide benefits to humanity. (SEEA Central Framework, 2.17)

**Exchange value:** Exchange values for ecosystem services and ecosystem assets are those values that reflect the price at which ecosystem services and ecosystem assets would be exchanged between buyer and seller if a market existed. The notion of exchange value also underpins the national accounts as a transactions based system, and hence excludes consumer surplus (i.e., the gain obtained by consumers because they are able to purchase a product at a market price that is lower than the price they would be willing to pay).

F

**Final ecosystem services:** as contributions of ecosystems to the production of benefits.

I

**Intermediate ecosystem services**: flows of ecosystem services between ecosystem assets.

L

**Land cover:** The observed physical and biological cover of the Earth's surface and includes natural vegetation, abiotic (non-living) surfaces and inland water bodies, such as rivers, lakes and reservoirs. (SEEA Central Framework, 5.257)

**Land use:** reflects both (a) the activities undertaken and (b) the institutional arrangements put in place for a given area for the purposes of economic production, or the maintenance and restoration of environmental functions (SEEA Central Framework, 5.246).

N

**Natural capital:** The Natural Capital Coalition / NCP definition is "Natural capital is the stock of renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits to people."

**Natural resources:** All natural biological resources (including timber and aquatic resources), mineral and energy resources, soil resources, and water resources. (SEEA Central Framework, 5.18)

**National Spatial Data Infrastructure (NSDI):** NSDI is defined as "the technology, policies, standards, and human resources necessary to acquire, process, store, distribute, and improve utilization of geospatial data" (Federal Geographic Data Committee). NSDI can be utilized for ecosystem accounting as an inventory of what spatial data infrastructure already exists in a country, in particular within government agencies such as spatial planning or environmental agencies.

**Non-SNA benefits** are not generated by economic production processes, as defined in the SNA. Rather, they encompass ecosystem services that do not contribute to the production of SNA goods and services.

P

**Provisioning services:** ecosystem services relating to the supply of food, fibre, fuel and water.

R

**Reference condition:** Where possible, the reference condition is the natural or near-natural condition in the absence of significant modification by human activity. If this is not possible, an alternative stable reference condition can be selected (e.g., condition at a particular baseline date).

**Regulating services:** ecosystem services relating to actions of filtration, purification, regulation and maintenance of air, water, soil, habitat and climate)

S

**SNA benefits** encompass the products (goods and services) produced by economic units (e.g., food, clothing, shelter, entertainment) within the production boundary defined by the SNA. SNA benefits include goods produced by households for their own consumption.

**Species abundance:** A measure of the absolute number of a particular species in an area.

**Species richness:** A measure of the number of different species in an area.

T

**Thematic accounts:** are accounts for specific topics including land, carbon, water and biodiversity. Data from thematic accounts may be used in compiling ecosystem accounts and may also provide important contextual information in their own right and support analysis of ecosystem accounting information.