



DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS
STATISTICS DIVISION
UNITED NATIONS



System of
Environmental
Economic
Accounting

System of Environmental-Economic Accounting 2012 – Experimental Ecosystem Accounting Revision

First Global Consultation on:

Chapter 8: Principles of valuation for Ecosystem Accounting

Chapter 9: Accounting for ecosystem services in monetary terms

Chapter 10: Accounting for ecosystem assets in monetary terms

**Chapter 11: Integrated and extended accounting for ecosystem services and
assets**

Comments Form

Deadline for responses: 6 July 2020

Send responses to: seea@un.org

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The comment form has been designed to facilitate the analysis of comments. There are twelve guiding questions in the form, please respond to the questions in the indicated boxes below. To submit responses please save this document and send it as an attachment to the following e-mail address: seea@un.org.

All documents can be also found on the SEEA EEA Revision website at:
<https://seea.un.org/content/seea-experimental-ecosystem-accounting-revision>

In case you have any questions or have issues with accessing the documents, please contact us at seea@un.org

Questions related to Chapter 8

Question 1: Do you have comments on the principles proposed to underpin monetary valuation for the revised SEEA EEA, including the use of exchange values and net present value approaches?

We question the user need of the suggested approach and advice you to publish the ecosystem standard without the valuation chapters. They may be more fitting in the revision of the SNA perhaps or described as an application that is made outside of the official statistics and with more clarification about what is the limits of this type of analysis.

We support the other chapters on physical indicators on ecosystems and actual economic instruments that are observable to be the additions that are needed to make the SEEA a useful statistical tool for environmental and economic policy.

The country experiences on creating monetary valuation tables done at the National Institute for Economic Research created confusion around was included and valued and how the time trends could be interpreted. A long term study was published by the government that used such data to create a green net national product summarized that Sweden was sustainable as the numbers on environmental damage per year where perceived as small. That the climate issue was not present in the calculation was overlooked in the final assessment. At the same time a general assessment was made from the EPA that spelled out the many environmental problems that needed to be solved in order to reach the environmental objectives. The monetary valuations were lacking in describing what was included and specifically that the most important issues that the emissions of greenhouse gases and the deterioration of the habitats where not reflected in what was perceived as a sustainability assessment.

We would like to emphasize that the inclusion of monetary valuation in the standard can become an obstacle for countries doing the more detailed physical description of the environment broken down into different eco systems and the corresponding uses and services derived from them. This is because the environmental accounts are perceived to be very complicated and so countries avoid to take them up into their statistical programs.

Monetary data based on various types of valuation is not helpful to bring in - it has not proven stable to objective assessments in our country. The pilots and research projects that have been made have been deemed better to use on a local scale and in research projects that do not claim the label of official statistics.

The time trends on a macro scale weighted with valuation have not been policy relevant. This is a critique of the method that we know we share with many other statistical offices and also researchers on biodiversity.

The SEEA is most helpful for users when we can formulate questions to which the statistics answer. The approach taken here, to present a sequence of tables, does not spell out how this information will be useful.

As the monetary valuation only brings up part of the damage from the economic system, or the cost to remedy the situation, then we have seen the reaction from ministry people 'all is well because that number is small compared to growth'.

The way you describe it here, it could also be that you want to show a positive value, that the ecosystem brings to the economy? Then how do you foresee that this should be interpreted? IF you still use the SNA boundary, then only the parts that are already within the economy (owned by someone that make money from them) will be seen.

Concerning specific parts of the text:

In light of the noted complexity in establishing specific monetary values for ecosystem services, principal limitations of the approach should also be noted. Just as the SNA is limited in terms of how it reflects activity, welfare and utility (using these terms in a broad sense) in the real economy, so it is clear that monetized ecosystem services reflect a the real value of those ecosystem services considered in a limited way.

Question 2. Do you have any suggestions for topics to include in Annex 8.1?

Regarding the discount factor it is important to specify what it aims to do. In discounting the comparison currently is with what can be earned on the monetary value in a financial investment (alternative use). But this is a strange way to make the comparison, a good which has been produced can not be invested on a financial market.

When we assume something about the future GDP we also assume something about the volume of future goods and services produced. Discounting these values should be done with care. It is obvious that the society can not use these goods and services and invest their corresponding monetary value on the financial market. The real alternative we face is to produce today or tomorrow and how much of the goods and services we should consume and invest.

One of the non-monetary relations which is of importance between today and tomorrow is productivity. The main reason why interest rates are used in discounting is that the real interest rate is related, by the golden rule in growth accounting, to productivity.

But, the discount rate used for welfare valuation (social values) of ES need not be the same as for market valuation (transaction values). The interest rate is influenced by several market forces and is rarely in a long term equilibrium. Choosing the discount rate to be equal to a financial market variable like the interest rate on a 10 year government bond will therefore not be ideal.

Question 3. Do you have any other comments on Chapter 8?

The system boundary of looking at natural resources that can give economic value means for example that only the pollination services that serve production for economic activities are included. This is far too limited. The SEEA needs to include the environment in general in relation to the economy and not only the parts of the environment that are possible to earn money from.

The SEEA can be used to better measure the rules and economic instruments that make it possible to reap benefits from economic activities that are harmful to the climate stability and to the natural world. The valuation suggested is not helpful in this regard.

Questions related to Chapter 9

Question 4. Do you have comments on the range of valuation methods proposed for use in estimating exchange values of ecosystem services?

It is very good to have an overview of the methods like in figure 9.1 and also short descriptions in chapter 9. The typography of valuation methods is somewhat misleading. There are actually only three methods proposed in SNA, market prices, market prices for similar products and the sum of costs with a mark-up (replacement costs). We therefore propose to add a distinction in figure 9.1 between techniques recommended in SNA and other techniques use in the economic literature.

The case of resource rent can be discussed at length. A resource rent is part of the distribution of income and can be used for the valuation of assets. But, using it as a valuation of the service goes far beyond SNA. We therefore think that the remarks on the limits of using the residual method is expressed well in §9.31.

Regarding the method outlined in §9.30 we think that taxes also could be included in the valuation of the ES. Special designed environmental taxes is a way of restricting the use and at the same time generate income to the government responsible for the management. If government will be the “owner” this addition of income to ES is motivated.

We also think some cautiousness should be added for some of the methods listed. For the moment this has been pointed out in the case of the replacement costs method (§9.35-36) and the residual value method (§9.29-32).

The productivity change method (§9.33) rely on assumptions like that the production function is continuous and homogenous of degree 1. In case there is economics of scale these kind of methods will exaggerate the calculated exchange value of production factors and inputs.

Replacement cost (§9.35) is used in a different meaning than what is understood in the SNA. In §9.35 replacement means replacing one ES for something that gives the same benefits. The original meaning of replacement cost is not the cost for substitutes. Replacement cost it is the price a supplier would demand for the same product produced in the same reference period the valuation is made. Price for substitute or alternative input would be a more appropriate term to use.

Opportunity cost methods (§9.43) are used in SNA to correct valuations for price changes between reference periods. For example, a good acquired in one period and put in inventory and used in a later period, should as consumption be valued according to the prices at the period it is used up. The opportunity from taking out of inventory in this case is to buy the good on the market. The difference in value is not part of output and income, but is in SNA recorded as holding gains. In other respects the SNA is in conflict with the opportunity cost approach. An investment made in a previous year is not revalued in relation to later changes in the rate of return on investments in the activity it is used in relation to other investment options. Replacement cost valuation of an asset means a

valuation with the price, which will induce a manufacturer to produce an additional new unit of such an asset/good.

In the SNA the meaning of costs or transaction values is not the same as opportunity cost. By opportunity cost we should understand the second best option in relation to the chosen one. This is mainly used to evaluate investment alternatives. In relation to input this would translate into what will the benefit be of using the input in a different activity. This is not the way the opportunity cost is presented in §9.43. It is rather presented as the price for using the ES in an alternative activity. But market prices are not changing due to the use unless the market is very thin and the “seller” knows how the gain will change and thus can use this information to negotiate a different “price” for the ES. The price of the ES will therefore not change because the use does, unless the value of using the ES have been estimated indirectly. Since ES are provided and used locally, “prices” in other parts of a country for the same ES might differ substantially and can’t be used since they are established on a different market.

As is stated in §9.43 it might be difficult to find an alternative use of ES. ES might not be possible to direct by human effort. Even if there are several uses the value of these uses are not known since price information does not exist. A remark on this method is that it can’t be used in cases where the value of alternative use of an ES has been estimated by an indirect method.

We think that the opportunity cost method only can be used indirectly by regarding the output it contributes to. This is very much the same as the productivity method (§9.33).

Research has evidenced that stated preference methods (§9.52-53) depend on the kind of good (public or private) and the degree of certainty in the answer (strongly correlated with age) of the respondent. Since ES can be used both as a public and as a private good the choice of valuation method seems to be critical. In relation to hedonic pricing methods (§9.47-48) SP-methods also give substantially higher valuation.

All, in all we think the problems with aggregation of ES values mentioned in §9.21 are underestimated.

Question 5. Do you have any other comments on Chapter 9?

Paragraph 9.67 starts off by discussing valuation’s dependence on biophysical, economic and institutional context. However the rest of the paragraph discusses only biophysical features and not economic. It would be valuable to extend the discussion in this paragraph to also cover economic features. For example, how is valuation affected by the wealth of a country’s inhabitants, a nation’s GDP, interest rates or inflation?

Questions related to Chapter 10

Question 6. Do you have comments on the definitions of entries for the ecosystem monetary asset account including ecosystem enhancement, ecosystem degradation and ecosystem conversions?

Click here and start typing (The length of your response is not limited by this text box.)

Question 7. Do you have comments on the recommendations concerning the selection of discount rates for use in NPV calculations in ecosystem accounting?

The discount rate is limited by the SEEA CF. One issue we have is if the private or individual discount rate should be equal to the market interest rate reduced by FISIM and taxes. The reason would be that these are elements that the individual investor will have to give up for investing money to be used for consumption in later periods.

Question 8. Do you have comments on Annex 10.1 describing the derivation and decomposition of NPV?

Click here and start typing (The length of your response is not limited by this text box.)

Question 9. Do you have any other comments on Chapter 10?

Click here and start typing (The length of your response is not limited by this text box.)

Questions related to Chapter 11

Question 10. Do you have comments on the proposed structure of the extended balance sheet that integrates the monetary values of ecosystem and economic assets?

Concerning: “11.8 The compilation of extended SUA can provide a powerful analytical tool.” The limitations of the approach should also be mentioned or point to other areas in the SEEA that it supports and complements

Question 11. Do you have comments on the approaches to assigning the ownership of ecosystem assets that underpins the structure of the extended sequence of institutional sector accounts?

Click here and start typing (The length of your response is not limited by this text box.)

Question 12. Do you have any other comments on Chapter 11?

This is not an integral approach. It avoids looking at the most pressing topics to address: Climate stability, terrestrial and marine biodiversity.

A complete system would include a lot more than spatial areas - a stable climate would be a key. How would that be solved in this method? It seems the method disregards the causes of the problem and venturing into looking at the state of the environment. Something that is not really telling how to solve the pressing issues.

To use the physical statistics on the ecosystems and combine them with actual economic data in input-output analysis is a good way to include ecosystems. That is a powerful tool that is better to use without valuation – once the money values are in place, we lose track of how much (or rather how little) of the system that was valued.

It is better to consider how to decrease emissions rather than to calculate trees as air filtration machines. When the emissions go down because of a fuel switch, that would not mean that the trees became without value, but that could be the result.

What is suggested is to redistribute some of the value added to show that it comes from an ecosystem, like oil, timber and products that require pollination. This is not statistics that are in high demand.