

# Stated preferences: Choice experiment

## Stated preferences: Contingent valuation and Contingent behaviour

Contingent valuation directly elicits values through surveys by asking people about their willingness to pay for a given ecosystem service.

- Type of measured value: use and non-use values.

For more information see:

In French: Terra, S., Guide des bonnes pratiques pour la mise en oeuvre de la méthode d'évaluation contingente, Directions des études économiques et de l'évaluation environnementale, Ministère de l'Ecologie et du Développement Durable

In English: [www.ecosystemvaluation.org/contingent\\_valuation.htm](http://www.ecosystemvaluation.org/contingent_valuation.htm)

- Contingent behaviour directly elicits values through surveys by asking people about their hypothetical behaviour towards a given ecosystem service.



VALMER Interreg 4A Channel project (2012-2015).

Coordination by M. Philippe, J. Ballé-Béganton and D. Bailly



## Stated preferences: Choice experiment

Choice experiment successively presents a number of choice sets to respondents and asks them to choose their preferred scenario.

Each choice set consists of two or three scenarios related to the good under valuation. This good is defined by its key attributes (or characteristics) and the levels that these attributes take, where one attribute is price.

For more information see:

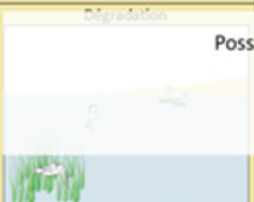

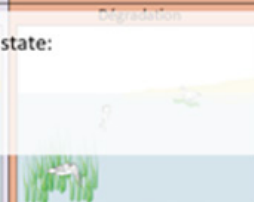

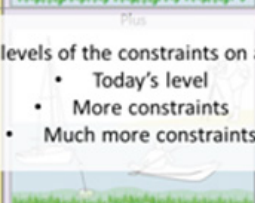
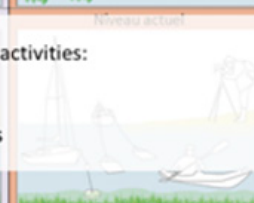
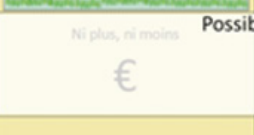
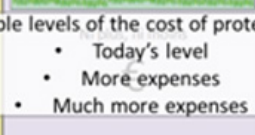

In English: [www.ecosystemvaluation.org/contingent\\_choice.htm](http://www.ecosystemvaluation.org/contingent_choice.htm)

**Choice experiment may help to reveal people preferences for ecosystem services.**

### Example

This choice experiment method was used in the Golfe du Morbihan (<https://participatory-assessment.eu/normand-breton-gulf/>) in order to estimate the preferences for seagrass conservation. Due to persistent knowledge uncertainties, the choice experiment applied to a very broad view of seagrass ecosystem services: comparing the ecological status of the ecosystem, considering various levels of constraints on activities and associated public expenditures.

Each of the 611 respondents was asked 8 times to select one among three scenarios made of three attributes, the first scenario being always the 'business as usual' projection. The answers to the questionnaires are then processed with econometric models. In the Golfe du Morbihan, the preference of the interviewees goes to an improvement of the seagrass ecological status through increased constraints on activities but without additional money devoted to this management policy.

Attributes	Business as usual	Scénario A	Scénario B
Seagrass bed evolution (tendancies)	Dégradation 	Amélioration Possible levels of the ecological state: • Dégradation • Maintenir • Amélioration 	Dégradation 
Constraints on activities	Niveau actuel 	Plus Possible levels of the constraints on activities: • Today's level • More constraints • Much more constraints 	Niveau actuel 
Cost of protection	Ni plus, ni moins € 	Possible levels of the cost of protection: • Today's level • More expenses • Much more expenses 	Beaucoup plus €€€ 
Choice			

*Scenarios on seagrass evolution used for the choice experiment in the Golfe du Morbihan*

## Stated preferences: Benefit transfer

Benefit transfer method estimates the economic values of ecosystem services using existing estimates from studies completed for another location or issue.

- **The critical part** of benefit transfer consists in adapting the value derived from existing studies to some other context.
- **The strength** of benefit transfer is that it is a cheaper and faster way to compute economic value, compared to an original site-specific valuation study.
- **The weakness** is that it relies upon the availability and the accuracy of previous studies on the same issue.

**For more information see:**

In French: [www.insee.fr/fr/ffc/docs\\_ffc/es336d.pdf](http://www.insee.fr/fr/ffc/docs_ffc/es336d.pdf)

In English: [www.ecosystemvaluation.org/benefit\\_transfer.htm](http://www.ecosystemvaluation.org/benefit_transfer.htm)

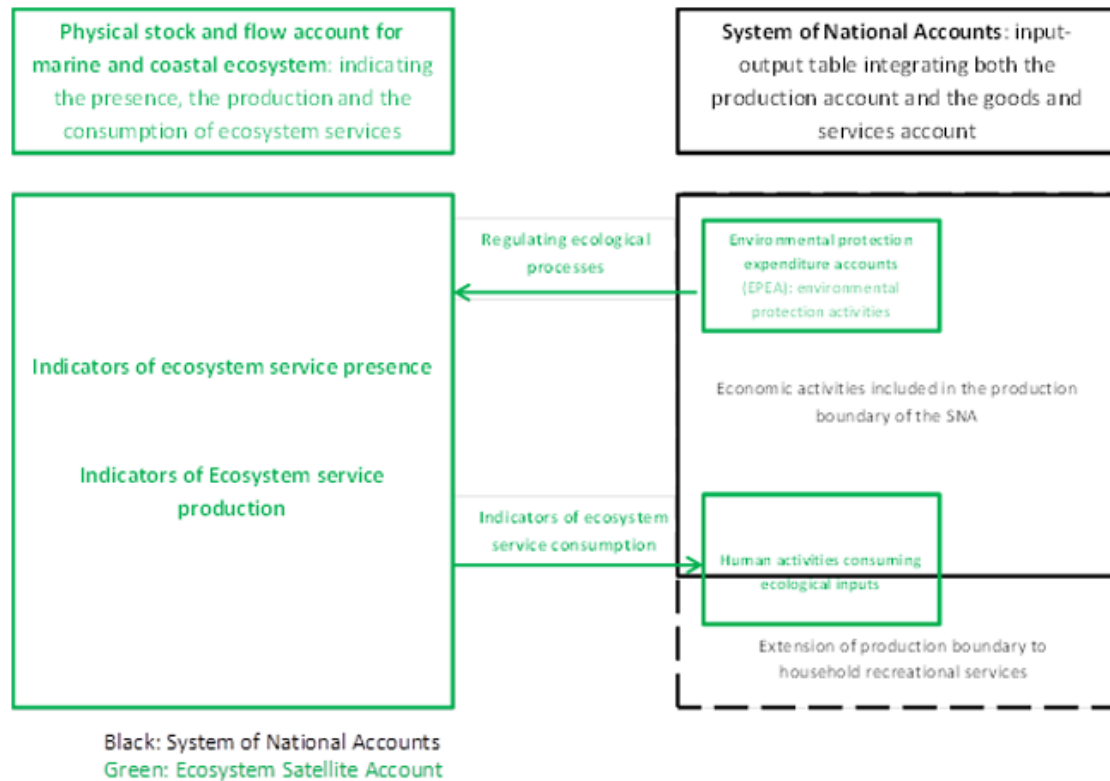
## Ecosystem accounting

In 2012, a satellite account called the '**System of environmental-economic accounting Central Framework**' [SEEA, 2013] was published by the United-Nations in order to incorporate the environmental assets in the national accounts and to estimate the defensive expenditures.

The conventional accounting indicators are adjusted in order to take into account the depletion of natural resources and produce an adjusted Gross Domestic Product (GDP), also called 'green GDP'.

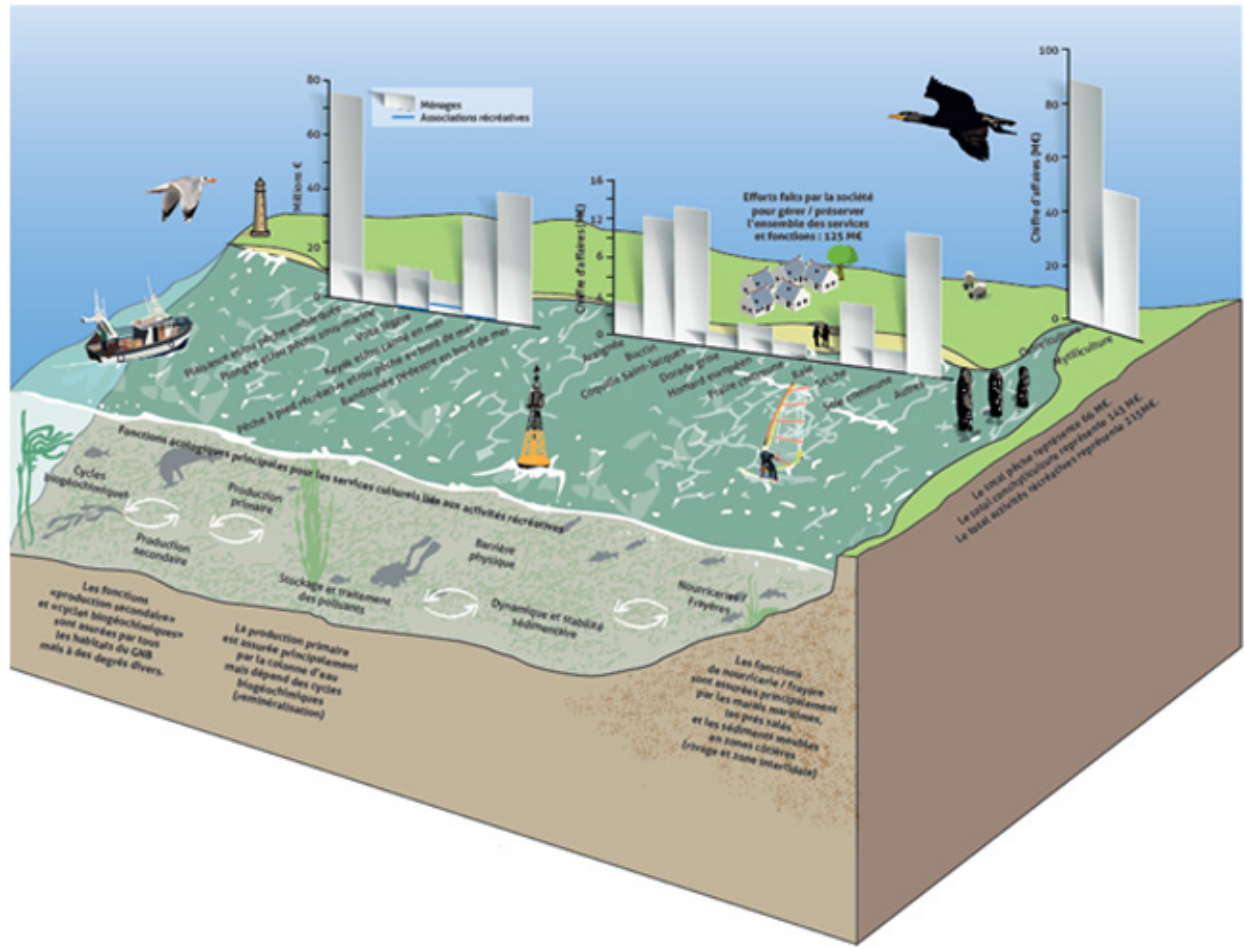
However, the SEEA focuses on natural resources, considered as well identified and separated economic goods. An experiment was carried out by the United-Nations to extend the SEEA to ecosystems: The SEEA Experimental Ecosystem Accounting [SEEA-EEA, 2013]. The SEEA-EEA focuses on asset accountings; therefore, one of the major challenges of the SEEA EEA remains to define monetary valuation methods to provide a monetary value of ecosystem services which would be consistent with the accounting approach. Indeed, the Ecosystem Services Approach has not solved all the methodological problems raised by the monetary valuation of natural capital.

For this reason, a complementary approach was adopted within the VALMER project: we developed an ecosystem satellite account, which encompasses the activities using or maintaining the ecosystem services and estimates all the resources and expenditures of these activities. For the second type of activities, it can be referred to one existing functional account of the SEEA-CF, which values the different means implemented by a society in order to avoid environmental degradation or to maintain or to increase the production of ecosystem services. Ideally, this satellite account of activities using or maintaining ecosystem services should be complemented by a physical account which would provide indicators of the ecological input used by these activities or the ecological outputs they may produce. Contrary to the SEEA-EEA, the environmental degradation would not be valued in monetary units, but in physical units. This approach was applied to the Golfe Normand-Breton study site.



*Ecosystem satellite accounting: incorporating ES in the SEEA-Central Framework*

An important issue for the integration of ecosystems in the SEEA is the assessment of ecosystem cultural services. Most of those services are obtained through a process of ‘production for own use’ by the households. It is thus necessary to extend the production boundary of the System of National Account in order to integrate those activities.



[Find out more about the ecosystem accounting in the case study: <https://participatory-assessment.eu/normand-breton-gulf/>]