

DIVERSE VALUATION AND ACCOUNTING OF NATURE

The 7th Environment Action Programme highlights the need to integrate economic indicators with environmental and social indicators by means of natural capital valuation and accounting. The United Nations Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) emphasises the consideration of diverse values of nature's contributions to people to inform policies and everyday practices. The recommendations in this brief are based on empirical research in 27 OpenNESS project (www.openness-project.eu) case studies in 23 European and 4 non-European countries, which applied 21 different assessment and valuation methods in real-life land and water management problemsⁱ. Practice has taught us that engaging with relevant beneficiaries and their diverse values of nature is indispensable to obtain legitimacy and credibility of valuation at local levels.

KEY MESSAGES

People hold **diverse** ecological, socio-cultural and economic **values** regarding nature. Values of nature are conditional on decision **context**, also at larger scales. This is why a diverse set of complementary **diverse** valuation **methods** is needed to capture the full spectrum of value, rather than only parts of this value diversity. Accounting for these diverse values increases **quality and acceptance** of decisions and policies.



In the pursuit of integration of ecosystem information, **the legitimacy of natural capital accounts at national and EU levels requires inclusion of ecological and socio-cultural values alongside monetary values.**

THE IMPLICATIONS: THE NEED FOR DIVERSE VALUATION IN PRACTICE

Several ongoing policy processes include valuation of nature and/or ecosystem services in one form or another. Many EU policies actually reflect *non-monetary values*, such as the EU habitat and Birds Directives, the Water Framework Directive and environmental legislation in member states, which protects nature beyond its purely instrumental utility. Diverse values can also be included in future or ongoing valuation initiatives in the EU, including strategic impact assessments, environmental impact assessment, and accounting for ecosystems within systems of environmental and economic accounts, such as Mapping and Assessing Ecosystem Services (MAES) and the Knowledge Innovation Project on International Natural Capital Accounting (KIP-INCA). Based on experiences from OpenNESS case studies we provide recommendations for **valuation for policy support** to broaden and diversify valuation approaches.

- 1. START WITH THE PURPOSE** of the valuation to identify which value dimensionsⁱ are relevant;
- 2. DEFINE THE INFORMATION NEEDS** such as which datasets and indicators are needed, in close interaction with the relevant stakeholders and place-based experts;

KEY CONCEPTS

Value is the worth or importance of something. **Valuation** is the act of assessing, appraising or measuring value. **Biophysical assessment and indicators** reflect ecological values when they focus on ecosystem structures and processes of importance to policy targets. **Socio-cultural valuation methods** explore ways of representing cognitive, emotional, and ethical responses to nature. They are often shared values, particularly suited to explaining the context specificity of values. **Monetary valuation methods** quantify preferences, needs, and desires of people for ecosystem services in economic terms. They are particularly suited for describing values across wider populations for ecosystem services that are traded directly or indirectly in markets. **Natural capital accounting** describes how the stocks of ecosystem assets, and the flows of ecosystem services and benefits, change from year to year in both physical and monetary terms.

3. **APPLY A SET OF METHODS** to address complementary ecological, monetary and socio-cultural dimensions simultaneously;
4. **USE ORIGINAL VALUATION DATA** based on information from actual beneficiaries and providers, rather than transferred estimates;
5. **PRESENT DIVERSE VALUES** in parallel when informing decisions.

These recommendations target the specific case of natural capital accounting as developed in the KIP-INCA project and UNSD System of Environmental and Economic Accounts (SEEA-EEA). **Natural Capital Accounting** is considered one of the main tools to improve decision-making on nature at Member State and EU level. Experimental ecosystem accounting (EEA) aims to make nature's contributions to society

more visible, using methods compatible with the system of national accounts (SNA)ⁱⁱ. While SNA accounting standards prescribe valuation methods based on exchange values such as market prices, management of Natural Capital also requires considerations in the realm of ecological and socio-cultural value dimensionsⁱⁱⁱ. Capturing these values goes beyond the accounting methods established in the SNA. EEA Guidance explicitly recognises the potential of biophysical ecological information, as well as diverse value concepts in accounts as a basis for policy analysis. OpenNESS findings suggest that developing complementary indicators based on socio-cultural values is required to provide policy with a more diverse basis for decision-

Over 700 000 large city trees; dozens of tree species, € 3,5 billion in replacement costs, almost 70 million visits/year to tree-covered green spaces: the OpenNESS case study in Oslo, Norway, used ecological, social and monetary indicators to raise awareness about urban green infrastructure.

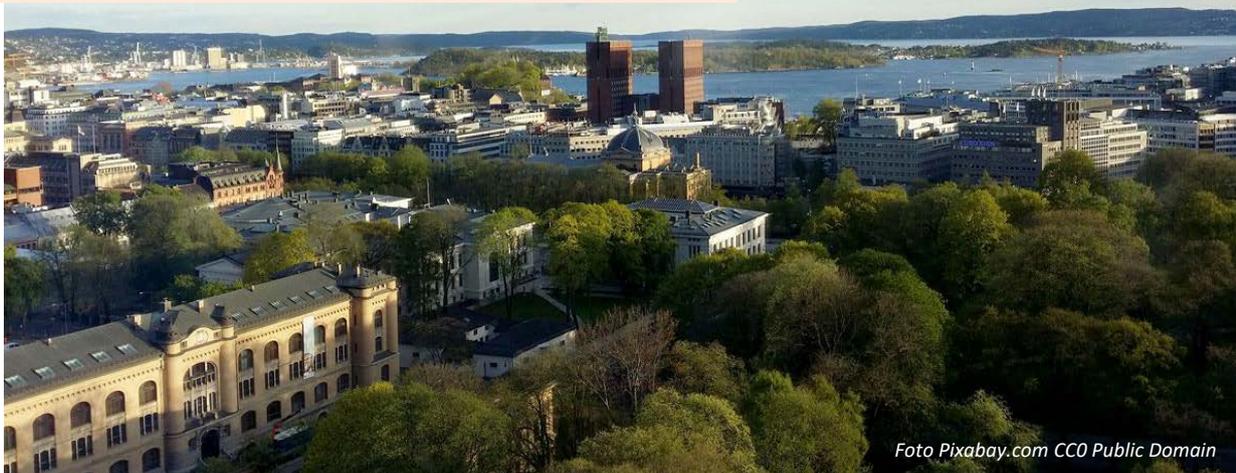


Foto Pixabay.com CC0 Public Domain



OpenNESS is funded by the European Union's Seventh Programme for research, technological development and demonstration under grant agreement No 308428.

www.openness-project.eu @ info@openness-project.eu

making, while endeavouring to avoid incompatibility of approaches.

We suggest using **three complementary accounting tables** to compile indicators reflecting **ecological, economic, and socio-cultural value dimension** (fig. 3): biophysical accounts of ecosystem extent and condition, taking into account thresholds; monetary accounts of the SNA of ecosystem services contribution to economic production and consumption; and socio-cultural accounts describing e.g. health, wellbeing, heritage, equity and justice.

PARALLEL COMPLEMENTARY ACCOUNTS:

- Can be designed and segmented to suit a **specific purpose** (e.g. flagging ecological thresholds, socio-cultural no-go zones, inequity issues).
- Can be **tailored** to specific features of input data, rather than starting from accounting compatibility requirements that restrict the kinds of data collected (e.g.

Farmers in Doñana, Spain, hold diverse values related to their landscape. Different valuation methods shift the importance of provisioning, regulating and cultural services and associated values. The study carried out in the Doñana social-ecological system highlights that valuation techniques generate complementary perspectives on services and values.



Thematic socio-cultural value indicators

Due to their “shared” nature socio-cultural values are challenging to express in aggregate accounts. Indicators of health and well-being associated with fair and equal access to nature can be used as proxies of socio-cultural values. For example, secure access to food and water, distribution of property rights across socio-economic groups, or the number of sacred natural sites maintained by local communities.

exclusion of restoration costs and welfare economic estimates).

- Stimulate collation of the **many sources** of potentially useful data already available and can steer design of new data collection strategies (e.g. wellbeing and welfare surveys, remote sensing, ecosystem service modelling).
- Accommodate member state or regional fine-tuning, allowing the reflection of **specificities and diversity of regions**, while increasing utility for regional and local level decision-making without losing comparability.

Figure 1

