

# Supplement 1: Definition of key terms, as used in the study

**actual use** (of an ES) The amount of an ES that is actually mobilized in a specific place (area) and time. *based on OpenNESS (2014)*

**assessment** The analysis and review of information derived from research for the purpose of helping someone in a position of responsibility to evaluate potential actions or think about a problem. Assessment means assembling, summarising, organising, interpreting and possibly reconciling pieces of existing knowledge and communicating them so that they are relevant and helpful to an intelligent but inexperienced decision-maker. Assessments are inherently transdisciplinary processes where scientists and stakeholders work together to match data to the elements of a shared conceptual framework. *based on MAES (Maes et al 2014), extended*

**basic spatial unit** The smallest spatial unit of a mapping project for which the elements of the conceptual framework are estimated. The (typical) size of BSUs is called spatial resolution. *based on SEEA-EEA (2012)*

**benefit** Positive change in wellbeing from the fulfilment of individual or societal needs and wants. Benefits generated by ecosystem services are no longer inherently connected to the source ecosystems. *combined from MAES (Maes et al 2014) & OpenNESS (2014)*

**capacity** (for an ES) The ability of a given ecosystem unit to generate a specific ecosystem service in a sustainable way. *based on SEEA-EEA (2012)*

**conceptual framework** A model describing the relevant elements of a physical or social system and the main connections between them for the purposes of understanding and communication *based on OpenNESS (2014)*

**condition aspect** Meaningful groups / types of ecosystem characteristics, which should be taken into consideration for quantifying ecosystem condition in a particular assessment context. 'Condition aspects' are related to 'ecosystem condition' in the same way as 'ecosystem service types' are related to the concept of 'ecosystem services'. All relevant condition aspects should be represented by quantitative condition indicators in the assessment process.

**ecosystem 1** (in a general context): Dynamic complex of plant, animal, and microorganisms communities and their non-living environment interacting as a functional unit. Humans may be an integral part of an ecosystem, although 'socio-ecological system' is sometimes used to denote situations in which people play a significant role, or where the character of the ecosystem is heavily influenced by human action. *based on OpenNESS (2014) and MAES (Maes et al 2014)* **2** (in a practical MAES context): a synonym of 'ecosystem unit'

**ecosystem assessment** Assessment of the causes of ecosystem change, their consequences for human well-being, and management and policy options. *based on MAES (Maes et al 2014)*

**ecosystem characteristic** Key attributes of an ecosystem unit describing its components, structure, processes, and functionality, frequently closely related to biodiversity. The term characteristics is intended to be able to encompass all of the various perspectives taken to describe an ecosystem. *based on SEEA-EEA (2012)*

**ecosystem condition [EC]** The overall quality of an ecosystem unit, in terms of its main characteristics underpinning its capacity to generate ecosystem services. *combined from SEEA-EEA (2012) & OpenNESS (2014)*

**ecosystem service [ES]** The contributions of ecosystems to benefits obtained in

economic, social, cultural and other human activity *based on MAES (Maes et al, 2014) and SEEA-EEA (2012)*

**ecosystem service classification** A classification of ecosystem services according to the ecological processes they rely on, and the benefits they contribute to *based on OpenNESS (2014)*

**ecosystem service type** A specific category defined by an 'ecosystem service classification'

**ecosystem type** A specific category defined by an 'ecosystem typology'. In a practical MAES context 'habitat type' and 'land cover type' can be seen as synonyms.

**ecosystem typology** A classification of ecosystem units according to their relevant ecosystem characteristics, usually linked to specific objectives and spatial scales. In the Niraj-MAES assessment we took a "management cycle" perspective, and considered all phases of a typical management cycle to belong to the same ecosystem type (e.g. clearcut sites were still considered forests)

**ecosystem unit** An instance of an ecosystem type within a basic spatial unit. In the Niraj-MAES assessment, on account of the relatively fine spatial resolution, we assumed that each basic spatial unit is occupied by just a single ecosystem unit (the dominant one), thus these two concepts (basic spatial unit, ecosystem unit) coincide.

**habitat 1** (in a general context): The sum of the abiotic and biotic factors of the environment, whether natural or modified, which are essential to the life and reproduction of the species *based on OpenNESS (2014)* **2** (in a practical MAES context): habitat and habitat type are used as synonyms of 'ecosystem (2)' and 'ecosystem type'.

**human inputs (to ES)** Anthropogenic contributions added to ecosystems such as fertilizers, fossil fuel, or labour that are invested to turn ecosystem functions into ecosystem services and benefits *based on MAES (Maes et al 2014 as 'energy inputs') and OpenNESS (2014)*

**human well-being** A state that is "intrinsically and not just instrumentally valuable" (or good) for a person or a societal group (e.g. basic materials for a good life, health, good physical and mental state, good social relations, security) *based on OpenNESS (2014)*

**indicator** An indicator is a number or qualitative descriptor generated with a well-defined method which reflects a phenomenon of interest (the indicandum). Indicators are frequently used by policy-makers to set environmental goals and evaluate their fulfilment. *based on OpenNESS (2014)*

**mapping** The process of creating a cartographic representation (map) of objects in geographic space. In the MAES context mapping means a spatially detailed assessment of the elements of the MAES framework, which aims inter alia quantifying the selected indicators for each basic spatial unit. *based on OpenNESS (2014), extended*

**model** A simplified representation of a complex system or process including elements that are considered to be essential parts of what is represented. Models aim to make it easier to understand and/or quantify by referencing to existing and usually commonly accepted knowledge. Models for ecosystem services (or condition) are formalised relationships between ecosystem characteristics which can be used as methods to estimate unknown characteristics based on already known ones. *based on OpenNESS (2014), extended*

**production boundary** The imaginary "boundary" between ecological and social system which should be specified in an ecosystem accounting context. Ecosystem processes that cross this boundary and contribute to social benefits should be considered as (final) ecosystem services, whereas processes, that do not cross this boundary are to be considered internal processes of ecosystems. *based on OECD (2016)*

**stakeholder** Any group, organisation or individual who can affect or is affected by the problem addressed in a study / assessment. *based on OpenNESS (2014)*

**tier** (a tiered approach) A classification of methods available in an assessment context according to level of detail and complexity with the aim to provide advice on method choice. The provision and integration of different tiers enables ES assessments to use methods consistent with their needs and resources. *based on OpenNESS (2014)*

**trade-off** (in ES) Situation in which one service increases and another one decreases. This may be due to simultaneous opposite response to the same pressure or due to true interactions among services. *OpenNESS (2014)*

**transdisciplinarity** A reflexive, integrative, and problem-oriented scientific principle aiming at the solution of complex and pressing real-life problems by joint efforts of various scientific and non-scientific bodies (stakeholders) making use of various knowledge forms (including scientific, local, place-based, and practitioners' knowledge). *based on OpenNESS (2014)*

**valuation** The process whereby the importance of something (e.g. an element of the MAES framework) is estimated in monetary (economic valuation) or non-monetary (bio-physical valuation, socio-cultural valuation) terms *based on OpenNESS (2014)*

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