

## 1. Indicator name

A.2 Extent of natural ecosystems

## 2. Date of metadata update

2024-09-01 00:00:00 UTC

## 3. Goals and Targets addressed

### 3a. Goal

Headline Indicator for Goal A: The integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050; Human induced extinction of known threatened species is halted, and, by 2050, the extinction rate and risk of all species are reduced tenfold and the abundance of native wild species is increased to healthy and resilient levels; The genetic diversity within populations of wild and domesticated species, is maintained, safeguarding their adaptive potential.

### 3b. Target

Headline Indicator for Target 1: Ensure that all areas are under participatory integrated biodiversity inclusive spatial planning and/or effective management processes addressing land and sea use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.

## 4. Rationale

1. Natural ecosystems are the foundation of biodiversity, providing the conditions necessary for a wide array of life forms to coexist and thrive. The conversion of natural ecosystems to intensively modified or anthropogenic ecosystems, driven by human activities such as urban development, agriculture, and infrastructure development, is one of the main drivers of biodiversity loss and is reflected in the reduction of the area of natural ecosystems. Conversely, ecological restoration efforts can result in increases in the area of natural ecosystems.

2. This indicator aims to show the extent of natural ecosystems as a proportion of overall area, and to track changes in this proportion over time. This responds to the element of Goal A that refers to "substantially increasing the area of natural ecosystems by 2050". The indicator also responds to the elements of Target 1 that refer to "addressing land and sea use change", "to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030". The indicator can be disaggregated into different natural ecosystem types, providing insights into the relative abundance or scarcity of different natural ecosystem types as well as their relative rates of loss or gain over time.

3. The term "natural ecosystem" broadly refers to ecosystems where the impact of humans on ecosystem composition, structure and function are low compared to natural factors. It is used in the indicator in a broad sense, including natural and semi-natural ecosystems, for several reasons:

(a) Semi-natural ecosystems often retain substantial biodiversity and are thus important from a biodiversity perspective, along with natural ecosystems. This contrasts with anthropogenic (intensively modified) ecosystems, which are of far less importance from a biodiversity perspective. Thus, the key distinction from a biodiversity perspective is between natural or semi-natural ecosystems on the one hand and anthropogenic ecosystems on the other.

(b) If semi-natural ecosystems were excluded from the indicator, this may have the unintended consequence of reducing attention to their management, conservation and in some cases restoration.

(c) In practice there are virtually no ecosystems that are completely natural and there is no agreed scientific basis for making firm distinctions between natural, near-natural and semi-natural ecosystems, which exist on a continuum, so a narrow definition of natural ecosystems would make the indicator difficult to operationalise.

4. The indicator focuses on conversions from natural/semi-natural to anthropogenic ecosystems and vice versa. The overall indicator will not reflect changes from natural to semi-natural ecosystems or vice versa, or changes from one natural ecosystem type to another. For simplicity, the term "*natural ecosystems*" is used in the metadata to refer to natural and semi-natural ecosystems

5. The indicator does not aim to address the ecological condition or integrity of natural ecosystems, which is captured in other indicators such as the Red List of Ecosystems (indicator A1). This means that ecosystems do not have to be in good ecological condition to be included in the indicator as natural or semi-natural. Where land uses in natural ecosystems result in some biodiversity loss and a transition to a semi-natural state (such as in managed native forests or grazed shrublands, grasslands or savannas), this decline in condition and accompanying biodiversity loss would be picked up in a Red List of Ecosystem assessment.

6. The [System of Environmental-Economic Accounting \(SEEA\) Ecosystem Accounting](#), as the adopted international statistical standard for organizing data about ecosystems, measuring ecosystem services, tracking changes in ecosystem assets, and linking this information to economic and other human activity, provides the conceptual framework and methodology for the compilation of this indicator. SEEA Ecosystem Accounting requires accounting for ecosystem extent in biophysical terms as one of five core ecosystem accounts, with the extent account providing the foundation for the other four core accounts. Because accounting tables have a standard structure and are based on standard definitions and classifications, they allow for comparison across time periods and between countries. This makes an accounting approach a powerful basis for the development of national and global indicators. An additional strength of the accounting approach is that accounts provide granular information that can be used for local application and fine-grained policy decisions as well as aggregate information for national and global reporting.

7. An ecosystem extent account tracks the extent of different ecosystem types within an area (such as a country) for successive accounting periods, providing an opening extent and closing extent for each ecosystem type in each accounting period. The information on opening and closing stocks in the account tables can be used to derive a range of indicators and presented in a range of forms (e.g. summary tables, maps, graphs).

8. In its simplest form, the indicator "Extent of natural ecosystems" can be shown as natural and semi-natural ecosystems as a proportion of total area, at the national level and globally, based on the closing extent for a particular accounting period. This provides information about the abundance of all natural and semi-natural ecosystems relative to anthropogenic ecosystems. A mock-up (with a hypothetical global average) is provided in figure I. An average per region could also be included.

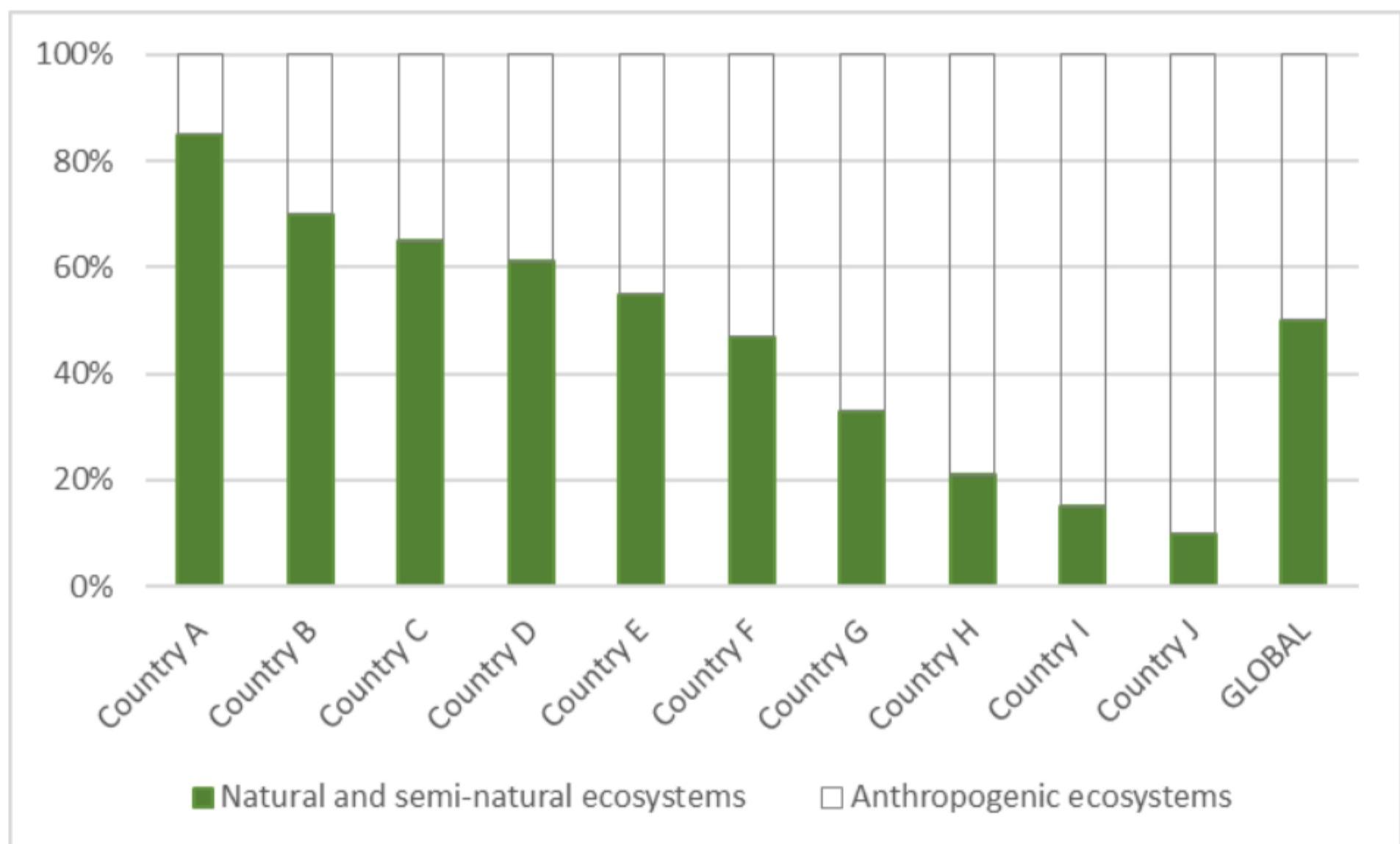


Figure I. Mock-up of indicator Proportion of natural ecosystems as at end of accounting period

9. The natural ecosystems can be disaggregated into different ecosystem types, for example by realm, biome or ecosystem functional group, to show the relative abundance or scarcity of different ecosystem types within the broad "natural" category.

10. The focus on natural ecosystems in Indicator A2 means that it aligns with the scope of Indicator A1, the Red List of Ecosystems, as Red List assessments focus primarily on natural ecosystems. Indicator A2 complements Indicator A1, each providing a different perspective. Indicator A1 focuses on which ecosystem types are most threatened and face the greatest risk of collapse, while indicator A2 focuses on the abundance of natural ecosystems relative to anthropogenic ecosystems and the relative abundance or scarcity of different natural ecosystem types.

## 5. Definitions, concepts and classifications

### 5a. Definition

#### Indicator definition:

11. The indicator, at the national level, is defined as the extent of natural and semi-natural ecosystems as a proportion of total area of the country at a particular point in time, expressed as a percentage. The point in time is the closing date of the accounting period for which the ecosystem accounts were compiled. Trends over time will be evident from changes in the proportion of total area over successive accounting periods.

12. The total surface area of a country includes land, inland water and, if applicable, territorial waters (i.e. ocean area to the end of the exclusive economic zone). For countries with marine territory, the indicator should be compiled ideally for the total surface area of the country, including territorial waters. However, it could be compiled only for land and inland water areas if data on the distribution of marine ecosystems are not yet available.

13. It is recognised that the indicator does not capture information about ecosystems in the high seas (i.e. areas beyond national jurisdiction)

#### Other key concepts and definitions:

14. The concepts, definitions and classification used are based on the SEEA Ecosystem Accounting<sup>1</sup> and the International Union for the Conservation of Nature's Global Ecosystem Typology (IUCN GET) (United Nations et al. 2021).

15. *Ecosystem extent* is the size of an ecosystem asset, where ecosystem assets are defined as contiguous spaces of a specific ecosystem type characterized by a distinct set of biotic and abiotic components and their interactions (United Nations 2021), and the specific ecosystem type reflects a distinct set of abiotic and biotic components and their interactions. An ecosystem type may have several occurrences (i.e. be made up of several ecosystem assets). The extent of all the ecosystem assets combined make up the extent of the ecosystem type.

16. The total area for which ecosystem accounts are compiled is called the *ecosystem accounting area*. For the purposes of accounting, ecosystem types must be delineated to be spatially mutually exclusive and comprehensive across the ecosystem accounting area (i.e. no overlaps (ARIES for SEEA) or gaps between ecosystem types and wall-to-wall coverage of the whole ecosystem accounting area). The total area is the sum of the areas of all ecosystem types in that area including natural, semi-natural and anthropogenic ecosystem types. For the purposes of this indicator, the ecosystem accounting area should be the total area of the country. For countries that have marine territory, the total surface area of the country could be divided into separate ecosystem accounting areas, for example one for the land and inland water area and another for the territorial waters. Further guidance on this will be provided in compilation guidelines to be developed.

17. *Changes in extent* of natural ecosystems occur primarily through ecosystem conversion. In the SEEA Ecosystem Accounting, ecosystem conversions refer to situations in which, for a given location, there is a change in ecosystem type involving a distinct and persistent change in the ecological structure, composition and function which, in turn, is reflected in the supply of a different set of ecosystem services. This definition aligns well with the approach to loss of ecosystem area (leading eventually to ecosystem collapse) in the Red List of Ecosystems.

18. Reduction in the extent of natural and semi-natural ecosystems will be tracked primarily through measuring conversion of area within natural or semi-natural ecosystems to anthropogenic ecosystems. There are also instances in which the extent of natural ecosystems may increase, for example through restoration of anthropogenic ecosystems to natural or semi-natural ecosystems.

19. Ecosystems are classified according to the IUCN GET, which is the *reference classification for ecosystem types* in the SEEA Ecosystem Accounting and which was also endorsed by the United Nations Statistical Commission at its 55th session in March 2024 as an international statistical classification and recommended it to be included in the international family of classifications (Keith et al. 2020). The three upper levels of IUCN GET – realms, biomes and ecosystem functional groups – classify ecosystems based on their functional characteristics (such as structural roles of foundation species, water regime, climatic regime or food web structure). Level 3 – ecosystem functional groups (EFGs) – of the IUCN GET is used as the basis for this indicator.

20. *Natural ecosystems* are ecosystems in which the impacts of humans on ecosystem composition, structure and function are low compared to natural factors.<sup>6</sup> As discussed in Section 4, for the purposes of this indicator natural ecosystems are defined broadly to include natural and semi-natural ecosystems and for simplicity the term "*natural ecosystems*" is used in the metadata to refer to natural and semi-natural ecosystems. An exception is in the definition of the indicator, where "*natural and semi-natural*" is used for precision.

21. “*Intensively modified or anthropogenic ecosystems*” are predominantly influenced by human activities where a stable natural ecological state is unattainable and future socio-economic interventions are required to maintain a new stable state. In some cases semi-natural ecosystems also require constant management to be maintained.

22. For the purposes of this indicator, *natural and anthropogenic ecosystems are identified based on the EFGs of the IUCN GET*. Of the 110 EFGs, 98 are considered natural or semi-natural and 12 are considered anthropogenic. The anthropogenic EFGs are listed in Table 1. The distinction between natural and anthropogenic ecosystem types should be made at level of EFGs rather than biomes, because some biomes include both semi-natural and anthropogenic ecosystem types.

**Table 1 List of ecosystem functional groups (EFGs) in the IUCN GET that are considered intensively modified or anthropogenic and thus excluded from “natural ecosystems” for Indicator A2**

<i>Realm</i>	<i>Biome</i>	<i>Ecosystem functional group</i>
Terrestrial	T7 Intensive land-use systems <sup>7</sup>	T7.1 Annual croplands
		T7.2 Sown pastures and fields
		T7.3 Plantations
		T7.4 Urban and industrial ecosystems
Freshwater	F3 Artificial fresh waters	F3.1 Large reservoirs
		F3.2 Constructed lacustrine wetlands
		F3.3 Rice paddies
		F3.4 Freshwater aquafarms
		F3.5 Canals, ditches and drains
Marine	M4 Anthropogenic marine systems	M4.1 Submerged artificial structures
		M4.2 Marine aquafarms
Marine- terrestrial	MT3 Anthropogenic shorelines	MT 3.1 Artificial shorelines

Please refer to the IUCN GET (Keith et.al 2020) for detailed descriptive profiles for each EFG, which can also be found at <https://global-ecosystems.org/>.

The IUCN GET is also used for summarising and disaggregation in Headline Indicator A1, the Red List of Ecosystems, which focuses on the risk of collapse of natural ecosystems.

## 5b. Method of computation

23. The indicator is drawn directly from ecosystem extent accounts compiled based on the SEEA Ecosystem Accounting framework, which organize data on the extent of different ecosystem types. An ecosystem extent account records the extent (area) and changes in extent, for all ecosystem types within an ecosystem accounting area (in this case a country), including natural, semi-natural and anthropogenic ecosystem types.<sup>8</sup> A stylized example of an ecosystem extent account is shown in Table 2, where the opening extent, closing extent, and additions and reductions in extent for each ecosystem type are recorded for a particular accounting period. Entries are in measurement units such as hectares or square kilometres. Ideally accounts are compiled for successive accounting periods, with the closing extent for one accounting period becoming the opening extent for the next accounting period. The critical elements of the account table for reporting on the indicator are the opening extent of the first accounting period and the closing extent of the first and each subsequent accounting period (see Section 6d.3).

24. More comprehensive versions of the ecosystem extent account table than the one shown in Table 2 are also possible (e.g. see Table 4.1 in SEEA EA), and a change matrix can be compiled alongside the extent account (described in SEEA EA), providing additional information about conversions between different ecosystem types.

**Table 2 Stylized ecosystem extent account (units of area)**

Accounting entries	Ecosystem functional groups (examples)						Total
	T2.6 Temperate forests and woodlands	T4.5 Temperate subhumid grasslands	F2.3 Seasonal freshwater lakes	T7.1 Annual croplands	T7.4 Urban and industrial ecosystems	...	
Opening extent							
Additions to extent							
Reduction to extent							
Closing extent							

Source: Adapted from SEEA Ecosystem Accounting, Table 2.2.

25. Countries that have their own national classification system and maps for ecosystems should use that classification and spatial data for the compilation of extent accounts. The accounts can be compiled in as much detail as needed at the national level, for example at a level equivalent to Levels 5 or 6 of the GET (these levels are intended to be developed bottom-up, from the national or local level).

26. In such cases, a bridge or concordance of this national classification system with IUCN GET Level 3 (EFGs) should be developed to facilitate consistency and comparison across countries. Each national ecosystem type should be cross-walked to the EFG that provides the best fit (not necessarily a perfect fit) based on the descriptions of the EFGs (available at <https://global-ecosystems.org/>).

27. Guidance and tools to support countries with this cross-walking process, which is required for several GBF indicators, are in the process of being developed. It is important to note that the cross-walk from national ecosystem types to EFGs is a conceptual cross-walk not a spatial cross-walk. Countries should use their own spatial data on the distribution of ecosystem types (cross-walked to EFGs) for compiling the extent account, not, for example, the indicative spatial data on distribution of EFGs that is available on the GET website.

28. When no existing national classification and/or map of ecosystem types is available, or deemed suitable for reporting, a country could opt to use global data or tools to compile extent accounts.

29. Once national ecosystem types have been cross-walked to the EFGs in the GET, the extent account table based on national ecosystem types should be converted to an extent account based on GET EFGs. In some cases this will involve aggregating values for several national ecosystem types that fall within one EFG.

30. The indicator, "*extent of natural and semi-natural ecosystems as a proportion of total area*", is then obtained by summing the extent of the EFGs pertaining to natural and semi-natural ecosystems (in hectares or square kilometres) and dividing by total area of the country (in the same units). The final indicator is expressed in percentage terms.

31. As noted in Section 4, total area of the country includes land area, inland water area and, where applicable, territorial waters (to the end of the exclusive economic zone). For countries with marine territory that do not yet have data on the distribution of marine ecosystem types, the indicator can be compiled only for total land and inland water area and the associated EFGs. Further, because most marine ecosystems are natural or semi-natural, there is a risk that reporting the indicator for land and marine area combined would mask the extent of anthropogenic ecosystems in the terrestrial realm. This means that the indicator should be reported separately for terrestrial and marine realms (at the national and global level). Guidance will be needed on dealing with freshwater ecosystems and transitional ecosystems (such as coastal ecosystems) in the indicator. In addition, further guidance will be needed on how to deal with instances where a country has spatial data on some but not all ecosystem types within its area (this may be the case especially in marine areas). Compilation guidelines, to be developed, should address these issues.

32. For reporting the indicator, countries will not be expected to submit the ecosystem extent account table. Rather, they will submit data on the extent of each EFG and the total country area in absolute terms (e.g. ha/km<sup>2</sup>). A globally aggregated indicator can then be obtained by summing the national values in absolute terms and converting them to proportions expressed in percentage terms. (See further discussion in Section 6d.)

## 5c. Data collection method

33. Also see Section 5e Data sources. The national maps and classifications of ecosystem types that underpin ecosystem extent accounts, and time series maps that show changes in extent of ecosystems, are developed based on a wide range of data sources which differ for different realms and have different collection methods. Remote sensing and earth observation data often play an important role, along with field data and expert knowledge.

34. When national data is not available, global data layers may be used where they are considered suitable.

## **5d. Accessibility of methodology**

35. The United Nations Statistical Commission at its 52nd session in 2021 adopted the SEEA Ecosystem Accounting chapters 1-7 describing the accounting framework and the biophysical accounts, including chapters on ecosystem extent, as an international statistical standard. Existing SEEA EA resources can be drawn on in compiling accounts, including freely available e-learning resources ([SEEA e-learning resources | System of Environmental Economic Accounting](#)). In addition, the Technical Committee on the SEEA Ecosystem Accounting is working on technical guidance notes on the compilation of ecosystem extent accounts (among others), which will assist countries in producing these accounts. Capacity development for Parties, especially for developing countries, should be provided to support the compilation of this indicator. 36. IUCN GET is a published and peer reviewed classification of global ecosystems which can be accessed at <https://global-ecosystems.org/>

## **5e. Data sources**

37. The main data requirements for this indicator are national maps of ecosystem types using national ecosystem classifications and time series maps that show changes in extent of ecosystems. In the terrestrial realm, conversion of natural and semi-natural ecosystems to intensively modified ecosystems would typically be mapped using time series land cover/land use data. Data sources could include research institutions, various government ministries and national mapping agencies. 38. In the absence of national data sources, regional and global datasets can be used, subject to criteria, standards and quality assurance, including validation at the national level through appropriate institutional processes involving relevant national experts. For example, ARIES for SEEA allows users to derive a basic ecosystem extent account (for the period between 1992 and 2020) in the terrestrial, freshwater and coastal realms using a multilayer look-up table approach which combines global data sources on land cover and other metrics to approximate EFGs (<https://seea.un.org/content/aries-for-seea>). The recent initiative of the Group on Earth Observations (GEO) to establish a Global Ecosystems Atlas may also provide useful data for this indicator. 39. Data quality guidelines for this and other headline indicators should be addressed in compilation guidelines.

## **5f. Availability and release calendar**

40. The indicator methodology is based on SEEA Ecosystem Accounting, which is well developed and accepted by the international statistical community and other communities working on ecosystem accounting.

41. Since the adoption of the SEEA Ecosystem Accounting as an international statistical standard, an increasing number of countries have started the implementation of ecosystem extent accounts. According to the 2023 Global Assessment of Environmental-Economic Accounting and Supporting Statistics, 33 countries compiled ecosystem extent accounts at least once during the period 2019 to 2023.

42. For countries with no national data on ecosystem extent, global tools and databases could be drawn on. Preliminary ecosystem extent estimates could be prepared via the ARIES for SEEA platform based on global datasets and models. These would require validation at the national level through appropriate institutional processes involving relevant national experts.

## **5g. Time series**

43. Although it is ideal to compile ecosystem accounts on an annual basis, in practice this is seldom possible and may not be meaningful. For the ecosystem extent account, an update every three to five years may be sufficient and is likely to indicate actual changes in extent.

## **5h. Data providers**

44. For those countries that have national ecosystem extent accounts, the relevant national authorities, in particular national statistical offices, ministries of environment or related agencies, will provide data for this indicator. In the absence of national ecosystem extent accounts, data may be estimated through ARIES for SEEA or other global data platforms and mechanisms. Such estimates would require national validation through appropriate institutional processes involving relevant national experts.

## **5i. Data compilers**

45. For those countries that have national ecosystem extent accounts, the relevant national authorities, in particular the national statistical offices, ministries of environment or related agencies, will compile this indicator. In the absence of national ecosystem extent accounts, estimates may be made using ARIES for SEEA or other global data platforms using existing global data sources. Such estimates would require national validation through appropriate institutional processes involving relevant national experts.

## **5j. Gaps in data coverage**

N/A

## **5k. Treatment of missing values**

46. Missing values for individual countries may be estimated using global data platforms using existing global data. Such estimates would require national validation through appropriate institutional processes involving relevant national experts.

## **6. Scale**

### **6a. Scale of use**

Scale of application (please check all relevant boxes):

Global:  Regional:  National:

47. Scale of data disaggregation/aggregation:

- (a) Global/ regional scale indicator can be disaggregated to national level:
- (b) National data is collated to form global indicator:

48. The indicator is applicable at the global, national and regional scale. National data can be aggregated to form the global indicator provided that the underlying ecosystem classifications can be linked to IUCN GET, noting that further guidance on cross-walking national ecosystem classifications to the IUCN GET is needed.

### **6b. National/regional indicator production**

49. The SEEA Ecosystem Accounting and IUCN GET are scalable at any level, including national and regional levels.

### **6c. Sources of differences between global and national figures**

50. Differences between country produced and internationally estimated data may arise due to differences in spatial resolution of datasets, classification and mapping approaches, cross-walking approaches, projection, and definition of ecosystem conversion. 51. Differences may also arise due to territorial disputes between countries or in the case condominiums. These differences will be dealt with on a case-by-case basis.

### **6d. Regional and global estimates & data collection for global monitoring**

#### **6d.1 Description of the methodology**

52. Regional and global estimates are produced by aggregating country-level data.

#### **6d.2 Additional methodological details**

53. Countries will provide data (using a spreadsheet template or through an online data collection system) that will request them to provide values in absolute terms (e.g. ha) for all EFGs in their country (see Section 6d.3 below). These values can then be aggregated globally and converted to percentages.

#### **6d.3 Description of the mechanism for collecting data from countries**

54. Data will be collected from countries (using a spreadsheet template or an online data collection system). As noted earlier, countries will not be required to submit their ecosystem extent account tables but rather to submit data extracted from the tables. Data on actual area in absolute terms is very useful, so the reporting template will require countries to report not only on proportions in percentage terms but also on the actual areas (e.g. in ha or km<sup>2</sup>). Countries will be requested to submit data on the extent of each EFG present in the country (natural, semi-natural and anthropogenic EFGs) at the end of each accounting period<sup>10</sup> as well as the total area of the country. The sum of the area of all EFGs for each accounting period should equal the total area of the country (noting that separate ecosystem accounting areas may be required for land and inland water area and for territorial waters, if applicable, as discussed in Section 5a).<sup>11</sup> Countries should identify the EFGs using the EFG codes and names from the GET Collecting data from countries disaggregated to EFGs allows for global aggregation to biomes or realms as needed.

55. The reporting template will allow countries to submit data for all the accounting periods for which they have compiled accounts. The first data point will be the opening extent of the first account compiled, followed by the closing extent for the first account and for each subsequent account. The opening extent of the first account provides a baseline for the country. Depending on the data available nationally, this could be the historical extent of the EFG, prior to major human modification of the landscape, or a more recent baseline.

56. Country baseline dates are distinct from the global baseline date. The proposed baseline year for global reporting under the GBF is likely to be 2020, or alternatively an average of the values between 2010 and 2020. Collecting data for years prior to the global baseline from countries that have such data could enable additional analyses that may be useful

## 7. Other MEAs, processes and organisations

### 7a. Other MEA and processes

N/A

### 7b. Biodiversity Indicator Partnership

No

## 8. Disaggregation

57. This indicator can be disaggregated by realm, biome, EFG and geographical location, all of which provide useful information.

58. The primary recommended disaggregation for A.2 Extent of natural ecosystems is:

By Ecosystem Functional Group (based on the IUCN Global Ecosystem Typology level 3); this will be the expected disaggregation for national reporting. Because the Global Ecosystem Typology is hierarchical, results can also be shown by biome and realm, which are a higher level in the hierarchy, and therefore with fewer categories (and thus potentially less informative, but more digestible for non-specialists).

59. Potential further disaggregations that are informative for this headline indicator include:

- (a) Disaggregation by geographical location;
- (b) Disaggregation by natural and semi-natural ecosystems, but this would need further discussion as the distinction between natural and semi-natural ecosystems can be difficult to make in practice (as discussed earlier). Those countries that are able to distinguish systematically between natural and semi-natural ecosystems could use this information on the relative share of natural and semi-natural area for analytical purposes, as it can provide additional relevant information about the interactions between people and ecosystems;
- (c) Subnational disaggregation may be important and useful at the country level (for example, disaggregation to provinces and municipalities). However, this would not be required for global data collection;
- (d) Disaggregation related to indigenous peoples and local communities may be relevant for this indicator. Where spatial data on indigenous peoples and local communities' lands exists, it may in principle be possible to disaggregate the indicator on this basis. However, this is a complex issue and guidance would need to be sought from the CBD's Working Group on Article 8(j) which addresses with indigenous peoples and local communities.

## 9. Related goals, targets and indicators

Target 2: Restore 30% of all Degraded Ecosystems

Target 3: Conserve 30% of Land, Waters and Seas

## 10. Data reporter

### 10a. Organisation

United Nations Statistics Division (UNSD)

### 10b. Contact person(s)

This meta-data sheet was prepared by UNSD, with contributions from members of the AHTEG and of the Task team of the UNCEEA Technical Committee on SEEA Ecosystem Accounting. Ilaria Di Matteo (dimatteo@un.org, seea@un.org), Environmental Economic Accounts Section of the UN Statistics Division

## 11. References

UN System of Environmental-Economic Accounting: <https://seea.un.org/ecosystemaccounting>

United Nations et al. (2021). System of Environmental-Economic Accounting—Ecosystem Accounting (SEEA EA). White cover publication, pre-edited text subject to official editing. Available at: <https://seea.un.org/ecosystem-accounting>.

United Nations (2021). Guidelines on Biophysical Modelling for Ecosystem Accounting Available at: <https://seea.un.org/ecosystem-accounting/biophysic...>

ARIES for SEEA: <https://seea.un.org/content/aries-for-seea>

Keith, D.A., Ferrer-Paris, J.R., Nicholson, E. and Kingsford, R.T. (eds.) (2020). The IUCN Global Ecosystem Typology 2.0: Descriptive profiles for biomes and ecosystem functional groups. Gland, Switzerland: IUCN

Assessment of Environmental-Economic Accounting and Supporting Statistics 2023. Available at <https://seea.un.org/content/global-assessment-envi...>

## 12. Graphs and diagrams