SLOVENSKI STANDARD
SIST EN 18140:2026

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Trajnostna in pametna mesta ter skupnosti - Na naravi temelječe rešitve (NbSs) - Terminologija in razvrstitev

Sustainable and smart cities and communities - Nature-based solutions (NbSs) - Terminology and classification

Nachhaltige und intelligente Städte und Gemeinden - Naturbasierte Lösungen (NbL) - Terminologie und Grundsätze

Villes et communautés territoriales durables et intelligentes - Solutions fondées sur la nature (SFN) - Vocabulaire et classification

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Sustainable and smart cities and communities - Nature-based solutions (NbSs) - Terminology and classification

Villes et communautés territoriales durables et intelligentes - Solutions fondées sur la nature (SFN) - Vocabulaire et classification

Nachhaltige und intelligente Städte und Gemeinden - Naturbasierte Lösungen (NbL) - Terminologie und Grundsätze

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (EN 18140:2026) has been prepared by Technical Committee CEN/TC 465 “Sustainable cities and communities”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2026, and conflicting national standards shall be withdrawn at the latest by October 2026.

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Introduction

At European level the European Commission (EC) released the first document on NbS: *Towards an EU Research and Innovation policy agenda for Nature-Based Solutions and Re-Naturing Cities*, in 2015. In this document the EC identified four goals that can be addressed by nature-based solutions:

— enhancing sustainable urbanisation;

— restoring degraded ecosystems;

— developing climate change adaptation and mitigation;

— Improving risk management and resilience.

In the recent document "EU taxonomy for sustainable activities" (2021c) has considered as environmental objectives the following categories: climate change mitigation and adaptation, the sustainable use and protection of water and marine resources, the transition to a circular economy, pollution prevention and control, the protection and restoration of biodiversity and ecosystems.

Evaluating the impact of NbS the "Handbook of practitioners" (2021a) reported a gap analysis in terms of:

— lack of a widely agreed definition of Nature-based Solutions (NbS);

— lack of NbS monitoring methodology and implementation stages (longer-term evaluations to assess NbS effects over time and guaranteeing continuity of monitoring measurements);

— measurability of intangible impacts (e.g. aesthetic enjoyment) and spillovers (impact of NbS intervention may spread beyond the treated area or group);

— accounting for trade-offs, difficulties in communicating to non-scientific partners the need and the challenges in a less -technical language.

The United Nation Environmental Agency with the resolution 5 provided the NbS definition that has been adopted in the present document. This definition, reported at paragraph 3.1, is the most widely accepted and multilaterally agreed NbS definition currently available (UNEA, 2022).

The effectiveness and credibility of NbS depend on adherence to key principles. These include, but are not limited to:

— biodiversity net gain and ecosystem integrity;

— addressing societal challenges while enhancing nature;

— long-term sustainability and adaptive management;

— inclusive governance and social equity.

Ensuring that NbS are framed within these principles helps prevent misinterpretation and guarantees alignment with the UNEA definition and the IUCN "Global Standard" on NbS (IUCN, 2020 a,b).

The purpose of including 3.2. Terms broadly related to NbS, is to provide context, to distinguish those terms from NbS and to support the standardisation effectiveness. These terms are connected to NbS, but not necessarily part of the definition, they have been chosen because of their frequent use in the context of NbS and their presence in the document sources.

1 Scope

Building on the consolidated definitions of NbS, this document establishes a terminology to support the development of an agreed vocabulary, forming the basis of the standardisation process.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp/

— IEC Electropedia: available at https://www.electropedia.org/

3.1 General

3.1.1
Nature-based solutions
NbS
actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human wellbeing, ecosystem services, resilience and biodiversity benefits

[SOURCE: UNEP/EA.5/Res.5 United Nations Environment Assembly of the United Nations Environment Program Fifth, 2022]

3.2 Terms broadly related to NbS

3.2.1
adaptive management
process of iteratively planning, implementing and modifying strategies for managing resources in the face of uncertainty and change

Note 1 to entry: Adaptive management involves adjusting approaches in response to observations of their effects and changes in the system brought on by resulting feedback effects and other variables.

[SOURCE: EN ISO 14090:2019, 3.3]

3.2.2
alien species
species, subspecies or lower taxon introduced outside its natural past or present distribution, including any part, gametes, seeds, eggs, or propagules of such species that might survive and subsequently reproduce

Note 1 to entry: This definition also applies to the terms “exotic species” and “introduced species” considered in this standard synonymous with “alien species”.

[SOURCE: Convention on Biological Diversity (CBD) COP 6 Decision V1/23. Alien species that threaten ecosystems, habitats or species. pp. Annex, Footnote 57 [64]

3.2.3
anthropogenic climate change
change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time period

[SOURCE: United Nations Framework Convention on Climate Change (UNFCC), https://unfccc.int/resource/ccsites/zimbab/conven/text/art01.htm modified: Antrhopogenic added in the term]

3.2.4
biodiversity
variability among living organisms on the earth, including the variability within and between species, and within and between ecosystems

[SOURCE: EN ISO 14050:2020, 3.8.22]

3.2.5
blue infrastructure
BI
strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services such as water purification, water retention, air quality improvement, space for recreation and climate resilience and adaptation

Note 1 to entry: This network of blue (water) spaces can improve environmental conditions and therefore citizens' health and quality of life. It also supports a green economy, creates job opportunities and enhances biodiversity.

[SOURCE: European Commission: Energy, Climate change, Environment https://environment.ec.europa.eu/topics/nature-and-biodiversity/green-infrastructure_en; modified: "such as water purification, water retention, air quality improvement, space for recreation and climate resilience and adaptation" added]

3.2.6
blue-green network
urban space development concept defining a network of existing and/or restored rivers and their valleys (blue areas) and green areas (agricultural areas, parks, old orchards, wastelands, degraded areas and others), as a basis for the spatial planning of cities that will provide sustainable development and adaptation to global climate change

Note 1 to entry: The network aims to create or preserve key 'reservoirs' for biodiversity and to link these through ecological corridors vital to the free movement of species. Blue-green networks can range from small-scale endeavours to all-encompassing city plans.

3.2.7
carbon sequestration
process of capturing and storing atmospheric carbon dioxide

Note 1 to entry: It is one method of reducing the amount of carbon dioxide in the atmosphere with the goal of reducing global climate change.

[SOURCE: U.S. Geological Survey https://www.usgs.gov/faqs/what-carbon-sequestration]

3.2.8
climate adaptation services
benefits to people from increased social ability to respond to climate change, provided by the capacity of ecosystems to moderate and adapt to climate change and variability

[SOURCE: Cohen-Shacham, E., Walters, G., Janzen, C. and Maginnis, S. (eds.) (2016). Nature-based Solutions to address global societal challenges. Gland, Switzerland: IUCN. xiii + 97pp.]

3.2.9
climate change
change in climate that persists for an extended period, typically decades or longer

[SOURCE: ISO 14050:2020, 3.8.3]

3.2.10
coastal erosion
gradual wearing away of material from a coast by the action of sea water

[SOURCE: ISO/DIS 13208:2024, 3.3.4]

3.2.11
cost-benefit analysis
decision tool which judges the desirability of projects by comparing their costs and benefits

3.2.12
cost-effectiveness analysis
CEA
economic evaluation method that compares the relative costs and outcomes (effects) of different interventions without monetising benefits, often used to assess the efficiency of NbS implementation

3.2.13
cultural heritage conservation
measures taken to extend the life of cultural heritage while strengthening transmission of its significant heritage messages and values

Note 1 to entry: In the domain of cultural property, the aim of conservation is to maintain the physical and cultural characteristics of the object to ensure that its value is not diminished and that it will outlive our limited time span.

[SOURCE: UNESCO https://databrowser.uis.unesco.org/resources/glossary/3073]

3.2.14
cultural landscape
one of the following three main categories:

— clearly defined landscape designed and created intentionally by human beings, often built for aesthetics reasons associated with religious or other monumental buildings and ensembles

— organically evolved landscape, developed by association with and in response to its natural environment (a relict, or fossil, landscape or a continuing landscape is one which retains an active social role in contemporary society)

— associative cultural landscape with powerful religious, artistic or cultural associations of the natural element

[SOURCE: UNESCO https://whc.unesco.org/en/culturallandscape/#1, modified “by man” with “by human beings”]

3.2.15
disaster risk
potential loss of life, injury, destroyed or damaged assets which could occur to a system, society or a community in a specific period of time, determined probabilistically as a function of hazards, exposure, vulnerability and capacity

[SOURCE: United Nations Office for Disaster Risk Reduction (UNDRR), 2017. The Sendai Framework Terminology on Disaster Risk Reduction. "Disaster risk reduction". Accessed 2 April 2025. https://www.undrr.org/terminology/disaster-risk]

3.2.16
disaster risk reduction
DRR
actions aimed at preventing new risks and reducing existing disaster risk and managing residual risk, which contribute to strengthening resilience and therefore to the achievement of sustainable development objectives

[SOURCE: United Nations Office for Disaster Risk Reduction (UNDRR), 2017. The Sendai Framework Terminology on Disaster Risk Reduction. "Disaster risk reduction". Accessed 2 April 2025. https://www.undrr.org/terminology/disaster-risk-reduction.]

3.2.17
ecohydrology
EH
understanding of relationships between hydrological and biological processes at different scales to improve water security, enhance biodiversity and further opportunities for sustainable development by by lessening ecological threats and maximizing greater harmony within catchment processes

[SOURCE: FAO https://agrovoc.fao.org/browse/agrovoc/en/page/c_f3c9b866]

3.2.18
ecohydrological nature-based solution
EH-NbS
action enhancing efficiency of hydrotechnical infrastructure, in agricultural and urban landscapes, for adaptation to the ongoing climate change and enhancing catchments sustainability by creating multidimensional potential of the WBSRC (water, biodiversity, ecosystem services for society, resilience to climatic changes, culture and education)

Note 1 to entry: It also promotes a holistic approach by encouraging transdisciplinary sustainability science and education; an integral part of this strategy is the implementation of EH-NbS for water quality and quantity improvement.

3.2.19
ecological engineering
management of systems of human and environmental self-design or light management that joins human design and environmental self-design

Note 1 to entry: The design of sustainable ecosystems that integrate human society with its environment for the benefit of both.

[SOURCE:ISO/DIS 13208:2024, 3.1.10]

3.2.20
ecological resilience
ability of an ecosystem to absorb or recover from disturbance and stress, while maintaining its function and structure

[SOURCE: ISO/DIS 13208:2024, 3.3.14]

3.2.21
ecosystem or ecological system
dynamic complex of plants, animals, and micro-organisms communities, and their non-living environment interacting as a functional entity

EXAMPLE: Deserts, coral reefs, wetlands, rain forests, boreal forests, grasslands, urban parks, cultivated farmlands.

Note 1 to entry: Ecosystems can be influenced by human activity.

Note 2 to entry: Examples include heathland, quarry lakes.

[SOURCE: EN ISO 14008:2020, 3.1.6, modified, “Note 2 to entry” added]

3.2.22
ecosystem approach
strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Application of the ecosystem approach will help to reach a balance of the three objectives of the Convention

[SOURCE: Secretariat of the Convention on Biological Diversity (2005). Handbook of the Convention on Biological Diversity Including its Cartagena Protocol on Biosafety, 3rd edition, (Montreal, Canada), p 586]

3.2.23
ecosystem services
benefits people obtain from ecosystems

Note 1 to entry: These include provisioning services such as food and water; regulating services such as flood and disease control; cultural services such as spiritual, recreational, and cultural benefits; and supporting services such as nutrient cycling that maintain the conditions for life on Earth. The concept “ecosystem goods and services” is synonymous with ecosystem services.

[SOURCE: Millennium Ecosystem Services – MEA (2005). Ecosystems and Human Well-being: Policy Responses, Volume 3. https://www.millenniumassessment.org/documents/document.776.aspx.pdf. Retrieved March 2025, modified: “benefits that humans obtain from ecosystems"]

3.2.24
ecosystem-based adaptation
(EbA)
managing ecosystems in a way that uses biodiversity and ecosystem services to help people adapt to the adverse effects of climate change

[SOURCE: Convention on Biological Diversity (CBD) Technical Series No86 p7]

3.2.25
ecosystem-based management
integrated, science-based approach to the management of natural resources that aims to sustain the health, resilience and diversity of ecosystems while allowing for sustainable use by humans of the goods and services they provide

[SOURCE: Cohen-Shacham, E., Walters, G., Janzen, C. and Maginnis, S. (eds.) (2016). Nature-based Solutions to address global societal challenges. Gland, Switzerland: IUCN. xiii + 97pp. https://doi.org/10.2305/IUCN.CH.2016.13.en]

3.2.26
ecosystem-based mitigation
managing ecosystems in a way that counteracts anthropogenic climate change, in particular by reducing emissions of greenhouse gases and enhancing removals of greenhouse gases from the atmosphere

[SOURCE: Convention on Biological Diversity (CBD) Technical Series No86 p7]

3.2.27
ecosystem maintenance
ongoing activity, applied after full recovery of an ecosystem, intended to counteract processes of ecological degradation to sustain the attributes of an ecosystem

Note 1 to entry: Higher ongoing maintenance is likely to be required at restored sites where higher levels of threats continue, compared to sites where threats have been controlled.

[SOURCE: International standards for the practice of ecological restoration – including principles and key concepts http://seraustralasia.com/wheel/image/SER_International_Standards.pdf . Modified, the word "activity" has been used instead of "activities"; the words "of an ecosystem" have been added after "full recovery"]

3.2.28
ecological restoration
activity or process that assists in initiating or accelerating the recovery of the health, structure, integrity, resilience and stability of an ecosystem or habitat that has been degraded, damaged, or destroyed

Note 1 to entry: By addressing ecosystem integrity, ecological restoration can reverse the loss of species by growing their population or reducing the population of alien invasive species.

[SOURCE: ISO/DIS 13208:2024, 3.3.17]

3.2.29
ecosystem resilience
capacity of a system to absorb disturbance and reorganize while still retaining similar function, structure, and feedback

Note 1 to entry: In plant and animal communities, this property is highly dependent on adaptations by individual species to disturbances or stresses experienced during the species' evolution.

[SOURCE: International standards for the practice of ecological restoration – including principles and key concepts, http://seraustralasia.com/wheel/image/SER_International_Standards.pdf, modified: the word "feedback" has been used instead of the plural "feedbacks"]

3.2.30
endemic species
species for which the entire global range is strictly limited to a specified region or locality

[SOURCE: Food and Agriculture Organization of the United Nations. Reducing Emissions from Deforestation and Forest Degradation https://www.un-redd.org/glossary/endemic-species. Modified: the phrase "is restricted to the site, the region or the country" has been replaced by the phrase "is strictly limited to a specified region or locality"]