

Standardization in Nature Conservation and Landscape Management

Pavel Pešout & Pavel Štěrbá

The Nature Conservation Agency of the Czech Republic (NCA CR) has been for ten years elaborating together with academic institutions standards in nature conservation and landscape protection. Almost 30 such standards have been published yet and approx. the same number has been under preparation. Up-to-date experience shows that the concept of standardization in various activities has proved itself successful and has fulfilled its purpose: standards are used by designers, customers, planners, project implementers,

contractors, evaluators of application for a subsidy/subvention/grant and they are also applied in the State/Public Administration performance. Moreover, they are sometimes misapplied. Thus, the standards at present have been serving as a basis for establishing unified code lists of activities in nature conservation and landscape protection linked to costs of common measures and consequently for planning and documenting the interventions having been made in nature and the landscape.



Grass sod/turf removal is included in nature and landscape management standard D 02 006 Disturbance Management on Non-forest Areas. The photograph shows topsoil grass sod/turf Vysoká hole in the Praděd/Altwater National Nature Reserve, 2019. © Pavel Pešout

The NCA CR started its standardisation of landscape and management activities in 2010 after discovering that commented instructions (e.g. those issued in the NCA CR methodology series) fail to secure sufficient understanding among all partners and participants in the planning and implementation of practical nature conservation measures. They lacked a clearly defined denominator to which the different actions in the process of prioritisation, setting, assessment, designing, assignment, implementation in the field, acceptance and inspection/checking of practical nature conservation measures can be related (for details, see PEŠOUT & ŠTĚRBA 2013).

Although the term standard may be perceived as a synonym of a norm (KNOTEK 2012), it does not have the intention to be so. It differs in the way standards are developed: in a broad discussion with professionals, details adapted to their future use, and public availability free of charge. Long-term collaboration between state bodies and relevant academic institutions in order to secure continuous updating is also typical of standards (see Box 1).

The standards have become widely used. They help State Nature Conservancy authorities and other investors with defining assignments for designers, formulating the subject of the work, and assessing the work for its acceptance (KNOTEK 2013). They help State/Public Administration in comparing the effectivity of measures supported. The standards also contribute to a unification of the State/Public Administration performance (CHOTĚBOR 2013).

Current state of standard development

Standards have been developed for over ten years according to an unaltered plan including fixed stages from signing contracts with academic institutions and assembling a development team through development of the content and public and professional reviewing for approval and publication (PEŠOUT & ŠTĚRBA *l.c.*). The documentation of the development of a standard incl. the settlement of remarks is deposited in and available from the public NCA CR library.

Presently, 26 standards have been developed and are published at www.standardy.nature.cz, while other three have been submitted for review. Remaining 22 standards have been under development (see Box 2). In 2022, most standards dealing with the most common activities in nature and landscape management should be compiled and published.

During the development of the standards, all participants/stakeholders work together

fruitfully, representatives of various opinions and approaches meet, opinions are refined, and concepts and interests are clarified. We appreciate the cooperation with colleagues from academic institutions and other professional collaborators who are willing to work on the development of the standards, just as specialists from reviewing institutions who correct the final form of the standards with their unbiased views. Participation of a broad range of professions, whose involvement is welcomed in the so-called 'public review' stage, is very essential.

Updating of the standards

As knowledge progresses and practical experience is gathered in the implementation of measures for nature and the landscape, particular parts of the standards may become obsolete. Therefore the collaboration between the NCA CR and academic institutions is permanent. It is based on mutual interest in keeping the standards up to date. Thus, although some standards have not been finished yet, the first ones have already been updated.

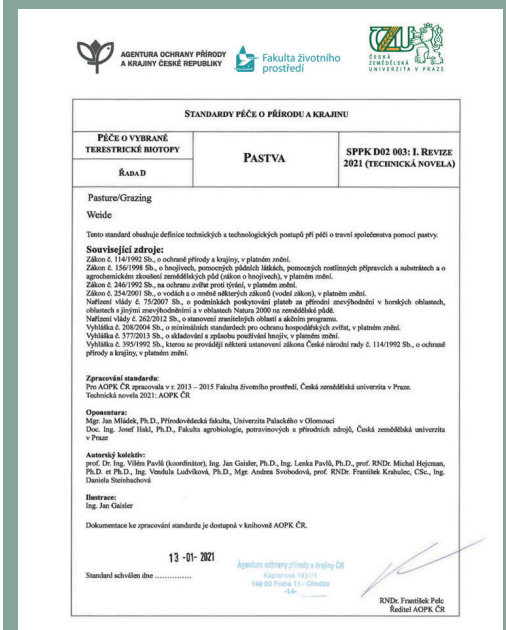
An example of an updated standard is Planting Trees (SPPK A 02 001). Another one is a standard dealing with grazing (SPPK D 02 003), where amendments to it were evoked by the need to adopt a standard for livestock protection against large carnivore attacks (SPPK E 02 006), which had initially not been planned. This shows that not only existing standards need updating, but also completely new ones must be added. There, a new set of measures caused by the return of large carnivores to a large area in the Czech Republic needed to be implemented in the field. Similarly, standardisation of fire management is assumed to be necessary in the future (as a supplement to the already published SPPK D 02 006 standard titled Disturbance Management on Non-forest Areas) if the presently discussed amendment to the Nature Conservation and Landscape Protection Act is approved, enabling the burning of vegetation in the selected cases.

Standards and costs of common measures

Ten years ago, NCA CR also started to produce documents named Costs of Common Measures (CCM), at the time titled Pricelists of Common Measures of the NCA CR. The reason was the adoption of a new Administrative Procedure Code and the 2010 ruling of the Constitutional Court, which helped to put into effect agreements on farming methods with landowners according to Article 68 of the Nature Conservation and Landscape Protection Act, to implement measures for the improvement of the natural environment, and to refrain from selected

Box 1 What is a Nature and Landscape Management Standard?

A nature and landscape management standard is a recommendation setting output parameters and providing a technical description of procedures for particular activities commonly implemented in nature and landscape management, incl. properties of materials, products and definitions. The standards are developed in collaboration with academic institutions and the Nature Conservation Agency of the Czech Republic (NCA CR) publishes them only after expert/technical and public reviews. Therefore, elaboration of standards provides the widest possible professional consensus is achieved. Standards are freely available to the public and are updated with increasing knowledge (PEŠOUT & ŠTĚRBA 2013).



Title page of D 02-003 Standard: Grazing

activities in the form of public contracts (PEŠOUT & ŠMÍDOVÁ 2012). Until then, all measures had been assigned in the form of services and the price was determined in accordance with public procurement regulations. According to the farming agreements, however, contributions were paid pursuant to Article 69. Therefore the mentioned Pricelists of Common Measures was compiled, based on averages of supplier prices at that time, which secured a comparable payments for implementing similar measures across various regions. Based on a recommendation of the Czech Republic Supreme Audit Office, the experience was later taken over by the Ministry of the Environment of the Czech Republic to ensure comparable practice in areas not falling

Tab. 1 Current state of development of nature conservation and landscape management standards © Pavel Štěřba

standard (Code and name)			** year of publication	**
Series A Arboricultural standards				
SPPK A 01 001	Assessment of woody tree state		2018	
SPPK A 01 002	Woody plant protection during building and development		2017	
SPPK A 02 001	Planting trees		2021*	
SPPK A 02 002	Pruning trees		2015*	
SPPK A 02 003	Planting and pruning shrubs		2014	
SPPK A 02 004	Crown security binding and other stabilising systems		2019	
SPPK A 02 005	Cutting/felling trees		2018	
SPPK A 02 006	Protecting trees against lightening strike		2016	
SPPK A 02 007	Modification of woody plant habitats		2020	
SPPK A 02 008	Establishing and managing woody plant growths		UP	
SPPK A 02 009	Special tree measures/treatment		2019	
SPPK A 02 010	Tree management near public transport infrastructure		2020	
SPPK A 02 011	Tree management near public technological infrastructure		2018	
Series B Water in the landscape				
SPPK B 02 001	Pool building and restoration		2014	
SPPK B 02 002	Restoring water regime in peat-bogs and springs		UP	
SPPK B 02 003	Restoring small watercourses and their floodplains		UP	
SPPK B 02 004	Management of watercourses incl. riparian growths		UP	
SPPK B 02 005	Extensive fishpond management		UP	
SPPK B 02 006	Fish ladders/Fish passes		2014	
SPPK B 02 007	Building and restoration small water bodies in nature-friendly way		UP	
Series C TSES and landscape elements				
SPPK C 01 001	TSES functioning assessment		UP	
SPPK C 01 002	Designing TSES (plans and projects)		UP	
SPPK C 02 001	Forming biocentres and biological corridors		UP	
SPPK C 02 002	Forming landscape and interactive elements		UP	
SPPK C 02 003	Planting fruit woody plants in the agricultural landscape		2016	
SPPK C 02 004	Management TSES components incl. landscape and interactive elements		UP	
SPPK C 02 005	Management of fruit woody plant plantings		2016	
SPPK C 02 006	Establishment and management of fruit sort genepool plots		2018	
SPPK C 02 007	Grasslands		2018	
Series D Selective terrestrial habitat management				
SPPK D 02 001	Restoring grassland communities using subnational seed mixtures		2017*	

standard (Code and name)			** year of publication	**
SPPK D 02 002	Restoring long-term unmanaged grassland communities incl. elimination of self-sowing encroaching woody plants			UP
SPPK D 02 003	Grazing			2021*
SPPK D 02 004	Mowing			2017
SPPK D 02 005	Measures to improve forest growth species composition			2014
SPPK D 02 006	Disturbance management on non-forest areas			2018
SPPK D 02 007	Eradication of the selected plant invasive alien species incl. subsequent site management			2016
SPPK D 02 008	Eradication of the selected animal invasive alien species incl. subsequent site management			UP
Series E Special species protection measures				
SPPK E 02 001	Installing and operating mobile seasonal barriers along roads to protect amphibians			2020
SPPK E 02 002	Permanent measures to provide landscape permeability for amphibians			2021
SPPK E 02 003	Measures to provide landscape permeability for Eurasian otters and other small mammals			UP
SPPK E 02 004	Measures for mitigating injuries of birds and other animals on overhead power lines			UP
SPPK E 02 005	Managing trees as a rare species habitat			UP
SPPK E 02 006	Livestock protection against large carnivore attacks			2021
SPPK E 02 007	Measures for mitigating injuries of birds on glass and reflection spaces			UP
Series F Visitor infrastructure				
SPPK F 01 001	Monitoring visitor attendance in Specially Protected Areas			UP
SPPK F 02 001	Fixing paths/trails and side-by-side log paths/trails			UP
SPPK F 02 002	Vantage points/lookouts and overcoming height differences (steps, ladders, handrails, etc.)			UP
SPPK F 02 003	Footbridges and small bridges			UP
SPPK F 02 004	Marking and labelling paths, trails, roads and cycleways/bikeways			UP
SPPK F 02 005	Marking borders of Specially Protected Areas and Memorial/Veteran Trees			UP
SPPK F 02 006	Information signs and signboards			UP
SPPK F 02 007	Rest facility equipment (benches, shelter roofs, sheds, summer-houses, gazebos, etc.)			UP

* – updated edition published; **UP** – under preparation; **TSES** – a multilevel national ecological network (local, sub-national, national/international) consisting of biocentres (core areas), biological corridors and interactive elements.

under the NCA CR administration. Since then, the Ministry has issued CCMs every year. They are updated according to experience of State Nature Conservancy authorities and from practice in the comment process. Exceptionally (for new, formerly not commonly implemented measures) a CCM is compiled in another way (e.g. by targeted survey or research).

As the standards are developed and published, they are gradually linked to the CCMs. Its aim is to standardise activities in procedure, conditions and materials traceable in the CCMs and conversely. For example, once the arboriculture

standard (SPPK A 02 002) was published, the structure and names of measures in the relevant part of the CCM were completely changed to be consistent with the published standard. In the different chapters of the current version of CCM (2021) also the related standards are mentioned.

Standards and activity code lists

The standards are gaining in importance because of the introduction of active adaptive management (AM) in Specially Protected Areas

(PEŠOUT & KNIŽÁTKOVÁ 2020). A prerequisite for continuously updated administration and management is the necessary digitisation of the entire AM cycle from planning, setting targets and their prioritisation, administration and implementation to monitoring the state of the subject of conservation and assessing how well management and conservation goals have been achieved. A tool making this possible is a unified nature conservation information system, which has currently been under preparation (ZÁRYBNICKÝ *et al.* 2020). This approach requires unification of the different code lists, such as the code list of nature and landscape

management activities (see **Box 2**), in order to make clear what activities are meant by a certain term. The nature and landscape management standards serve as a basis for elaborating such code lists.

Standardisation must not limit individual approaches

The objective of the standards is not only to unify terms in the communication among designers, investors, suppliers, the State/Public Administration and experts and technical institutions, but also to achieve the required quality in nature and landscape management. The standards are based on examples of good practice, therefore respecting them should guarantee correct and appropriate implementation of a project.

At the same time, however, it must be stressed that each measure has to be considered individually, taking into account specific local conditions. It is possible or rather certain that conditions and procedures set in a standard will have to be altered in the particular cases. In such a situation, thoughtless insisting on consistent application of the standard is one of the mistakes made in applying standards. On the other hand, a decision to deviate from the standard procedure must be made consciously, and in internal NCA CR practice also described and justified. Documentation of an aberrant procedure is not only important for a particular situation, but it also (especially when repeated) is an incentive to update the standard. It is moreover important in the checking payments from subvention programmes/subsidy schemes guaranteed by the Ministry of the Environment of the Czech Republic.

Standards should thus – whether for convenience or caution – not make the land manager or another supplier or work assessor stop considering or even ignore specific conditions at the implementation site and so make less effort in setting the parameters of the measure as targeted and tailored as possible to achieve the best possible result.

The standards in nature and landscape management can only support the appropriate implementation of the measures, but they alone cannot ensure adequate quality. Therefore, they should be handled as a utility or a tool, not as a law. ■


The list of references is attached to the online version of the article at www.casopis.ochranaprirody.cz.

Box 2 Code List of Nature and Landscape Management Activities

The Nature Conservation Agency of the Czech Republic (NCA CR) has for a long time been documenting implemented nature and landscape management measures, including maps, in the Nature Conservation Information System (ZÁRYBNICKÝ *et al.* 2020). For this purpose, a multilevel code list of management activities (category of measures – measure – activity) is used. The activity code list is uniform not only in the implemented management, but also in management planning (a necessary step to prepare the digitisation of management plans), and at the same time it serves to monitor management and to assess the effectivity of the management implemented, making it a cornerstone of the adaptive management cycle.

The code list currently includes a total of 498 different nature and landscape management activities.

Each activity in the list is assigned the usual price (basic price and possible surcharges/reductions) from the Costs of Common Measures (CCM). The interconnection of activity code lists and CCMs is a significant step forward, opening further data processing and analyses. CCMs as they are now available (e.g. https://www.mzp.cz/cz/naklady_obvyklych_opatreni_mzp) are an export from the NCA CR's Nature Conservation Information System, of which CCMs are an integral part.



Ministerstvo zemědělství a venkovského rozvoje

Ministry of Agriculture and Rural Development of the Czech Republic

Čísleník činnosti

Activity Code List

Ing. Jiří Ševčík

UP AOPK ČR - Kapslařova 1

odhlásit

Seznam opatření

Seznam činností

Seznam příplatek/snížení

Seznam vlastností

Nápověda

Čísleník AOPK / Čísleník činnosti / Seznam činností

Verze: 2021 (platnost od 01.11.2020)

Export NOO

Export

NDO

Skupina opatření

Opatření

Činnost

Kód

ID

Zákes

Hledat fulltextem

▼

▼

▼

▼

▼

▼

▼

Zemědělské činnosti

Sečení travního

🔍 Filtrovat

✕ Zrušit

Kód	ID	Skupina opatření	Opatření	Činnost	Cena (Kč)	Jednotka	Zákes	NOO	Akce
ZC04a	10016	Zemědělské činnosti	Sečení travního porostu a rákosin	Seč kosou	42 000,00	ha	polygon	ano	🕒
ZC04b	10017	Zemědělské činnosti	Sečení travního porostu a rákosin	Seč křovinořezem	30 000,00	ha	polygon	ano	🕒
ZC04c	10018	Zemědělské činnosti	Sečení travního porostu a rákosin	Seč lehkou mechanizací	13 000,00	ha	polygon	ano	🕒
ZC04d	10019	Zemědělské činnosti	Sečení travního porostu a rákosin	Seč ručně vedenou sekačkou	27 000,00	ha	polygon	ano	🕒
ZC04e	10351	Zemědělské činnosti	Sečení travního porostu a rákosin	Seč speciální pásovou sekačkou s nízkým tlakem na půdu	16 000,00	ha	polygon	ano	🕒
ZC04f	10020	Zemědělské činnosti	Sečení travního porostu a rákosin	Seč těžkou mechanizací	10 000,00	ha	polygon	ano	🕒

© 2021, Agentura ochrany přírody a krajiny České republiky

sobota 22. ledna 2021

Example of unified code list of activities linked to costs of common measures (Filter: Category of measures – Farming activities, Measure – Grassland and reedbed mowing).



Standard D 02-003 Grazing was amended in 2021. Grazing on Štítarský kopec Hill sub-national Territorial System of Ecological Stability (TSES) biocentre/core area carried out by the Czech Union for Nature Conservation, Libosváry Local Chapter. © Pavel Pešout