THE EROSION PROTECTION SEGMENTS ANS POSSIBILITIES OF THEIR ALTERNATIVE USE

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Abstract
The paper deals with the implementation of elements of anti-erosion protection, integration into the landscape and their production and non-production potential. There are given examples of the use of implemented elements for the restoration of historic landscape structures, the creation of valuable habitats and the subsequent environmental education or recreation for local residents.

Key words: Erosion, non-production potential, landscape structures, recreation

Introduction

Part of sustainable farming is the implementation of anti-erosion measures. These measures often complicate the current way of cultivating the land. The problem is also the provision of care for the implemented PEO and their possible subsequent use.
An eligible solution is the cooperation of farmers with landscaper., Particular elements of anti-erosion protection can be designed in a multifunctional form -like segments of territorial system ecological stability (TSES), extensive orchards, alleys and other landscaping structures. The paper shows the possible use of implemented elements of erosion protection in practice.

Material and methods

The protection of agricultural land against erosion is regulated by Decree 240/2021 Coll., related legal regulations and methodologies. The implementation of effective anti-erosion measures is generally hindered by property relations.
The paper presents a set of implemented anti-erosion measures, which were implemented by the ecologically managed agricultural company Javorník CZ, s..r.o., which manages 8 cadastral areas in the White Carpathians Protected Landscape Area. All measures were designed in accordance with the White Carpathians Protected Landscape Area Management Plan.
A different approach to anti-erosion protection was applied on land owned by the Town of Kroměříž, which gradually, in cooperation with the economic entity, is implementing a multifunctional area with significant recreational potential in a suburban area (locality Těšnovice) in the immediate vicinity of the protected area Obora.

Results

Two different projects are presented. Both are characterized by sequential long-term implementation.
Sustainable management in the landscape of the White Carpathians
Due to less favourable habitat conditions, the agricultural land in the White Carpathians was extensively farmed until the middle of the 20th century. This created a unique White Carpathian landscape with a richly structured landscape structure and high biodiversity. Collectivization drastically disrupted traditional farming methods and emptied the landscape (loss of biodiversity, clearing t
he plow, scaling up the landscape, elimination of historic landscape structures.
Society-wide changes in the 90s brought new opportunities for farming and significantly strengthened the interests of nature and landscape conservation.
The enlightened management of the agricultural company Javorník based in Štítná nd Vláří – Popov created a research team that used the practical experience of the agricultural entity, the professional methodological activities of the staff of the White Carpathians Protected Landscape Area Administration and the Agency for Agriculture and Rural Development in Zlín. Experts from Mendel University and the University of South Bohemia were also involved in the project. The public participated through community representatives. The coordination and technical side of the project were processed by the design studio Arvita P spol. s r.o. Within the framework of the Operational Program Environment, the 1st stage of the project (Sustainable management in the landscape of the White Carpathians) was implemented in the years 2013-2016. The measures were implemented on 79.7 ha, of which anti-erosion elements on 20.9 ha. Accompanying management measures affected 615 ha.
The 2nd stage of a similar scope is currently being implemented and the 3rd stage is being prepared for the coming grant period. The result of an environmentally friendly and rationally designed project is

a comprehensive restoration of a functional and beautiful agricultural landscape corresponding to the present time.

Community orchard – Cherry Field

Completely different is there second presented project situated in the highly productive landscape of Haná. The anti-erosion protection project implemented by the City of Kroměříž was initiated by the owner's need to efficiently and economically manage the property - agricultural land. Erosion-endangered land in an area of 6.5 ha was set aside in order to prevent further damage to the land and the lower settlement. It was agreed that the land would remain agricultural land. The target site is a community park with several other ecologically significant sites. The plantings are a sample collection of native woody plants and rapid colonization by small animals is also expected. The whole area will be implemented gradually in partial steps without any subsidies. Area is there crossed by a walking trail accompanied by cherries - hence the name Cherry Field. Successively harmonious landscape park will be created here, which will benefit from valuable distant views and show its visitors (observers) our common communities, whether meadow, wetland or forest, and at the same time become home to many animals. This solution will create an ecologically stable and biodiversity-rich habitat that will also have an anti-erosion function. The location remains (except for small segments) part of the productive agricultural land.

Discussion

The implementation of anti-erosion protection is a basic condition for sustainable landscape management. However, despite all efforts, implementation is very prolonged and difficult. Farmers lack sufficient positive motivation to implement erosion protection. It is quite certain that the establishment of permanent elements, such as borders, gaps, linear and scattered greenery, complicates land management and makes them more expensive for high fuel price.

The personal long-term experience of the designer shows the need for much greater education and communication with farmers. Better coordination of subsidies would also be beneficial - currently unmaintained field roads significantly contribute to the manifestations of water erosion. Frequent solution of erosion problems by simply grassing the site is not the optimal solution. Where holistic agriculture with crop and livestock production operates, a certain proportion of arable land is needed even in less-favored areas. Implementation of anti-erosion elements in the form of restoration of landscape structures (taking into account the needs of the farmer and the mechanization used) are certainly a good solution for everybody.

Conclusion

The landscape there is not only a space for agricultural production, but also a subject of public interest, because in addition to agricultural production, it plays an essential role for its natural, cultural and historical values. It is an integral and important part of the lives of the inhabitants, not exclusively for owners and producers.

An important part of both projects was the cooperation of all parties involved - from farmers to nature and landscape conservation workers, local authorities and other stakeholders. The main task of the designer here was to raise awareness of the project, to find a common language and to coordinate the diverse, occasionally and conflicting needs and interests of the parties involved. This was achieved mainly due to the very active approach of project investors and enlightened economic entities.

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