



NATURE-BASED SOLUTIONS IN LAND MANAGEMENT FOR ACHIEVING LAND DEGRADATION NEUTRALITY IN UKRAINE

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In this study, land degradation is defined as the harmful alteration of both the qualitative characteristics and quantitative condition of land within the ecosystem. This degradation results from human activities as well as direct or indirect processes such as climate change and the effects of war. It is manifested by the long-term reduction or loss of biological productivity, ecosystem value, and ecological integrity. Ukraine's environmental policy aims to achieve a neutral level of land degradation to preserve land resources and prevent net losses of healthy and productive lands. This goal is pursued by combining measures designed to avoid, reduce, and reverse degradation. To offset anticipated losses, it is crucial to adopt nature-based solutions in land use and management. These solutions involve actions to protect, sustainably manage, and restore both natural and altered ecosystems.

This study aims to explore the synergy between mitigating land degradation and the associated benefits of nature-based measures, thereby contributing to the fight against land degradation and supporting sustainable development goals.

The focus of this study is the land in Ternopil region, where several measures have been proposed to reduce degradation processes. These measures include the restoration of forest, grassland, and wetland areas; management of natural and semi-natural landscapes; and the implementation of an integrated nature-based approach to agriculture. Key actions include restoring and creating forest belts, returning riverbanks to their natural state, preserving naturally regenerated forests on agricultural land, and forming an ecological network (Fig.).

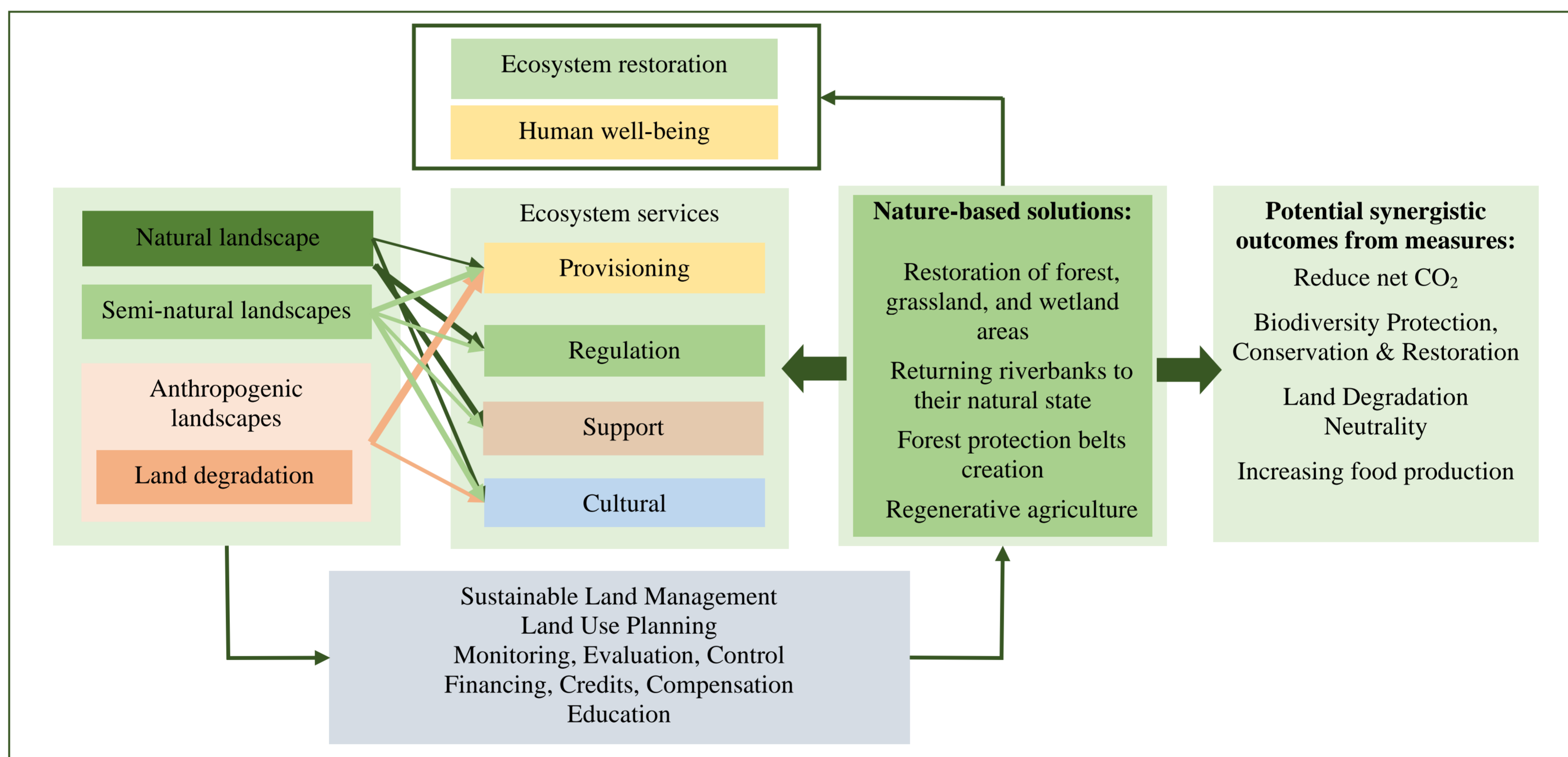


Fig. Conceptual framework for achieving synergy in nature-based management of degraded lands. Source: the authors develop it.

At the local level, it is recommended to adopt an integrated landscape approach to spatial planning for community development. It is advisable to allocate up to 10% of agricultural land to natural and semi-natural ecosystems, such as meadows, forest belts, hedges, wetlands, grasslands, and steppe areas. Additionally, promoting innovative agroforestry practices that are currently uncommon in Ukraine is encouraged.

At the national level, amendments to legislation are necessary to implement and enforce nature-based solutions across all sectors of Ukraine's economy. This aims to ensure rational land use, protection, and regeneration, adherence to environmental protection requirements, and the achievement of Sustainable Development Goals. Furthermore, it is essential to develop financial and credit mechanisms to stimulate the practical implementation of these solutions and enhance the knowledge and awareness of land users regarding the adoption of nature-based approaches and their potential for achieving neutral land degradation.

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