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FORMING ECOLOGICAL NETWORKS BASED ON INTERNATIONAL EXPERIENCE: ADVANCED APPROACHES IN SUSTAINABLE LANDSCAPE MANAGEMENT

Annotation. This article analyzes the content of the concept of an ecological framework (ecological network) and advanced approaches to its formation in foreign countries. In particular, in the European Union, the USA, Canada and other developed countries, aspects such as the integration of ecological networks into territorial planning, legislative support, the use of GIS technologies and ensuring the participation of civil society are highlighted. The article provides a basis for studying international experience and forming a national model for ensuring ecological sustainability**.**

Keywords: ecological framework, ecological network, sustainable development, territorial planning, landscape management, international experience.

Introduction. Preservation and restoration of ecological connections between natural ecosystems has become an important direction of global environmental policy. The concept of an ecological framework (or ecological network) plays an important role in this. International experience shows that through proper planning of an ecological network, it is possible to preserve biodiversity, increase resilience to natural disasters, and reduce anthropogenic

pressure. This article analyzes effective approaches to organizing an ecological framework using the example of developed countries.

The concept of ecological framework and its international appearance is very multifaceted. Ecological framework (English: ecological network, green infrastructure) is a territorial structure that connects natural areas, corridors, buffer zones and other ecosystem elements, maintaining ecological continuity. Its main purpose is: protecting biodiversity, ensuring ecological sustainability, restoring balance at the landscape level.

This concept first emerged in Europe in the 1990s and later became widely used in the United States, Canada, Australia, and other countries.

The European Union experience: The Pan-European Ecological Network is the first established system. The European Union is one of the most advanced regions in the formation of ecological networks. In 1995, the concept of the Pan-European Ecological Network (PEEN) was developed.

The main approaches are as follows.

✓ Transboundary integration: Ecological areas are seen as a single network that crosses the borders of several countries.

✓ NATURA 2000 system: A large ecological protection system that includes core areas and ecological corridors of the European Union.

✓ GIS technologies: Widely used in landscape analysis and identification of ecological corridors.

✓ Legislative framework: Each member state integrates the ecological network into its national legislation.

The Green Infrastructure approach in the US is broadly defined. In the US, the term "green infrastructure" is widely used instead of the terms ecological network or ecological framework. Its main elements are:

Urban ecology integration: The ecological situation in cities is improved by integrating green parks, reservoirs, and green zones into a single system.

Coordination at the federal and local levels: Strategies for forming an ecological network are coordinated at the state and regional levels.

Civic participation and the private sector:

Many projects are implemented in collaboration with representatives of society and business.

Example: The state of Maryland has designated green infrastructure as a mandatory element of regional planning.

Canada has a largely Landscape-Based Planning system in place. Ecological networks in Canada are designed through a landscape-based approach. These include:

- Analysis of natural geographical zones,
- Taking into account animal migration routes,
- Taking into account the interests of local communities

Diqqatga sazovor tajribadan yorqin misol: Yellowstone to Yukon (Y2Y) ekologik yo‘lagi – Shimoliy Amerikadagi eng yirik ekologik tarmoqlardan biri bo‘lib, Kanada va AQSh chegaralarini kesib o‘tadi.

Turning to advanced technologies and scientific approaches, the following tools are actively used in creating ecological networks in foreign countries:Remote Sensing (masofadan zondlash): Landshaft o‘zgarishlarini monitoring qilish.

GIS (Geographic Information Systems): Mapping ecological corridors and areas.Modeling tools (masalan, Marxan, Zonation): Ekologik muhofaza ostidagi eng muhim hududlarni aniqlash va hokazo.

Identification of the most important areas under ecological protection, etc.

Universities and research institutes are also actively involved in these processes.

There are a number of proposals for Uzbekistan based on international experience. By analyzing foreign approaches, the following recommendations can be put forward for Uzbekistan:

• Inclusion of ecological networks in national territorial planning

• Creation of ecological corridors along the Syrdarya, Amudarya, and Zarafshan rivers

• Connecting the habitats of species listed in the Red Book through ecological corridors

• Widespread introduction of GIS and remote monitoring technologies

• Ensuring the participation of civil society, local communities, and farmers

Conclusion. International experience shows that for the successful organization of ecological frameworks, not only natural resources are needed, but also political will, institutional stability and technological readiness. The experience of Europe, the USA and Canada sees ecological networks as an integral part of territorial and strategic planning. Uzbekistan, due to its unique natural and geographical features and important ecosystems, should use foreign approaches to the formation of ecological networks and create its own national model. This will be an important factor not only in preserving biodiversity, but also in ensuring sustainable economic development and environmental security**.**

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