ECOLOGICAL RURAL TOURISM: SUSTAINABLE USE OF NATURAL RESOURCES AND ECOSYSTEMS

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Ecological rural tourism is one of the most relevant directions for the development of the tourism industry in Ukraine, and not only because it is aimed at nature conservation, sustainable use of natural resources, and ecosystems. The thing is, this type of tourism combines environmental education, leisure in natural conditions, and support for rural agricultural development. In addition, sustainable use of natural resources is particularly important for our country, as we have unique natural resources that need to be utilized in a way that ensures their preservation for future generations.
TARGET SETTING

For Ukraine, ecological rural tourism is one of the most relevant directions for the development of the tourism industry, and not only because it is aimed at preserving nature, sustainable use of natural resources, and ecosystems. The fact is that, this type of tourism combines environmental education, recreation in natural settings, and support for agricultural development (which plays an important role in ensuring food security, agricultural exports, and employment opportunities in rural areas. Furthermore, for our country, sustainable use of natural resources is crucial, as we possess unique natural resources such as forests, water basins, landscapes, and biodiversity. These resources should be utilized in a manner that ensures their preservation for future generations. Tourist attractions and activities should be developed with the utmost consideration for the preservation of natural resources, minimizing negative environmental impacts, and...
restoring natural ecosystems. Conservation of ecosystems is an additional advantage that Ukraine can gain from ecological rural tourism. Natural ecosystems are an integral part of the rural landscape, and their preservation is crucial for supporting biodiversity and ecological balance. Therefore, it is important not only to develop ecological rural tourism but also to cultivate the principles of sustainable use of natural resources and ecosystems within it. These principles should be inherent in all tourism projects, which will minimize their impact on national ecosystems and promote sustainable development of local economies.

ANALYSIS OF RESEARCH AND PUBLICATIONS
The topic of rural tourism and the issues and prospects of developing ecological rural tourism in Ukraine are being investigated by a significant number of researchers. Authors such as Boyko V.O., Kliuchnyk A.V., Pivniova L.V., Granovska V.H., and Boyko V.O. have devoted attention to analyzing certain aspects of ecological rural tourism, but they have overlooked those related to the sustainable use of natural resources and ecosystems. Therefore, the development of ecological rural tourism remains insufficiently explored at present.

THE WORDING OF THE PURPOSES OF ARTICLE (PROBLEM)
The purpose of the article is to analyze the specifics of development and characteristics of ecological rural tourism in Ukraine.

THE PAPER MAIN BODY WITH FULL REASONING OF ACADEMIC RESULTS
In Ukraine, all conditions are in place for the development of ecotourism, which we have identified as a form of tourism aimed at facilitating the interaction between people and the natural environment of rural areas while considering the preservation of natural resources and ecosystems [2; 3]. Currently, there are several regions where such tourism is actively thriving.

A region that is quite developed and interesting in this sense is the Inner Eastern Carpathians, which includes the territories of the Transcarpathia and Ivano-Frankivsk regions of Ukraine. Here, many mountain villages provide tourists with opportunities to:
2. Sample local cuisine.
3. Explore traditional crafts.
4. Engage in outdoor activities in the natural environment, such as cycling, horseback riding, and hiking.

It is noteworthy, that from 2012 to 2022, the share of businesses operating in rural tourism supporting sustainable use of natural resources and ecosystems increased from 4% to 22%. This is illustrated in Figure 1.

The intensification of the greening processes in rural tourism is driven by international funds and organizations providing grants and financial support for local projects aimed at the sustainable use of natural resources. Notable examples of such projects include “EcoCarpathians,” “Green Transcarpathia,” and “Carpathian Eco-Villages.”

Poltava region (primarily located in the Poltava Oblast) is also well-developed in terms of rural tourism. It offers many villages that provide tourists with opportunities to:
2. Experience rural life and immerse themselves in the local culture.
3. Participate in agricultural activities.
4. Learn about the process of plant cultivation and animal breeding.
5. Visit local farmers’ markets and savor fresh rural produce.

You can also visit local craft workshops where unique handmade items are produced. In this region, from 2012 to 2022, the share of businesses operating in rural tourism and supporting sustainable use of natural resources and ecosystems has increased from 1% to 25% (Figure 2).

The outlined development is also driven by the fact that international funds and organizations provide grants and financial support for local projects aimed at the sustainable use of natural resources.

Figure 1. The share change of businesses operating in rural tourism in the Carpathian region and supporting natural resources and ecosystems’ sustainable use

![Figure 1](image1)

Source: formed based on [6].

Figure 2. The share change of businesses operating in rural tourism in the Poltava region that support sustainable use of natural resources and ecosystems

![Figure 2](image2)

Source: formed based on [6].
Available rural ecotourism within the boundaries of Polissya (in northern Ukraine). Specifically, there are many villages that offer tourists the opportunity to: 1) stay in traditional wooden houses; 2) taste organic products from local farms; 3) learn about local life and natural processes. In this region, from 2012 to 2022, the proportion of businesses in rural tourism supporting sustainable use of natural resources and ecosystems has been growing very slowly, according to existing research in this field [6]. This slow growth can be attributed to limited resources. As a result, in 2022, ecological rural tourism accounted for only 7.9% of the total number of businesses (Figure 3) operating in rural tourism.

The development of ecological rural tourism often requires significant investments in creating and improving infrastructure, ensuring comfortable accommodation, staff training, and so on. The lack of sufficient investment in the Polissya region hampers the ecological development of the tourism industry and impedes the sustainable use of natural resources.

Among the regions known for rural tourism development, various districts of the Ternopil region (covering the territory of the Podillya Upland) are often highlighted. Within this region, many villages offer tourists the opportunity to: 1) stay in rural farms and guesthouses; 2) taste unique organic products; 3) spend time at natural lakes; 4) learn more about local rural life. However, despite sufficient investment in improving rural tourism infrastructure through partnerships, the proportion of businesses in the region supporting sustainable use of natural resources and ecosystems has remained virtually unchanged from 2012 to 2022, at around 2—3% [6]. There are several reasons why the development of sustainable rural tourism in Podillya remains limited, even with adequate investment in infrastructure improvement. Indeed, residents and entrepreneurs often lack sufficient understanding of the potential and benefits of sustainable rural tourism [6]. The lack of active support and promotion from local authorities and government agencies can hinder sustainable rural tourism development. Another contributing factor may be the absence of well-developed strategies, legal norms, and support programs, which complicate the work of business entities and diminish their interest in sustainable rural tourism development.

These Ukraine regions are the most densely developed ecological rural tourism areas. Although other regions also offer similar opportunities for interacting with nature and local rural life.

Figure 3. The share change in the proportion of businesses operating in rural tourism in the Polissya region that support natural resources and ecosystems sustainable use

Source: formed based on [6].

Figure 4. Specificity of manifestation of rural tourism characteristics

Source: formed based on [1; 3—5].
Among the characteristics of rural tourism, are the following:

1. Interaction of tourists with nature and rural environments.
2. Business focus on preserving and supporting a healthy ecosystem in rural areas.
3. Active engagement with the local population.
4. Focus on improving the quality of life for the local community.
5. Increasing awareness of the natural environment and ecological issues.
6. Attracting investments in sustainable use of natural resources and ecosystems.

The manifestation of these characteristics varies significantly, as depicted in Figure 4.

All of these characteristics aim to achieve the main goal of rural tourism, which is development oriented towards sustainable use of natural resources and ecosystems. This requires a high level of rural tourism greening.

By analyzing the outlined characteristics of rural tourism, it is possible to not only identify its general features in Ukraine but also specify measures that would ensure its proper greening. Particularly:

1. Cultivating sustainable use of natural resources within the interaction of businesses with nature and rural environments.

This is since in Ukraine, measures to prevent illegal deforestation, waste sorting and recycling, and renewable energy sources use, among others, are practically not implemented to protect natural resources from the negative impact of tourism. Therefore, in regions where rural tourism is being developed, active measures for the sustainable use of natural resources, as listed in Table 1, should be implemented.

The comprehensive implementation of these measures ensures the rational use of water, forest, soil, mineral resources, air basin, and other natural components. It promotes the conservation of natural resources at the highest possible level, reduces losses, and minimizes the negative environmental impact during their extraction, use, and processing.

2. Supporting a business focus on the conservation and support of a healthy ecosystem in rural areas is vital. In Ukraine, measures are currently being implemented to conserve species diversity and protect natural areas, reserves, and landscapes. Additionally, cultivating balanced resource use and minimizing the negative impact on nature through accompanying measures is crucial. These measures promote balanced resource utilization and minimize negative environmental impact, as outlined in Table 2. The comprehensive implementation of these measures leads to the conservation, restoration, and support of healthy ecosystems. It includes protecting

### Table 1. Measures for sustainable use of natural resources for businesses in rural tourism

<table>
<thead>
<tr>
<th>Measure</th>
<th>Features of measure implementation</th>
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</thead>
<tbody>
<tr>
<td>Conservation of water resources</td>
<td>Application of environmentally friendly water usage methods through the implementation of rainwater collection and purification systems and energy- and water-saving technologies use. Prevention of pollution of water sources, lakes, and rivers by harmful substances.</td>
</tr>
<tr>
<td>Energy conservation</td>
<td>Energy efficient technologies and equipment utilization. Promote renewable energy sources used, such as solar panels or wind turbines.</td>
</tr>
<tr>
<td>Energy efficiency</td>
<td>Implementation of energy-efficient technologies in hotels, guesthouses, and other tourist facilities, such as LED lighting, energy-saving household appliances, and heating systems. Minimization of energy usage by reducing unnecessary lighting and turning off electrical appliances during inactive periods.</td>
</tr>
<tr>
<td>Conservation of forest resources</td>
<td>Ensuring responsible forest use, preventing illegal logging, promoting forest regeneration, and preserving biodiversity.</td>
</tr>
<tr>
<td>Waste minimization and secondary materials utilization</td>
<td>Implementing waste sorting and recycling systems, encouraging guests to engage in environmentally conscious consumption, promoting the use of reusable and biodegradable materials.</td>
</tr>
<tr>
<td>Control of chemical substance usage</td>
<td>Minimizing the use of harmful chemicals such as pesticides and toxic fertilizers in the area of ecological rural tourism. Implementing organic farming methods and environmentally friendly alternatives for plant and soil care.</td>
</tr>
</tbody>
</table>

Source: formed based on [1; 3].

### Table 2. The measures aim to promote balanced resource utilization for businesses in the field of rural tourism and minimize their negative impact on the environment

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Ecological planning and design</td>
<td>When developing new tourist attractions or renovating existing ones, it is important to consider the principles of ecological planning by preserving natural landscapes, minimizing biodiversity loss, rational land use, and employing green technologies.</td>
</tr>
<tr>
<td>Balanced resource utilization</td>
<td>Supporting the balanced use of natural resources in tourism services providing, entails reducing water and energy consumption and other resources through efficient management, energy-efficient technologies utilizing, and renewable energy sources transitioning.</td>
</tr>
<tr>
<td>Protection of natural areas</td>
<td>Compliance with rules and regulations for the conservation of natural areas, reserves, and other ecologically significant ecosystems is essential. This can be achieved by considering the sensitivity of nature when locating and utilizing infrastructure and engaging in activities.</td>
</tr>
</tbody>
</table>

Source: formed based on [1; 4].
Ukraine. It facilitates tourists’ engagement with the local population, which is an essential aspect of ecological rural tourism in order to ensure a positive economic impact on the local community (see Table 3).

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Measures for cultural exchange</td>
<td>Organization of events that promote the exchange of traditions, art, music, and culture between tourists and the local population. For example, hosting folk festivals, craft workshops, and traditional activities.</td>
</tr>
<tr>
<td>Involving local residents in tourist activities</td>
<td>Offering services of local residents as guides, artisans, and tour guides. This supports the local economy, preserves traditional crafts, and stimulates the development of rural communities.</td>
</tr>
<tr>
<td>Engaging the local population in promoting ethical principles among tourists</td>
<td>Involving the local population in disseminating information about cultural peculiarities and behavioral norms within local communities. This helps preserve cultural heritage and promote respect for local traditions and customs.</td>
</tr>
<tr>
<td>Development of local infrastructure</td>
<td>Promoting the development and improvement of infrastructure in rural communities, such as hotels, restaurants, shops, and transportation. It helps attract tourists, create new job opportunities, and make the tourist experience more comfortable.</td>
</tr>
</tbody>
</table>

Source: formed based on [1; 2; 3].

Table 4. Measures to develop the socio-cultural characteristics of the local population, their traditions, and tourism-related needs

<table>
<thead>
<tr>
<th>Measure</th>
<th>Features of measure implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement of local residents in the development of the tourism industry</td>
<td>Training and providing opportunities for employment in the tourism industry, such as guides, chefs, artisans, etc. It will contribute to new job creation and increased income for the local population.</td>
</tr>
<tr>
<td>Support for local entrepreneurship</td>
<td>Promoting the development of rural farms, craft workshops, and other local businesses. It will help expand their opportunities for profitability and support the economic development of the local community. Popularizing local products.</td>
</tr>
<tr>
<td>Job creation and development of local businesses</td>
<td>Include local values to ensure mutually beneficial cooperation and preserve cultural heritage. Organizing socio-cultural events such as festivals, exhibitions, workshops, etc., can attract tourists and generate interest in the local culture. It stimulates the development of local businesses, increases tourist influx, and positively impacts the quality of life of the local population.</td>
</tr>
</tbody>
</table>

Source: formed based on [1; 5].

5. It is vital to utilize ecological rural tourism as education and raising mean, awareness about the natural environment, ecological issues, and the importance of its conservation. This particular feature is almost nonexistent. Tourists are not provided with information about the impact of greening actions on the surrounding environment. We believe that businesses offering rural tourism services should provide tourists with recommendations for sustainable consumption and support local initiatives for nature conservation. Organizers of ecological rural tourism should: conduct excursions, lectures, and practical sessions on natural sciences, ecology, and environmental conservation; encourage tourists to practice responsible behavior; demonstrate examples of natural resources' sustainable utilization.

6. It is vital to attract investments in the sustainable utilization of natural resources and ecosystems. Currently, this is achieved through partnership formation, involving collaboration between the private sector, nonprofit organizations, and funds interested in sustainable development and conservation of natural resources. However, these processes can be further expanded through a broader range of measures outlined in Table 5.

The comprehensive implementation of the outlined measures is intended to accelerate the processes of sustainable utilization of natural resources and ecosystems. By shaping a business orientation that satisfies current human needs without compromising nature’s ability to replenish these resources and sustain natural processes in the long term.

CONCLUSIONS FROM THIS STUDY AND PROSPECTS FOR FURTHER EXPLORATION IN THIS AREA

Within the scope of the study, attention is drawn to several characteristics of rural ecotourism, including: the interaction of tourists with nature and rural environments; business focus on conservation and support of healthy ecosystems; active engagement with the local population; emphasis on improving the quality of life for the local community; increased awareness of the natural environment and ecological issues; attracting investments for sustainable utilization of natural resources and ecosystems.

The manifestation of these characteristics varies, but it contributes to the development focused on sustainable utilization of natural resources and ecosystems. Based on...
the analysis of these characteristics in rural tourism in Ukraine, it is noted that for its proper ecological development, the following steps are necessary:

1. Cultivating sustainable utilization of natural resources within the interactions between businesses, nature, and rural environments. Specifically, measures should be implemented to prevent illegal logging, promote waste sorting and recycling, encourage the use of renewable energy sources, and undertake other actions aimed at preserving natural resources from the negative impact of tourism.

2. Supporting the focus of businesses on the conservation and preservation of a healthy ecosystem in rural areas is crucial. Specifically, measures should be implemented to conserve biodiversity and protect natural sites, reserves, and landscapes. Additionally, it is vital to balance resource utilization and minimize the negative impact on the environment through accompanying measures that promote sustainable resource management and minimize adverse effects on nature.

3. Promoting close interaction with the local population is essential. Specifically, measures should be implemented to encourage cultural exchange, preserve traditions, and create a positive economic impact on the local community.

4. Improving the quality of life for the local population. It is crucial to implement measures aimed at developing the socio-cultural characteristics, traditions, and needs of the local population in tourism development, to ensure mutually beneficial cooperation.

5. Focus on education and raising awareness about the natural environment, ecological issues, and the importance of its conservation. It is important for businesses offering rural tourism services to provide tourists with recommendations for sustainable consumption and support local initiatives for nature conservation.

6. Attracting investments for the sustainable use of natural resources and ecosystems is currently achieved through partnership formation. However, these processes can be further expanded through a wider range of measures, including grant support, utilizing funds from investment funds, and incentivizing private investments.

The prospects for further research are focused on studying effective methods and strategies for nature conservation and sustainable resource utilization in rural areas.


table 5. Measures to attract investments in the sustainable utilization of natural resources and ecosystems

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Formation of partnerships</td>
<td>Collaboration between the private sector, non-profit organizations, and funds interested in sustainable development and conservation of natural resources. This may involve entering into partnership agreements, joint project funding, joint marketing activities, and more.</td>
</tr>
<tr>
<td>Grant support</td>
<td>Government organizations, international funds, and organizations provide grants and financial support for projects aimed at sustainable use of natural resources. Businesses can participate in grants that can be directed towards infrastructure development, entrepreneurship support, local community education, biodiversity conservation, and other areas.</td>
</tr>
<tr>
<td>Utilization of investment funds</td>
<td>There are specialized investment funds that are dedicated to supporting sustainable development projects. These funds can provide financing for projects in the fields of energy efficiency, renewable energy, water management, nature conservation, and other sectors.</td>
</tr>
<tr>
<td>Stimulation of private investments</td>
<td>Governments can provide various forms of support and incentives for private investors in the field of sustainable natural resource utilization.</td>
</tr>
</tbody>
</table>

Source: formed based on [1; 2; 5].

References:
6. PricewaterhouseCoopers database (2022), PwC report "Ecological rural tourism in Ukraine", Available at: https://www.pwc.com/content/pwc/userReg/login.en_gx.html?redirectUrl=gG0V—551pIs21J2UMYgbH5ktcJLK2-IwWPau2GN84=&referer=gG0V—551pIs21J2UMYgbH5ktcJLK2-IwWPau2GN84=&parentPagePath=/content/pwc/gx/en (Accessed: 01.11.2022).


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