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## **Environmental certification as instrument of sustainable development providing in agritourism of Ukraine**

**Summary:** In the article the modern scientific approaches to the definition of agricultural tourism is presented. Article deals with meaning and prospects of development of agro-tourism activities as a component of sustainable development of rural areas of Ukraine. The normative concepts of rural and agrotourism, the necessity and actuality of ecological certification of touristic objects and rural farmstead are examined in this article. Thus we have determined that promotion on the market of rural tourism (green) and agro-tourism is impossible without complying with relevant standards, norms and ecological passportization and certification of tourist objects and rural (agro) estates. The environmental certification issues have to play leading role in governmental and regional target programs and to provide the sustainable development of rural residential territories and certain touristic regions.

**Keywords:** agricultural tourism, environmental passport, rural areas, ecological certification

### **Introduction**

Agritourism (ecological) is one of the most important type of tourism, recreation and entertainment. Agritourism can be defined on the environmentally sustainable kind of tourism for promotion the awareness and use of natural, cultural, historical and other resources for the establishment of rural tourism product<sup>1</sup>. In the process of touristic demands satisfaction the improper treatment of nature resulted from tourism services provision and tourism product creation usually causes anthropogenic loading on the environment. Energy saving and rational use of nature resources are fundamental base of sustainable development and its principles are founded on the UN Conference in 1992 (Rio de Janeiro), revised on the World Summit on Sustainable Development in Johannesburg in 2002 and confirmed on the Conference "Rio+20" in 2012. It deals not only with industry and economics, but also with the tourism industry, which leads to certain impacts and threats for the environment. According to the development dynamics and potential hazards for the environment, the necessity of standard documentation has appeared.

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<sup>1</sup> S. Medlik: Dictionary of Travel. Tourism and Hospitality, London: Butterworth Heinemann Etd.,1993, p. 43; S.A. Luchenok: Agrotourism: world Experience and Development in the Republic of Belarus, BSEU, Minsk 2008, p. 198; E. Rilla: Agritourism: unique niches in Great Britain and New England, University of California, San Diego 1998.

The standard documentation on present and possible impacts on the agroecosystems makes it possible to define the main ways of agricultural and noneagricultural business development (including the agritourism business)<sup>2</sup>.

**The paper objective:** to highlight the importance of agricultural tourism in rural development and to develop the environmental passports of touristic territory and rural farmstead.

### **Methods of investigations used in the paper – analytical and statistical**

The agritourism organization is linked with development of agricultural business and agrosphere on the whole<sup>3</sup>. This interconnection is performed in the following way:

- agrolandscapes are favourable for business needs and rural population activity with rational agricultural activity and rational nature management;
- green agricultural production attracts tourists to rural areas;
- environmental safety of agrarian business is the guarantee of rural areas normal condition. According to the mentioned the quality of agritourism product and associated services has to comply with both national and international quality standards.

It is still perspective and primary for farmsteads to use energy-saving technologies, which reduce electric power, heat, water consumption due to application of solar heating systems and other alternative energy sources (biofuels, wind generators, solar collectors). It helps to solve the problem of rational nature management and nature conservation.

As a result of resource-saving and alternative technologies application it is possible to achieve:

- reduction of product energy intensity due to technological processes improvement and reduction of energy resources losses;
- increase of secondary resources and materials use rate;
- rational self-restraint of resources use;
- application of new systems and devices of resource consumption accounting.

Resource-saving technologies make possible efficient use of natural resources, increase production volumes with the same amount of involved raw material, fuel, main and additional materials. It is one of the important factors for the development of agritourism as environmentally favorable tourism activity.

It is possible to achieve mentioned due to the environmental certification and the classification of agritourism farms (farmsteads), whose makes service in the agritourism sphere.

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<sup>2</sup>V.M. Isaenko, K.O. Babikova: The current state and development prospects of agritourism in residential area Ukraine, [in:] Agroecological Magazine: Scientific-Theoretical Journal 2012, No. 2, p. 101–103.

<sup>3</sup> J. Majewski: Agrotourism: Advisor for farmer, Press, Lwów 2005, p. 80; T.I. Tkachenko: Sustainable Tourism Development: Theory, Methodology, Business Realities, Nat. Torh.-Economic University 2006, s. 537.

Environmental certification is the integral constituent of sustainable development process of any activity within rural residential areas. Its essence is the need of inventory and accounting of the main sources of anthropogenic impacts on the environment, fulfillment environmental protection standards and regulations in the nature management process, determination of the nature resources level exploitation and development of corresponding measures and programs based on certification data.

The environmental certification of touristic areas and agritourism development objects provides possibility to conduct systematic monitoring of state and changes of main agrolandscapes components at certain territory, prevention of irreversible agroecosystems changes, and establishment of corresponding legal regulations of agricultural activity in accordance with sustainable development principles.

Nowadays in Ukraine there is Ukrainian public non-profit organization "The Union of Rural Green Tourism Development Promotion" that has developed requirements concerning voluntary categorization (only in the area of rural green tourism) "The Ukrainian Hospitable Farmstead" and "The Green Farmstead". Program and requirements are developed on the base of Laws of Ukraine "On Tourism" and "On Consumer Rights Protection", interstate standards for tourist-excursion service and analogous standards of member countries of the European Federation of Farm and Village Tourism EUROGITIS, requirements of the State Standard of Ukraine 4268:2003 "Tourist services. Tourism accommodation. General requirements" and the State Standard of Ukraine 4269:2003 "Tourist services. Classification for hotels", regulations and main standards concerning individual and collective non-hotel accommodation.

The environmental certification issues in the touristic sphere have been not determined yet on the legal level, therefore they need further improvement.

## Results and discussion

Based on the above mentioned the research papers "Environmental passport of touristic territory (object)" (No. 52561 Ukraine)<sup>4</sup> and "Environmental passport of rural farmstead and residential territory" (No. 52563. Ukraine)<sup>5</sup> have been developed and corresponding author's certificates have been approved (Table 1)<sup>6</sup>.

**Table 1.** Environmental passport of touristic territory or object

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<sup>4</sup> K.D. Nikolaev, K.O. Babikova, V.M. Isayenko, G.A. Bilyavskaya. Number 52561 Ukraine. Scientific work "Environmental passport tourist area (object)", Appl. 10/15/13; publ. 12.13.13. (research and processing of results, writing and presentation materials).

<sup>5</sup> Number 52 563 Ukraine. Scientific work "Environmental Passport rural (agricultural) estate and residential area", K.O. Babikova, K.D. Nikolaev, V. Isaenko. – Appl. 10/15/13; publ. 12.13.13. (research and processing of results, writing and presentation materials).

<sup>6</sup> K. Babikova, K. Nikolaev, V. Isaenko: Prospects and priority of resource saving technologies as constituent of farmstead environmental certification, 8<sup>th</sup> International Green Energy Conference. – NAU, June 17–19, 2013, p. 299–302; K. Nikolaev: Peculiarities of Eco-Sustainable Tourism Development in the Rural Regions in Ukraine / K.D. Nikolaev, K. Babikova // Annals of agrarian science. №3. p.77–80.

<b>Part 1</b>	<b>General characteristic of touristic territory or object (physiographic and administrative data)</b>
	1.1. Name of object or territory, address, founder and date of foundation, relevant authority; structure
	1.2. Area and character of configuration
	1.3. Environmental map of territory or object
	1.4. Coordinates of object position (country, region, district, settlement)
	1.5. Form of ownership (state, private, collective)
	1.6. Physiographic characteristic
	1.7. Physiographic or geobotanical zoning
<b>Part 2</b>	<b>Environmental state of touristic territory</b>
	2.1. Characteristic of anthropogenic loading
	2.2. Sources, volumes and kinds of pollution from operating (or nearby) enterprises
	2.3. Land resources
	2.4. Water resources
	2.5. Atmospheric air
	2.6. Wastes
	2.7. Construction
2.8. Ecological economic characteristics	
<b>Part 3</b>	<b>Characteristic of tourists flows and tourism service</b>
	3.1. Data of tourists contingent and touristic activity
	3.2. Features and conditions of tourism service
<b>Part 4</b>	<b>Environmental protection activity</b>
	4.1. Nature protection activity
	4.2. Recreational and touristic activity
<b>Part 5</b>	<b>Responsible sides. Conclusions and guidelines</b>

Source: own source.

The development of environmental passport of a farmstead is the important step for the provision the sustainable development of agritourism within rural areas is. Special attention has to be paid to:

- ecological compatibility of agricultural production, which is made by owners of farmsteads;
- water resources utilization (volume for 1 person, volumes of waste waters discharge, character of pollution, efficiency of treatment);
- waste management (amount of stored and utilized wastes, the places of their storage);

- state of land resources (area of farmstead territory, characteristic of agricultural crops, level of soil contamination, use of chemical protective agents for plants, mineral fertilizers etc.);
- environmental protection measures, applied within owners farmsteads;
- energy- and resource-saving<sup>7</sup>.

Based on materials of rural residential settlement passport, touristic object environmental passport (Table 1), ecological agrochemical passport of field and land plot the typical structure of environmental passport of farmstead has been offered (Table 2).

**Table 2.** Environmental passport of farmstead

<b>Part 1</b>	<b>General characteristic of farmstead</b>
	1.1. Touristic recreational assessment of geographical situation (country, region, district, settlement)
	1.2. Data about owner, form of ownership on land
	1.3. Types of agricultural activities, conducted within farmstead
	1.4. Area of building, farmstead land area, garden area, field area (or other territories, used for agritourism service)
	1.5. Characteristics of soils within farmstead land plot, their type and structure
	1.6. Water objects within farmstead (draw well, artificial and natural pond, lake, river)
	1.7. Crop production (total area of agricultural crops, production volume)
	1.8. Livestock (quantity and species), production of milk, honey, eggs or other products
	1.9. Distance from road (highway), railway station, bus terminal, airport, river or sea station, industrial enterprises
	1.10. Presence of outdoor pool and sports ground
1.11. Characteristic of transport availability to farmstead	
<b>Part 2</b>	<b>Specification of farmstead building</b>
	2.1. Commonly used rooms (area, type of lighting, presence of implements, furniture, green plantations, technique and other equipment)
	2.2. Rooms for tourists (quantity, area, total quantity of places, presence of technical and sanitary equipment)
	2.3. Dining room or kitchen (dimensions, technical equipment)
	2.4. Availability of washing rooms
	2.5. Accomplishment of building: <ul style="list-style-type: none"> <li>– lighting;</li> <li>– heating (central or autonomic);</li> <li>– water supply, including hot water (central or individual);</li> <li>– conditioning of rooms;</li> <li>– sewage system (central, cesspool).</li> </ul>
	2.6. Plan of building

<sup>7</sup> K.D. Nikolaev, K.O. Babikova: Statutory basis of tourism organization in Ukraine rural regions, “Modern problems of humanity in the context of social relations and international politics development”. Materials digest of the XXIX International Research and Practice Conference and the II stage of Championship in research analytics in military, political and sociological sciences, London 2012, p. 78–80.

Table 2. cont.

<b>Part 3</b>	<b>Environmental state of farmstead land plot and environmental protection measures</b>
	3.1. Sources, volumes and types of pollution from stationary and mobile sources
	3.2. Land resources: <ul style="list-style-type: none"> <li>– agroecological state of soils:</li> <li>A) acidity (pH);</li> <li>B) productive humidity in 0–100 cm (mm);</li> <li>C) content in ploughable soil layer: humus (%), slightly hydrolyzed nitrogen, mobile phosphorus, exchangeable potassium);</li> <li>D) pollution: heavy metals content, pesticides remains; <ul style="list-style-type: none"> <li>– sanitary state of soil;</li> <li>– fertilizing (organic, mineral)</li> </ul> </li> </ul>
	3.3. Water resources: <ul style="list-style-type: none"> <li>– pH;</li> <li>– total hardness of water;</li> <li>– content of chlorides and sulfates;</li> <li>– characteristic of water objects pollution sources:</li> </ul> a) discharge rates of unpurified / slightly purified waste waters; <ul style="list-style-type: none"> <li>– quality and compliance of drinking water quality with existing standards and sanitary norms;</li> <li>– availability of cesspit wells (isolated from ground waters);</li> </ul> 6) content of nitrates and pollutants (heavy metals, pesticides remains).
	3.4. Quality of agricultural production: <ul style="list-style-type: none"> <li>– use of agrochemicals in horticulture and gardening;</li> <li>– level of pollution with nitrates, pesticides residuals and heavy metals;</li> <li>– amount of grown organic production</li> </ul>
	3.5. Wastes: <ul style="list-style-type: none"> <li>– amount of stored domestic wastes;</li> <li>– amount of stored agricultural wastes;</li> <li>– availability of special caskets for wastes presorting on the farmstead territory;</li> <li>– payment rate of waste storage</li> </ul>
	3.6. Power supply: <ul style="list-style-type: none"> <li>– amount of consumed electrical energy and fuel (per 1 tourist), availability of counters;</li> <li>– use of energy- and resource-saving technologies</li> </ul>
	3.7. Spendings for environmental protection
	3.8. Measures for conservation of species, landscapes and biological diversity
	3.9. Environmental tourism mapping of region
3.10. Environmental educational activity	
<b>Part 4</b>	<b>Types of tourism, touristic contingent and features of service</b>
	4.1. Main and perspective types of touristic activity within farmstead and region
	4.2. Data of touristic contingent: <ul style="list-style-type: none"> <li>– age of tourists, level of environmental education, culture, social status;</li> <li>– average residence time in the farmstead (number of nights)</li> </ul>
	4.3. Maximal number of tourists to be roomed simultaneously in the farmstead.
	4.4. Permissible number of tourists, depending on the recreational capacity of the territory.
4.5. Availability of attractions, nature protected areas, environmental routes near the farmstead.	
<b>Part 5</b>	<b>Conclusions and guidelines Agroecological assessment mapping</b>

Source: own source.

Applied value of environmental certification includes:

- possibility of précising and timely environmental assessment within region or separated territory (object);
- assessment of level of touristic institutions impact on environment;
- environmental protection measures implementation;
- harmonious nature management in accordance with established legal guidelines and regulations <sup>8</sup>.

Developed environmental passports are the base for further environmental classification of farmsteads, and they permit to make timely scientific substantiated forecasts about prevention and neutralization of potential negative environmental processes and to implement measures for decreasing territory environmental hazards levels.

It should be noted, that environmental classification provides the transparency of proposition for client, the quality control of provided service and production. Certified category is the guarantee that the farmstead was thoroughly checked by experts and meet established national standards in the sphere of tourist service. In this case a tourist will always know what he can expect and what he is paying for.

The basic criterions of environmental classification are based on the main principles of sustainable development and provide:

- decrease of wastes volume, recycling and reusing of raw material;
- efficiency and conservation of energy;
- management of drinking water use and control of waste waters;
- stimulation of local development;
- preservation of nature and culture heritage;
- rational agriculture and organic farming;
- environmental education of the public etc.

The aim of the farmstead classification is to define and unificate the standards concerning living conditions for tourists. The farmstead classification is also one of the most effective tools of agritourism development, control of quality of agritourism farms propositions and it is voluntary for application.

Mandatory character of environmental certification system application and classification of agritourism objects development permits to assess accurately, timely and promptly the environmental state within region or certain farmstead; to determine levels of impacts on the environment from touristic institutions; to implement environmental protection measures.

Implementation of environmental certification and classification permits owners of farmsteads and individual farms to:

- increase the competiveness of own farm among others;
- enlarge production volumes of green crops;
- increase number of environmentally conscious tourists, visiting farmsteads;
- get profits from agritourism activity;

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<sup>8</sup> K. Nikolaev, K. Babikova: Peculiarities of Eco-Sustainable Tourism Development in the Rural Regions in Ukraine, *Annals of Agrarian Science* 3, p. 77–80.

- get guarantees concerning compliance of agroecological territory state with established international and national standards;
- increase environmental consciousness and culture;
- attract investments for further development;
- improve services provision for rural areas, farms and whole infrastructure in general.

## Conclusions

Promotion on the market of rural tourism (green) and agro-tourism is impossible without complying with relevant standards, norms and ecological passportization and certification of tourist objects and rural (agro) estates. The environmental certification issues have to play leading role in governmental and regional target programs and to provide the sustainable development of rural residential territories and certain touristic regions. All above should prevent and minimize damage to the environment and provide the appropriate level of product quality and services.

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