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SELF-POWERED RURAL TOURISM HOUSES IN UKRAINE

The new approaches towards the green tourism, agrotourism and rural development in general is vitally important for the economy under the rapid urbanization. The sustainability of green and rural tourism hardly depends on the alternative sources of energy usage by farmstead owners. Ukraine has a great potential to improve in this prospective domain.

This research was realized within the master degree programme course Geographical grounds for sustainable development, balanced recreation and tourism by the group of the first year at Geography of Ukraine chair in Taras Shevchenko Kyiv National University. The curricular for the above course follows the project principle. This research was supervised by Motuzenko Olena Olexandrivna (Associate Professor of Taras Shevchenko National University of Kyiv) and Sarmento Joao Carlos Vicente (Assistant Professor of University of Minho, Portugal), who joit the group within the framework international academic mobility "Erasmus+". In this case students got an opportunity to master in analytics and comparative methods as well as skills (linguistic and communicative) of working in the international team.

Purpose of the research. This research aims at clarifying the popularity of alternative energy sources in farmsteads involved in green and rural tourism in Ukraine.

Methods. Our research used the survey method, including phone calls and e-mail letters with pre-designed set of questions. This method helped to collect information about the object of interest during the communication with the respondents. Questionnaire took into account age, sex, experience in tourism of every owner, etc. In addition data analysis and calculation of referrals and general indicators of the objects grounded the findings.

Results. The research identifies the main issues of concern of the estate owners, who used alternative energy sources. Based on survey results we defined the range of owners who are interested in using alternative energy if they get a required information and financial support from the state as well as the list of rural facilities involved in alternative power supply. The above results will help to create an information network for owners of rural estates to provide the information about possibilities for alternative power supply with the help of the current international and national support programs.

Scientific novelty. The patterns of regional differentiation in alternative energy resource usage in green rural tourism reflects the key result of this research. Based on the analysed information we clarified the regional situation with number of farms which already used alternative energy sources, the way and purposes they use it (tourism or personal needs).

The practical significance. The research of the new approaches towards the green tourism development, agrotourism and rural development enable to improvements of the socio-economic situation of the country.

Keywords: green tourism, rural green tourism, farmstead, owners of the estates, alternative energy sources.

Statement of the problem. The tools for sustainable development of green tourism include among others usage of the alternative energy supply, the situation with which in Ukraine was unclear.

Analysis of recent studies and publications. An important contribution to the study of rural green tourism problems was made by such well-known foreign and native scholars as O.O. Beydyk, B.I. Vyhrystenko, B.I. Gerasymenko, L.S. Hryniv, P.V. Gudzyk, V.G. Gulyaev, M.I. Dolishniy, L.V. Zaburanna, V.D. Kalytyuk, O.O. Lyubitseva, M.P. Malska, S.I. Popovych, I.L. Sazonets, T.G. Sokol, T.I. Tkachenko, John Walker, V.K. Fedorchenko, S.V. Hlopyak, V.V. Khudo, V.I. Tsybukh, J.N. Chobotar, I.M. Shkola and others.

Selection of the unsolved aspects of the problem. Identify problems and barriers experienced or perceived by the estates owners of rural green tourism. Explain what exactly is meant by 'rural green tourism', 'alternative energy sources', 'green tariff', about the benefits of using such energy.

The wording of the purposes of article. The main areas of research were to explore the experience of the alternative energy sources and investigate the development and use of alternative energy in Ukraine, including legislation, benefits of green tariffs, etc. Poll of the state owners about the practical use and the problems that exist in the use of alternative energy sources.

The main material. For the research information from 22 regions of Ukraine (except Luhansk, Donetsk and Crimea) was gathered. 430 farmsteads were processed, 329 farmstead owners were contacted, about 70% of the total number. 38 of them use alternative energy sources, by means of solar panels and collectors, windmills, biofuels (humus in bricks, wood waste, corn sprouts etc.) in particular.

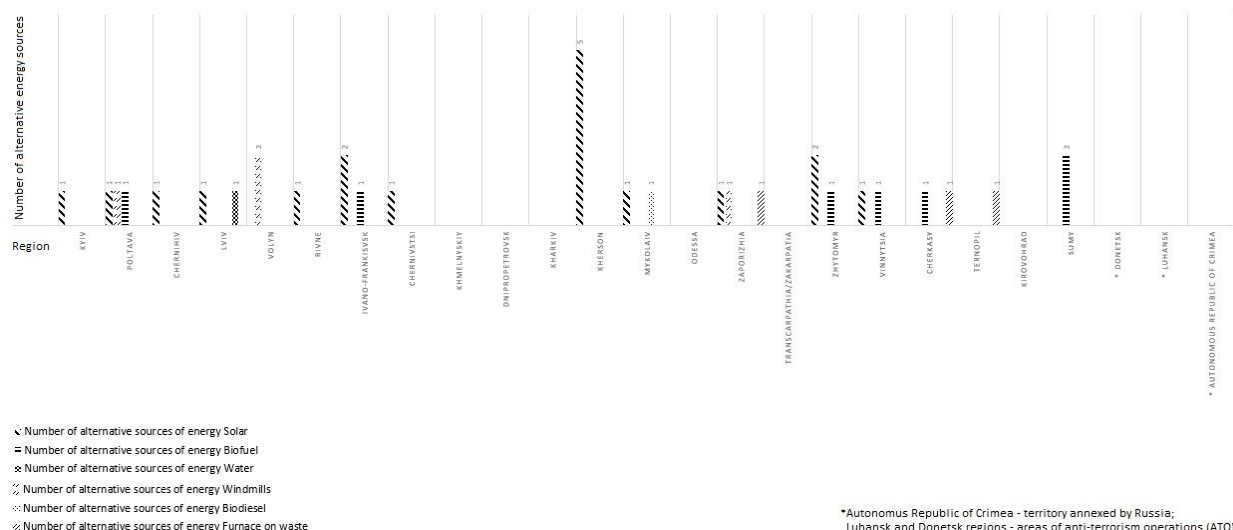
The list of rural green estates of Kyiv region includes 22 entities. Among 16 contacted farmsteads, just one household use alternative forms of energy and plans to develop such systems further. In Poltava region the information was obtained from 39 out of on 51 farms. Only 3 of them use alternative energy sources. One of the households have a windmill with 1 kW capacity, in another one solar collectors are used to heat water during summer period, and the third one use biofuel. In Chernihiv region, only 6 farmsteads were found with only one that was failed to contact, and one using biofuel (wood waste and solar energy), but the owner did not mention how. In Lviv region only 5 farmsteads of green tourism were found, 4 of which belong to the "Union for Promotion of Rural Green Tourism Development in Ukraine". Alternative energy sources are

used in two households. The Volyn region has only 20 farmsteads of green tourism. Alternative energy sources are used also only in two households. Rivne region has only 66 farmsteads of green tourism. Alternative energy sources are used in one household, and the owners of 27 estates are interested in getting information regarding alternative energy. Ivano-Frankivsk region counts 45 farmsteads of green tourism, 14 of which belong to the "Union for Promotion of Rural Green Tourism Development in Ukraine". Alternative sources of energy are used in 3 households, but only one owner has a desire to learn more regarding it. In Chernivtsi region there is only 20 farmsteads of green tourism. One household uses alternative sources of energy. Khmelnytsky region has 10 farmsteads with not a single one using alternative energy sources. In Dnipropetrovsk region 7 farmsteads were analyzed. Only 4 owners were contacted and there were no household also that used alternative energy sources. In Kharkiv region were only two farmsteads at all. The contact was established with one of them, but the owner was not interested in all in getting the information. In Kherson region there are 54 green tourism estates. The contact was established with 22 owners, it showed that in Kherson alternative energy sources use is at basic level of development. It was observed that only 5 estates installed solar panels. In Mykolaiv region one estate was contacted, which owner uses both solar energy and biofuel (dried humus - briquette). 7 estates in the Odessa area, with 4 of them contacted. No one using alternative methods of power generation. In the Zaporizhzhya region 22 estates were found. 12 farms were reached, 3 of them have equipment that can obtain alternative energy (wind turbines, solar panels, alternative furnace (using wastes). 37 green estate of Transcarpathian region were analyzed, alternative source are not used there at all. 11 out 37 happened to establish the contact. In the Zhytomyr region the contact information of 12 estates was found. The contact was established with 9 of them, only 3 use alternative forms of energy and plans implement new technologies of alternative energy further. Vinnytsia region - information on 12 estates was found, 11 owners of households were contacted, one household uses solar panels in a single complex, another one uses biofuel. In Cherkassy region information was found on 21 farms, it was possible to contact 16 of them. In nearest future only two plan to use alternative energy sources. In the Ternopil region one owner of the estate was contacted, which uses electric heaters and furnace working on wood and other raw materials. In Kirovograd region 8 estates were registered to use biofuel. The situation is similar in the Sumy region, biofuel is used by two estates. A number of problems were found during the research. About 20% of respondents have negative attitude to such surveys, they answered briefly or even refused to provide information. It should also be noted that local people are completely unaware of the subject, namely which alternative energy sources exist and what are their types (6-7% of the respondents needed to be informed). About 35% of respondents were not interested in the topic and refused to share any information. The low percentage

of e-mail responses indicates a poor level of service and status of rural green tourism in Ukraine today.

Most owners do not use alternative energy sources in rural green tourism due to the following reasons: high price, equipment pays off too long, no support from the government, no need for it (when estate is small, or the range of services includes only fishing and daytime recreation), lack of information.

Thus, the results of research on alternative energy sources in tourism in different regions of Ukraine can be represented graphically on Pic.1.



Pic.1. Regional features of use of alternative energy sources in tourism

Conclusions. Ukraine has active and less active regions using or interested in using alternative energy sources in their farms in the future.

The largest number of rural green estates registered in Rivne, Kherson, Poltava, Ivano-Frankivsk and Zakarpattia regions, the lowest - in Ternopil, Mykolayiv, Sumy, Kharkiv and Lviv. The largest number of households that use alternative energy sources are located in Kherson, Zaporizhia, Ivano-Frankivsk, Poltava and Zhytomyr (at least 3 farms), the rest of the areas have one or two examples, or do not have estates of this type at all.

The strange thing is that, for example, Lviv region, which has a unique tourist and recreational resources, has no official statistics on the rural green estates, and especially those using alternative energy sources. This indicates that, unfortunately, the shady business in rural green tourism constitutes the lion share in the majority of Ukrainian regions and this problem requires some urgent decisions by public authorities.

As a result of the research, a conclusion on the expediency of alternative energy sources use in rural green tourism was made. Besides, one of the farmsteads in Zhytomyr region was visited, which owner uses energy-saving technologies in the construction and the welfare of his home.

Thus, it was found that the use of alternative energy sources in rural green tourism is promising and needs support from the state by means of government programs and special legislation providing benefits and privileges to households' owners, who use energy-saving technologies.

Also during the course of the project work, the students had received practical and educational results. Participation in the project gave students an opportunity to learn how to conduct research, draw conclusions and generalizations about the result, but also to experience teamwork.

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