

Reorientation of tourists to rural areas due to climate change

Mihaela-Iuliana Grigore^{1,*} 

¹University of Craiova, Department of Geography, Science Doctoral School, 13 A.I. Cuza Street,
200585 Craiova, Romania
mihaela.grigore@starholiday.ro

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ABSTRACT: The global warming, tourist crowds, thermal discomfort, ultraviolet radiation, ecotourism, ethnic Saxons, Saxon villages, sustainable tourism, craft and culinary art, tourist potential, UNESCO cultural objectives. In the summer season, due to the heat wave that persists in most of the country, the very high thermal discomfort, the temperature-humidity index (ITU) that exceeds the critical threshold of 80 units, more and more tourists go to the mountain areas and depression. In this sense, the Saxon settlements in Transylvania are an alternative for tourists who love nature, hiking, traditional art and cuisine. The Saxon villages in the heart of Transylvania have become a tourist attraction in recent years. His Majesty, King Charles of Great Britain, drew attention to these areas where time seems to have stood still. This research is based on a questionnaire, from which we drew conclusions about the reorientation of tourism activity in the Transylvanian region for this period, when climate change is increasingly felt. It is the first research of its kind, which tries to correlate the influence of climate change on tourism activities, for the central area of Romania, i.e. Transylvania.

KEYWORDS: sustainable tourism, ecotourism, climate change, economic reorientation, rural area, smart village

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1. INTRODUCTION

Transylvania is a geographical and historical region in the centre of Romania. The territory is surrounded by the Carpathian arc, being a high plateau, bordered by hills and depressions, with a rich hydrographic network and alternating forest and steppe vegetation. The turbulent history of this territory has brought together various ethnic communities (Romanians, Hungarians, Germans, Gypsies, etc.), and is characterised by great cultural diversity. Numerous ancient and especially medieval fortresses enhance the tourist attraction of this region. Its easy accessibility is a favourable factor for tourism. Ecotourism and rural tourism are increasingly developing, especially in recent years, when the coolness of forests and lakes, fresh air and natural food is in demand after by city residents from polluted and hot areas, or people from the increasingly arid south. Climatic factors represent the key element of attraction for tourism. Thus, warm weather, low precipitation and the absence of extreme weather phenomena are the most important factors for a vacation destination. In this way, any tourism activity, or any tourism strategy at local, regional, or national level, are directly related to climate change.

A unique land, with a special character in the Romanian landscape, the Saxon area of Transylvania is one of the very few places in Europe that still preserves unaltered the medieval air of the centuries of colonization. The cultural heritage here is huge, the heritage is still alive and the interest to conserve and protect this perfectly functioning rural ecosystem.

*Corresponding author: mihaela.grigore@starholiday.ro; Tel.: +40-722-370-530

These villages are located in South East, East and Central Transylvania, in the counties of Sibiu, Braşov, Mureş and Alba. The Saxon area of Transylvania amounts to about 4% of Romania's geographical territory. The character of the settlements is typical, with houses built in a characteristic style and organized around the spiritual and defensive center of the village, represented by the fortified church.

While the impact of COVID-19 has subsided, climate change is putting increasing pressure on socio-ecological systems and will continue to do so even more in the coming years. Global warming has negative effects on the environment and may affect tourism in Transylvanian villages. In general, global warming can lead to climate and environmental changes, which can affect tourism in the region. For example, climate change may lead to increased temperatures and decreased rainfall, which may affect agriculture and tourism in the region. In Transylvania there are several hundreds of villages that have no tourist infrastructure, but are often quite charming for nature, tranquility, rural life and Saxon and Romanian architecture. They are considered a refuge for those who run away from the heat wave, are in love with nature, but also for those who want privacy and protection against COVID-19. If rural tourism in Transylvania does not turn into mass tourism and continues to be practiced at a low level, it represents an important form of sustainable tourism. This means that tourism is and can be economically feasible without destroying nature the resources and environment (human and physical) of the host communities and destinations.

Further, it will try to highlight the reorientation of tourism towards the countryside, against the backdrop of climate change and global warming that has been taking place in recent years.

2. LITERATURE REVIEW

The Tourism research related to the Transylvanian region focuses on two main directions. One focuses on the legend of Dracula. As early as 1998, a team of researchers led by Mureşan and Smith published *Dracula's castle in Transylvania: Conflicting heritage marketing strategies*. Then Duncan Light, fascinated by the legend, published in 2007, *Dracula tourism in Romania Cultural identity and the state*. Over time, the attraction of Dracula has waned, with interest in tourism research moving in the other major direction based on studies of Saxon cultural heritage, especially after 2010 and after King Charles of Great Britain chose to have holiday homes here. The Transylvanian region has a great potential for natural tourism, but also for man-made tourism based on cultural identity, medieval heritage and contemporary amenities.

In this regard, we note the studies Tourism in Saxon communities in South-Eastern Transylvania (Brasov county) (Dinu & Ciocă, 2008), Transylvanian Saxon culture as heritage: Insights from Viscri, Romania (Corsale & Iorio, 2014), Cultural Heritage, Tourism and the Sustainable Development of the Local Communities: The Case of the Saxons' Fortified Churches of Transylvania (Vergheş & Popescu, 2018), Involvement of rural tourism operators in the project "Sibiu European Gastronomic Region" (Nicula & Popsa, 2018), Geographical features and authentic culture as attractions of Viscri community-based tourism in Romania (Voda et al., 2018), Projected Destination Images Versus Visitor-Generated Visual Content in Brasov, Transylvania (Nechita et al., 2019), Trademark potential increase and entrepreneurship rural development: A case study of Southern Transylvania (Stefan et al., 2021), Rural tourism: the evolution of practice and research approaches – towards a new generation concept? (Lane & Kastenholz, 2015), Domestic industries and foreign portfolio choice (Schumacher, 2018).

Geographical research, especially in the field of tourism, is increasingly turning to the Transylvania region, as it represents a diverse and dynamic source that needs to be analysed and known.

3. RESEARCH METHODS

Both quantitative and qualitative research methods were used for this study. The spatial distribution method, observation method, historical method, analysis and synthesis method, inductive-deductive method, comparison method, cartographic method were used in the development. Among the quantitative methods, the statistical method was applied, and among the qualitative methods, the survey/interview method was applied. These have led to a better knowledge of the topic debated in this study and to the correlation of tourism and climate change issues.

4. RESULTS

Every year, more and more tourists go to the Saxon villages to discover the beauty of the most spectacular fortified churches, welcoming houses, traditions and culinary products specific to the area. Tourism through the Saxon villages offers a unique experience (Figure 1).



Figure 1. Transylvania regional map.
Source: www.interferente.ro

Tourism and travels have the potential of becoming an important export sector in Romania and of ensuring workplaces and the economic increase among the vast rural population of the country (Mazilu, 2011).

Climate change has a major impact on local cultural landscapes, but also on natural ones. From the centuries-old forests to the hills and meadows of Transylvania, they are all affected by climate change. This impact on the environment constantly threatens the cultural continuity of local communities in all areas of Romania.

Throughout history, our communities have shaped the natural landscapes around them and transformed them into cultural landscapes thanks to the customs and traditions inherited from our predecessors. The richness of these places is noticeable in areas of Transylvania, but also in other areas of the country, where history, cultural and ecological identity are closely related. Transylvanian hay meadows and those with centuries-old trees are among the richest in grassland species in the world.

Forests represent other natural elements with a special value in the Romanian cultural landscape. Furthermore, in the forests of Romania live the most important populations of large mammals in Europe (bears, lynxes, Carpathian deer and wolves). These forested landscapes influence the local climate, and sometimes protect against floods. Unfortunately, these areas are also exposed to extreme natural phenomena such as wildfires and massive landslides.

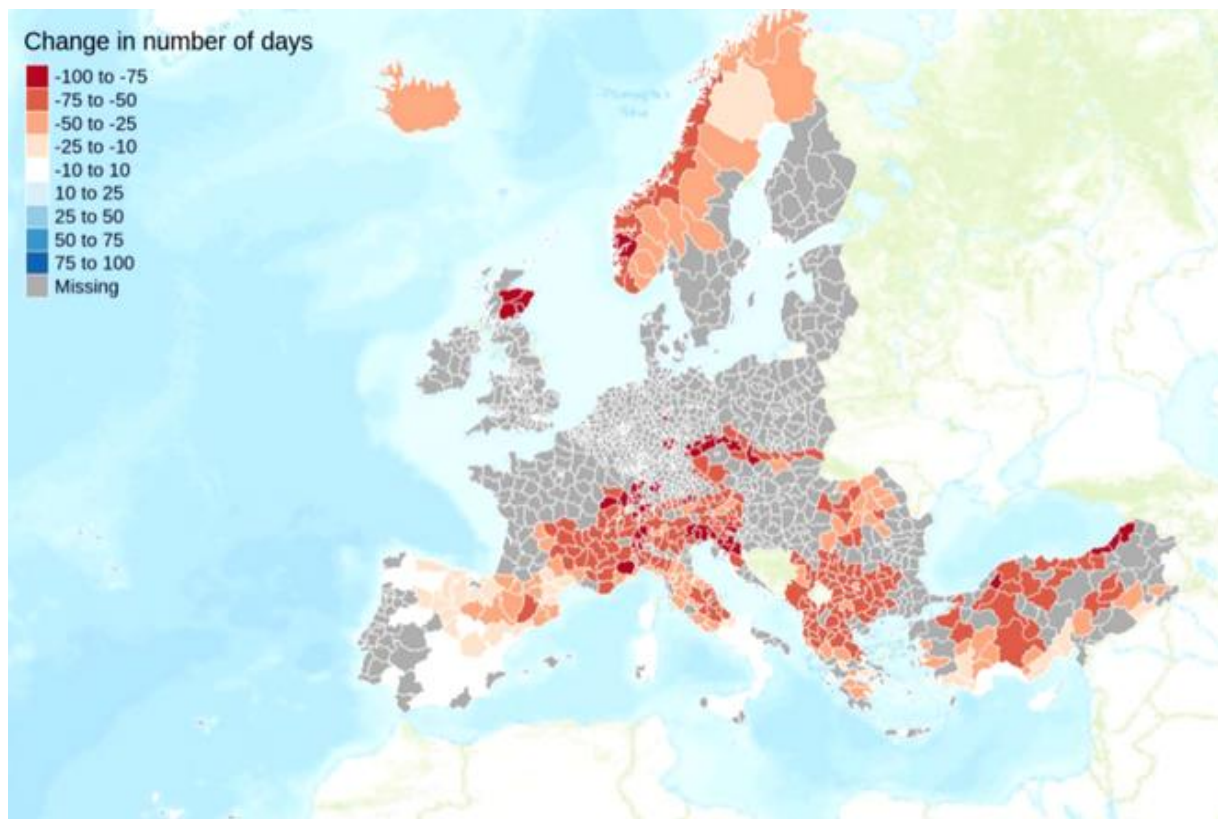


Figure 2. Projected changes in the number of snowy days (at least 30 cm of snow) annually at altitudes higher than 800 m towards the end of the 21st century according to the pessimistic scenario (RCP8.5), based on data provided by Copernicus.
Source: Morin et al., 2021.

The lack of snow in recent years influences the cultural traditions associated with winter holidays in the countryside but also mountain tourism. In recent years we have experienced the driest winters. Climatologists warn that winters with snow will be fewer in the future, even at higher altitudes where the glaciers are melting. These things change the cultural landscape and prompt people to adapt their old customs to fewer common times and conditions.

Copernicus data show that if we do not act to reduce the rate of global warming, we can "lose" on average between 25 and 75 snowy days per year (Figure 2).

In Transylvania, but also in other areas of the country, the tradition of mowing, collecting hay and drying it represented a local tradition, often completed with a rural celebration of great spiritual and social value. But with the intensification of agriculture and the simultaneous increase in average temperature, the geographical and ecological structure, as well as the management of these areas with meadows and hayfields, has been profoundly transformed.

These changes have transformed the dynamics of rural communities and the cultural activities they carry out in nature. Thus, many farmers have abandoned traditional agricultural practices on small plots and adopted modern practices involving increased mechanization and the forced increase of certain vegetation species (Figure 3).

These images represent different landscapes undergoing transformation in the Transylvania area, illustrating the changes from a low-intensity land use to a more intensive use (in the case of arable land – Figure 3a. and 3b and pastures – Figure 3c and 3d). It is observed how the intensive use reduces the structural diversity of the landscape by clearing both wood and meadow vegetation. Traditional land use practices such as manual mowing are increasingly being replaced by mechanized harvesting (Figure 3e and f). Climate adaptation options represent a range of alternative management approaches designed to mitigate impacts on cultural resources, but at the same time encourage communities to rethink their

activities and turn to different forms of collaboration and association. This is how the various local initiatives were formed in many of these areas of rural Romania (Loos et al., 2015).

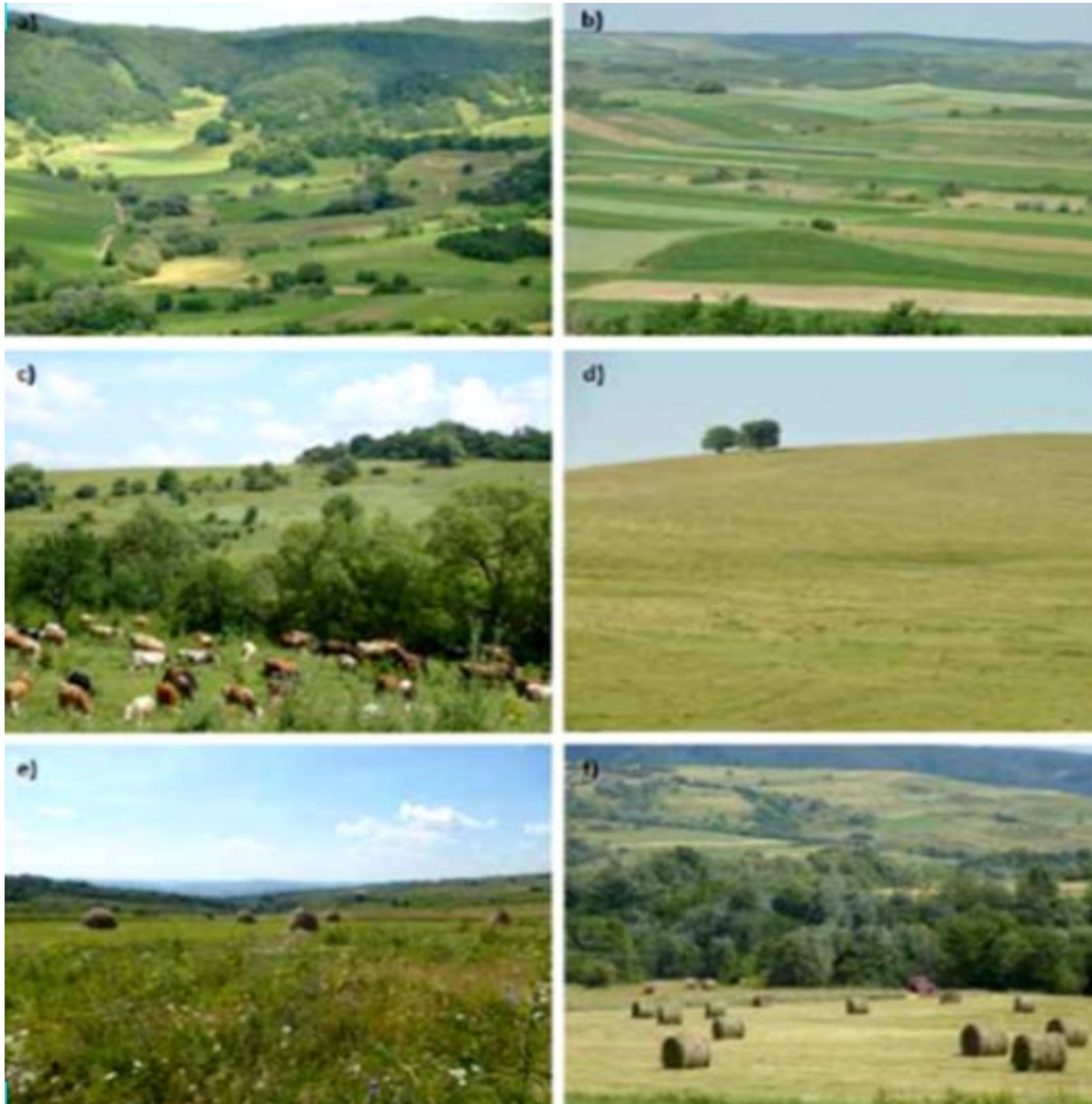


Figure 3. The effect of climate change in Transylvania.

Source: Loos et al., 2015.

Smart Villages are understood as "rural communities that refuse to wait for change to happen". Such communities are made up of rural people who take the initiative to mobilize and find practical solutions to the everyday challenges they face, as well as take advantage of new opportunities to improve their quality of life and standard of living.

Starting from 2016, within the European Union, the smart village concept was launched under the name "A better life in rural areas" in the Declaration from Cork, Ireland.

The smart village is a relatively new concept in the EU policy-making process. The emerging concept of the smart village refers to rural areas and communities that build on their existing strengths and resources, as well as developing new opportunities. The concept involves the participation of the local population in improving economic, social or environmental conditions, cooperation with other communities, social innovation and the development of smart village strategies.

Digital technologies can be applied to many aspects of life and work in rural areas. The smart village concept also suggests the adoption of smart solutions in both the public and private sectors in a wide

range of policy areas, such as improving access to services, developing short food supply chains and the development of renewable energy sources. The smart village concept is gaining ground on the rural development agenda, coinciding with the ongoing reform of the common agri-cultural policy (CAP). The domains of smart village are: health; education; economy; environment/sustainable development – water, air, soil, sanitation; digitization/digitalization/digital transformation; renewable energy; nutrition; awareness and civic involvement; good governance (Andrei & Simon, 2014).

For example - rural tourism in Transylvania is especially practiced in the Saxon villages. The Saxon settlements founded by the Saxon colonists are found in the area bordered by the medieval cities of Sibiu, Sighișoara and Brașov. A region with wooded hills, narrow valleys, biodiversity, fortified church towers - such a picturesque landscape as if from a painting (Popescu, Badita & Mazilu, 2014).

His Majesty, King Charles of Great Britain, who drew attention to these areas where time seems to have stood still. Every year, more and more tourists go to the Saxon villages to discover the beauty of the most spectacular fortified churches, welcoming houses, traditions and dishes specific to the area.

In addition, nature ran free in the Saxon area so that the flora and fauna were not affected by pollution or toxic substances. The Saxon settlements in Transylvania hide real tourist treasures that have impressed both Romanian and foreign tourists. A few Saxon villages in Transylvania are preserved almost intact. In this sense, the villages of Viscri, Biertan, Saschiz, Călnic, Prejmer, Valea Viilor and Dârjiu are seven villages protected by UNESCO, because here many traditions and fortified churches have been kept almost intact.

Ten years ago, guesthouses and rural tourism were very rare. But now, in many of these villages, life without tourism and cultural events has become unimaginable - in other words, what started as a vision of a few villagers has become part of everyday life and a means of existence for some entire villages (Brown, 2006).

Many new opportunities for sustainable business have emerged. The possibility of using holiday vouchers in wine destinations is an important argument in choosing where to spend your leisure time, whether we are talking about trips, weekends, holidays or vacations (Mazilu et al., 2017).

If many years ago there were few tourists, now there are several types of activities that tourists can enjoy and that provide economic support for ecologically sustainable management of the landscape. However, only a small part of the income generated by this tourism is reinvested in the development of cultural landscapes and in such new projects (Dobrescu & Mazilu, 2020).

Traditional landscapes with a distinct cultural heritage can positively influence the local economy, even if sometimes seasonal activities have to be rethought. Rural communities can benefit from ecological and cultural tourism, offering tourists handicraft products, but also foods specific to these areas (Gogonea et al., 2017).

Thus, ecotourism can ensure the widening of the spectrum of traditional economic activities, in Transylvania but also in other areas without marginalizing or replacing them, so that the local economy is not subject to external and internal changes and influences.

The tourist activities carried out under the ecotourism emblem offer specific opportunities, the local population and the tourist industry being forced to use natural resources in a sustainable manner and to appreciate the valuable natural and cultural objectives.

For this, however, strong and united communities are needed, which encourage the civic spirit of the locals and which aim to implement a vision in which all natural and cultural resources are valued and cared for.

In this sense, the code of good practices in eco-tourism recommends:

- the construction of installations for capturing biogas, resulting in the reduction of methane emissions, and the energy obtained is used for the purpose of reducing fossil fuels;
- outdoor grazing versus growing in systems with shelters;
- education, increasing the degree of awareness among farmers about the consequences determined by the effects of climate change;
- the continuous review of agricultural strategies, to ensure their flexibility in relation to the effects of climate change and adaptation measures.

5. DISCUSSION

A questionnaire based on 4 questions was created to collect important data regarding identifying the opinion of the inhabitants of rural villages regarding the impact of climate change on daily activities. This quiz contains questions with only one possible answer and multiple-choice questions and a Likert scale is used.

The data collection method was personal interview (face to face) and 100 questionnaires were applied, all of which were validated (100 people, 54 men and 46 women). The surveyed population is made up of household representatives, from Saxon villages in the south and southeast of Transylvania, generally over 25 years old.

The objectives of the research are the following:

- a) residents to determine the level of awareness regarding climate change.
- b) to identify the residents' perceptions regarding the effects of climate change.
- c) to determine the sources of information that provide reliable data on the effects of climate change;
- d) to identify the stakeholders responsible for addressing the effects of climate change;
- e) to identify the possibility of taking measures to combat the effects of climate change.

The research hypotheses are the following:

- 1) in general, the inhabitants of the Saxon villages are aware of climate change and their effects on daily activities.
- 2) in general, the inhabitants perceived these climate changes;
- 3) in general, the Saxon villages are and will be affected by climate change;
- 4) a large percentage believes that measures can be taken to combat the effects of climate changes;
- 5) the representatives of the Saxon villages are of the opinion that the local public administration is the main one interested institution that should be involved in taking measures to address the effects of climate change.

According to the results, hypotheses 1 to 4 were confirmed. And hypothesis 5 was not confirmed.

The questions focused on the following:

- the future impact of climate changes;
- the possibility to adopt measures to tackle the effects of climate changes.
- identifying the organizations responsible for adopting measures to mitigate the effects of climate change.

The analysis of data collected underlines that a relatively high percent of respondents heard about "climate change" (55%), while 15% of them declared they never heard of this phenomenon. The rural people are aware of climate change, and they are interested in this topic. This also underlines the need for awareness strategies (Figure 4).

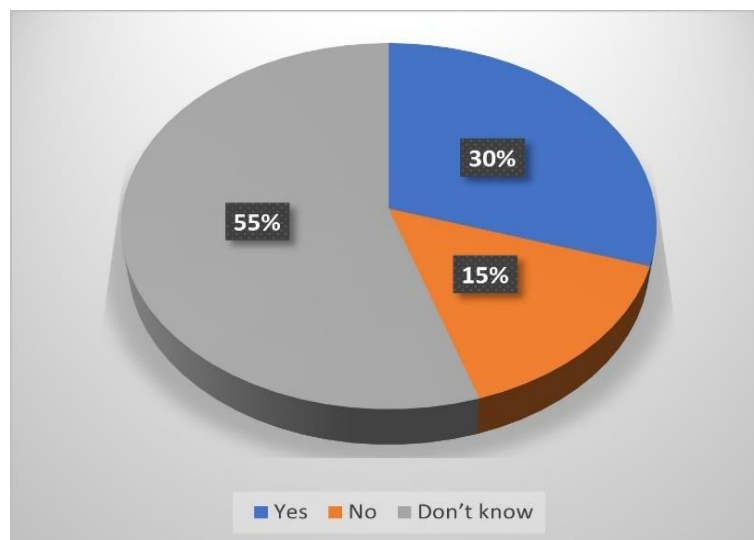


Figure 4. The Distribution of respondents according to the answers of the question: "Have you ever heard about climate change?"

In this sense, 55% of the respondents stated that they have perceived important changes in some aspects of the weather (types of wind, the amount and type of precipitation, etc.).

At the same time, 20% of them didn't notice any important changes in the weather.

This important percentage of 55% represents the people who carry out specific activities in the rural areas and who are able to see the changes in the environment they live in.

Most of the information on climate change reached the respondents via television, and to a much lesser extent via radio, the Internet, newspapers, and magazines.

The result highlights the importance of this information channel (television) for rural people, where they can easily find news about climate change (Figure 5).

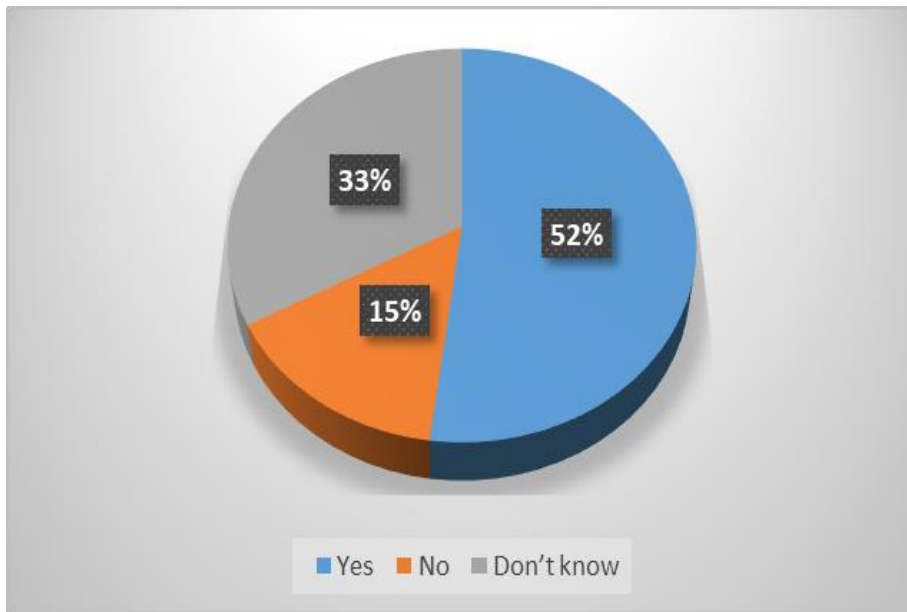


Figure 5. The distribution of respondents according to the answers of the question: "Have you noticed an important change of some aspects of the weather?"

However, according to the respondents, they have the highest confidence in the information provided by specialists, followed by members of the local public administration, TV/radio, newspapers, and magazines.

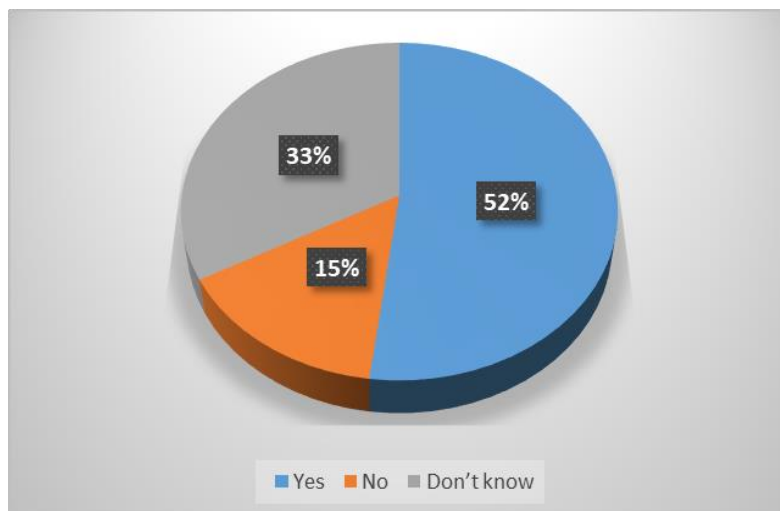


Figure 6. The distribution of respondents according to the answers of the question: "Do you think the climate change affects you or will affect you in the future?"

Regarding the effects of climate change at the individual level, only 52% of the respondents declared that they are or will be affected, while 15% considered they will not experience these effects. A high proportion is represented by those who responded that they do not know if the changes in various aspects

of the weather had or will have an influence on them. This might be caused by the insufficient level of information held by rural people concerning climate change.

Unlike many other European countries, Romania still has the privilege of having preserved a good part of its natural and cultural heritage, but that does not mean that we must let things take their natural course, especially if this course turns out to be one with devastating consequences for the natural and cultural landscapes of the next generations in Romania (Figure 6).

Therefore, climate warming and human activities that degrade the environment are the problem of the entire planet, of all people. It should be the problem for each of us. These harmful effects cost lives and a lot of money.

6. CONCLUSIONS

Despite all the problems related to the transport and tourism infrastructure, Transylvania is a major attraction for tourists, especially for those from abroad. Against the backdrop of climate change, tourists visiting this region are increasingly moving to rural areas. We note the following types of tourism: leisure tourism, cultural tourism, ecotourism, religious tourism, rest and recreation tourism, treatment and spa tourism, sports tourism, but also shopping tourism, scientific tourism, youth tourism or business tourism, especially in recent years.

Transylvania, with its rural areas, remains one of the most attractive regions for tourism in Romania and an increasingly sought-after destination in the future, mainly as a result of the reorientation of tourists due to climate change.

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