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DEVELOPMENT OF MODERN INSURANCE MARKET - CONSTRAINTS AND POSSIBILITIES



UNIVERZITET U BEOGRADU
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**DEVELOPMENT OF MODERN
INSURANCE MARKET –
CONSTRAINTS AND
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THE OPPORTUNITIES OF INSURANCE AGAINST CURRENT RISKS IN TOURISM

Insurance has a significant impact on the economic growth of every country. Insurance products are important factors in the financial planning of individuals, households, and business entities. Being an important segment of economic activity, insurance is intertwined with other sectors of the economy. Tourism is a segment of economic activity that contributes to foreign exchange earnings, generating income through taxes, and employment, in both a direct and an indirect manner. A significant contribution in terms of regional development and the development of infrastructure is achieved through tourism activities. A strong global economy is bolstered by the high demand for international travel. The way that insurance companies conduct their business at a national level is influenced by macroeconomic trends. The insurance industry is facing an outlook of growth in both the number and the size of tourists and the tourism economy, as a consequence of a rise in the number of extreme weather events caused by climate change, as well as the risk of trip cancellation due to pandemics. The need for insurance arises due to risks such as climate change, illness or death while travelling, an increased number of accidents at a tourist destination, structural damage to a tourist facility or a fire, or adverse weather. In short, the change in climate affects most aspects of insurance in tourism.⁴⁹⁴ In the tourism literature, a few studies⁴⁹⁵ have provided insights into tourists' perspectives on the relevance of various insurance covers, particularly travel, weather, climate and health insurance. Technological advancements in tourism, as a social trend, conditions a change in the consumers' behaviour pattern, thus producing new tourist destinations.

⁴⁹⁴ Brämmer, Ch. (2002). *Chancen und Risiken der Klimaänderung*. Zürich: Schweizerische Rückversicherungs-Gesellschaft

⁴⁹⁵ Caponecchia, C., & Tan, T. T. (2019). Exploring the traveller underinsurance problem. *Annals of Tourism Research*, 76(C), pp. 343-345; Law, R. (2006). The perceived impact of risks on travel decisions. *International Journal of Tourism Research*, 8(4), pp. 289-300; Olya, H. G. T., Alipour, H., Peyravi, B., & Dalir, S. (2019). Tourism climate insurance: Implications and prospects. *Asia Pacific Journal of Tourism Research*, 24(4), pp. 269-280; Williams, A. M., & Baláz, V. (2015). Tourism risk and uncertainty: Theoretical reflections. *Journal of Travel Research*, 54(3), pp. 271-287.

A report from the World Tourism Organization (UNWTO) shows that exports generated by international tourism reached 1.7 trillion US dollars in 2018, which is a 4% increase in real terms compared to the previous year. For the seventh year in a row, tourism exports grew faster than merchandise exports (+3%), reflecting solid demand for international travel in a generally robust economic environment.

Strong growth in outbound travel from many source markets around the world led to large revenues from international tourism in 2018. The tourism sector accounts for 29% of global service exports and 7% of overall exports of goods and services. These figures consolidate international tourism among the top five economic sectors in the world, behind chemical manufacturing and the food industry, but ahead of the food and automotive industries.⁴⁹⁶

The COVID-19 pandemic was both a health and an economic crisis with a devastating effect on developing countries, especially the ones dependent on tourism. The governments of countries protected their population by introducing measures such as movement restrictions, lockdown, quarantine and Domestic and international mobility was completely abolished. This led to a sharp decline and led to severe economic consequences for countries that rely on the tourism sector. International tourist arrivals dropped by 74% in 2020 compared to the previous year. In many developing countries, tourist arrivals were down by 80-90%. The beginning of 2021 was worse for many destinations, with an average global decline of 88% as compared to pre-pandemic levels.⁴⁹⁷

The latest UNWTO data shows that over the first five months of 2021, 147 million destinations recorded fewer international arrivals compared to the same period of 2020, or 460 million less than the pre-pandemic year of 2019. The data does point to a relatively small upturn in May, with arrivals declining by 82% (versus May 2019), after falling by 86% in April. This slight upturn trend emerged as some destinations started to ease restrictions and confidence rose slightly.⁴⁹⁸

⁹⁶ <https://www.unwto.org/global/press-release/2019-06-06/exports-international-tourism-hit-usd-17-trillion>

⁹⁷ UNWTO Tourism Dashboard, March 2022. Available at https://unctad.org/en/files/official-document/dticinf2021d3_en_0.pdf

⁹⁸ UNWTO (2021c). World Tourism Barometer, May 2021. Available at <https://www.unwto.org/unwto-world-tourism-barometer-data>

perceived travel risk can lead to a decrease in travel demand in the event of circumstances of terrorism⁴⁹⁹, diseases⁵⁰⁰, natural disasters⁵⁰¹, mega events⁵⁰². In connection to travel intentions, risk perception is shaped by past experiences, demographics, psychographics, and knowledge⁵⁰³. The contribution of the tourism industry to the economic development of a country depends on the commitment to creating sustainable tourism. Adapting to climate change, which has a significant impact on the tourism sector, will be the key to success in the future business. The entities within the tourism of Serbia are committed to decreasing risk in the areas such as tourist accident coverage, travel health insurance, travel liability insurance, as well as insurance against the risk of trip cancellation. Adapting tourism businesses to climate change would open up the possibility of creating new destinations and products, which would give a developing country, such as Serbia, a chance to keep up with international trends in tourism. The tourism industry and especially international tourism should be acknowledged to be vulnerable to crises or disasters.⁵⁰⁴

Natural disasters that are occurring as a consequence of climate change in the last few decades require a revision of the principles of sustainability. The

Wilks, J., & Moore, S. (2003). *Tourism risk management for the Asia Pacific region: An authoritative guide for managing crises and disasters*. APEC International Centre for Sustainable Tourism (AICST)

Loppat, P. A., Brown, L. H., Aitken, P., & Speare, R. (2010). Level of concern and precaution taking among Australians regarding travel during pandemic (H1N1) 2009: Results from the 2009 Queensland social survey. *Journal of Travel Medicine*, 17(5), pp. 291-295; Pine, R., & McKercher, B. (2004). The impact of SARS on Hong Kong's tourism industry. *International Journal of Contemporary Hospitality Management*, 16(2), pp. 139-143; Yanni, E. A., Marano, N., & Han, P. (2010). Knowledge, attitudes, and practices of US travelers to Asia regarding seasonal influenza and H5N1 avian influenza prevention measures. *Journal of Travel Medicine*, 17(6), pp. 374-381.

Park, K., & Reisinger, Y. (2010). Differences in the perceived influence of natural disasters and travel risk on international travel. *Tourism Geographies*, 12(1), pp. 1-34.

Schroeder, A., Pennington-Gray, L., Kaplanidou, K., & Zhan, F. (2013). Destination risk perceptions among U.S. Residents for London as the host city of the 2012 Summer Olympic Games. *Tourism Management*, 38(C), pp. 107-119.

Pennington-Gray, L., Schroeder, A., & Kaplanidou, K. K. (2011). Examining the influence of past travel experience, general web searching behaviour and risk perception on future travel intentions. *International Journal of Safety and Security in Tourism*, 1(1), pp. 64-92.

Yan, A.M. (2017). Martins Structural breaks in international tourism demand: Are they caused by crises or disasters? *Tourism Management*, 63, pp. 3-9.

impact of crises and disasters on tourism can be complex based on their nature, magnitude and scale.⁵⁰⁵ A period of two consecutive years with the highest insured losses resulted from natural disasters worldwide was 2017/2018, when these losses amounted to 219 billion USD, with more than half of that arising resulting from secondary risks. However, there is a large gap between annual losses and the part covered by insurance. For example, it is estimated that the overall losses resulting from natural disasters in 2017 and 2018, 280 billion USD were not covered by insurance.⁵⁰⁶ Losses were also tremendous during the catastrophic floods that struck Serbia in 2014 and caused the death of 56 people, forced 32,000 people to evacuate from their homes, and has impacted 144 municipalities.⁵⁰⁷

We should also not disregard the impact that tourism has on climate change on a global level, through gas emissions which cause the greenhouse effect and inadequate use of natural resources. One of the ways to mitigate the risk and adapt to the consequences of climate change is via insurance. Decreasing uncertainty in terms of occurrence, scope and cost of risk requires a more detailed analysis of the specified categories.

1. THE CAUSAL-CONSEQUENTIAL RELATIONSHIP BETWEEN TOURISM, CLIMATE CHANGE AND INSURANCE

A consequence of the industrial era, fuel combustion and mass deforestation is the increase in the concentration of atmospheric gases that cause the greenhouse effect. This disrupts the energy balance which in turn causes a change in the climate. A rise in global temperature leads to rising sea levels and the precipitation models changes. The melting of glaciers and sea ice increases the amount of water, which then results in extreme weather events and the extinction of certain species of plants and animals. However, despite the rise in the amount of research examining tourism and climate change, there are still significant gaps in previously published studies, in terms of the expertise in adapting to climate change, and especially in regard to financing climate change.⁵⁰⁸

⁵⁰⁵ Backer, E., & Ritchie, B.W. (2017). VFR travel: A viable market for tourism relief and disaster recovery? *International Journal of Tourism Research*, 19(4), 400-411

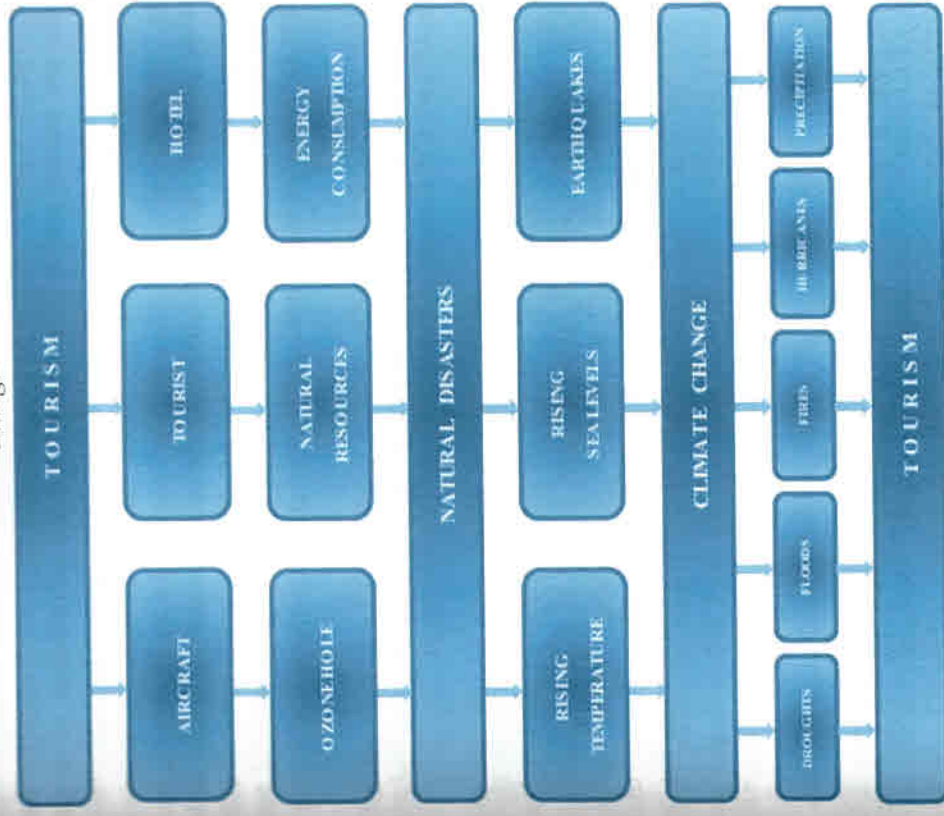
⁵⁰⁶ Swiss Re (2019). Natural catastrophes and man-made disasters in 2018: new perils on the frontline". *Sigma*, 2(2019), Zürich: Swiss Re, pp. 1-30.

⁵⁰⁷ <http://www.obnova.gov.rs>

⁵⁰⁸ Simpson, M. C., Gössling, S., Scott, D., Hall, C. M., & Gladin, E. (2008). *Climate Change Adaptation and Mitigation in the Tourism Sector: Frameworks, Tools and Practices*. Paris: UNEP, University of Oxford, UNWTO, WMO.

amping to the aforementioned examples in the tourism industry can be removed within the financial sector via insurance policies that would include weather conditions. A volatile climate increases the demand for an insurance policy against weather risks, in order to decrease the losses for tourists on a micro level.⁵⁰⁹

Figure 1. A representation of the impact chain of tourism in relation to climate change



Source: Own work

⁵⁰⁹ Lashley, J. G., & Warner, K. (2015). Evidence of demand for microinsurance for coping and adaptation to weather extremes in the Caribbean. *Climatic Change*, 133(1), pp. 101-112.

Catastrophic events caused by natural disasters are a topic that is much discussed. Associated risks, however, such as adverse weather coverage for tourists, do not get adequate attention, even though they can have a long-term effect on the development of the tourism sector.

Figure 1 shows a reciprocal relationship between climate change and tourism. Tourism is affected by climate change, but it is also causing climate change through gas emissions (mostly from aircraft) and energy consumption needed to heat or cool the accommodation facilities during the period when the tourism activities are carried out. It is estimated that the contribution of tourism to global warming and gas emissions will increase significantly by 2035, mostly as a result of aviation.⁵¹⁰

Analysing the other factors of competitiveness and the positioning of Serbia as a tourism destination, we can see that, for now, only the natural, cultural, historical, and ethnographic contents are providing a significant and positive incentive to its positioning in tourism.⁵¹¹

What should be pointed out is the value of products with a geographical origin. Their value lies not only in their quality, tradition, and reputation but also in their significant contribution to sustainable rural development.⁵¹²

Climate is an important resource for tourism, and its impact is multifaceted and complex. Climate is a significant factor in the development of tourism, but it is a limiting one as well since it does represent a form of risk that needs to be managed by participants in tourism. In order to maximize tourist satisfaction, cooperation is required between the tourism sector, climate tracking organizations, and insurance.⁵¹³ The size of the impact that climate has on the

touring probability of a tourist destination is corroborated by the research conducted within ski resorts and seaside destinations.⁵¹⁴

The tourism sector in Serbia will face a decrease in the extent of snow cover and a rising temperature, which will affect the tourism consumption in cities as well as the frequency of adverse weather. A positive effect might occur in the autumn and spring periods when the temperatures will be higher and the amount of precipitation lower, due to Serbia's continental position. The aforementioned seasons will cause changes in the length and quality of the tourism season in Serbia.

The varying and unstable weather conditions will affect mountain tourism, the tourism infrastructure which can be destroyed by natural disasters, cultural treasures which are important tourist attractions, coastal areas and port cities which will be impacted by rising sea levels and rising temperatures, natural habitats which will be destroyed. These risks may present a new chance for insurance which would enable tourists to have a safe and pleasant stay.

1 CLIMATE CHANGE CONSEQUENCE RISKS AND THE IMPACT ON THE TOURISM SECTOR

Destinations should adapt to the effects of climate change in the medium and long term. Alongside with annual increase of number of tourists, changes in their behavior and motives are equally important. They are influenced by climatic changes, reduction and scarcity of resources, lack of time in relation to agency, desire and motives to visit "old" destinations.⁵¹⁵

Climate change represents a real and growing threat to tourism, which was acknowledged at the First International Conference on Climate Change and Tourism, held in Djerba, Tunisia in 2003. Four years later (October 2007),

Scott, D. (2006). Climate change and sustainable tourism in the 21st century. *Tourism Research: Policy, Planning, and Prospects*, Cukier, J. (ed.), Waterloo: Department of Geography Publication Series, University of Waterloo; Charmichael, B. (1996). Conjoint analysis of downhill skiers used to improve data collection for market segmentation. *Journal of Travel and Tourism Marketing*, 5(3), pp. 187-206; König, U., & Abegg, B. (1997). Impacts of climate change on tourism in the Swiss Alps. *Journal of Sustainable Tourism*, 5(1), pp. 46-58; Bicknell, S., & McManus, P. (2006). The canary in the coalmine: Australian ski resorts and their response to climate change. *Geographical Research*, 44(4), pp. 386-400.

Mihaljević, B., & Brzaković, T. (2018). *Knowledge and Innovation Transfer in Agribusiness*. Belgrade: Institute of Agricultural Economics

⁵¹⁰ Vieira do Nascimento, D. (2016). Exploring climate finance for tourism adaptation development: an overview. *Worldwide Hospitality and Tourism Themes*, 8(5), pp. 593-605.

⁵¹¹ Radosavljević, K. (2015). Strategija razvoja kanala marketinga u agričuvstvu Republike Srbije. *Doctoral dissertation*. Kragujevac: Faculty of Economic University of Kragujevac, p. 245.

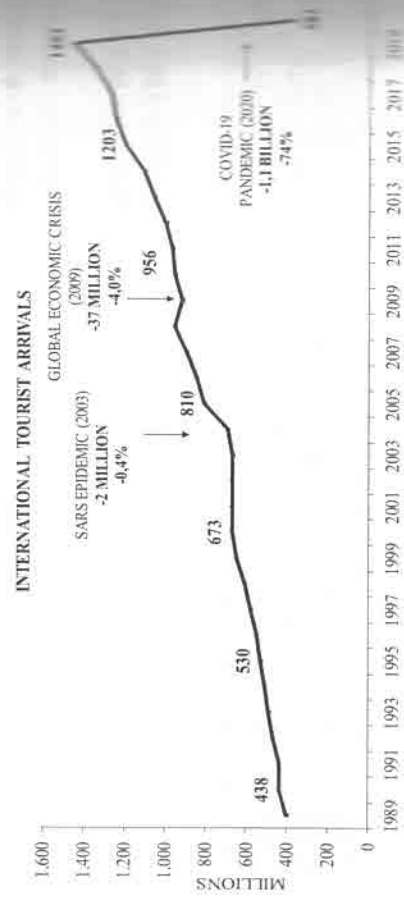
⁵¹² Radosavljević, K. (2017). *Kanali marketinga poljoprivrednih proizvođača*. Belgrade: Institute of Economic Sciences, p. 30.

⁵¹³ Smith, K. (1993). The influence of weather and climate on recreation and tourism. *Weather*, 48(12), pp. 398-404.

during the Second International Conference on Climate Change and Tourism organized in Davos, Switzerland by the UN World Tourism Organization (UNWTO), United Nations Environment Programme (UNEP), and the World Meteorological Organization (WMO), a significant advancement in policy implementation was achieved. This was due to an obvious need to create a agenda that would enable the tourism industry to adapt and build the capacity to mitigate the impact of climate change.⁵¹⁶

In the last decade of the last century, the tourist market has gained extremely large dimensions and importance.⁵¹⁷ Tourism is an expanding industry and the global growth of international tourism continues to follow an upward trend albeit at a more moderate rate than in the previous decades. This is shown below, in Figure 2.

Figure 2. Crises in tourism



Source: <https://www.unwto.org/covid-19-and-tourism-2020>

For many small developing countries, the tourism business was the largest category of exports, accounting for 50% of their overall exports. The growth was larger than in the global economy. In 2019 the trend of sustainable growth continued for the tenth year in a row, after 2009 when there was a 4% drop due to the Global Financial Crisis.

International tourism registered a 4% upturn in 2021, with 15 million more international tourist arrivals (both visitors and overnight stays) as compared to 2020 (415 million vs 400 million). However, according to preliminary

⁵¹⁶ Simpson et al. (2008), op. cit.

⁵¹⁷ Cvijanović, D., Mihailović, B., & Vukotić, S. (2016). *Marketing i konvulzija funkciji razvoja turizma Srbije*. Belgrade: Institute of Agricultural Economics

estimates, international arrivals were still down by 72% compared to the pre-pandemic year of 2019. The data in the Figure 2 shows that 2020 was the worst year in the history of tourism, with international arrivals dropping by 74%.⁵¹⁸

International tourism is slowly picking up, though the recovery remains very fragile and uneven. Volatility and lack of clear information on entry requirements could continue to affect future trends in tourist movement. In addition, domestic travel is driving the recovery in many destinations, especially those with large domestic markets.⁵¹⁹

Tourism is a major economic sector and has a particular socio-economic importance, as it employs many women and young people and provides a livelihood to many informal workers in developing countries. The pandemic had a devastating effect on the tourism sector. UNWTO estimates that 100-120 million direct tourism jobs are at stake. In correlation with closely linked sectors, the drop in international tourism caused an estimated loss of about \$2.4 billion in GDP in 2020.⁵²⁰

This trend caused the development of domestic tourism due to risk. The conclusion based on the SWOT matrix is that the Republic of Serbia has great potential for the development of rural tourism, which is a trend in the countries of the European Union.⁵²¹ Creating a competitive advantage in Serbia can be achieved by creating local brands in conjunction with other industries, such as tourism. This would increase the confidence of the agricultural producers themselves.⁵²² Rural tourism, nature, mountains, and spas have become favorite destinations in the tourism of Serbia.

Last-minute reservations spiked due to the volatility of pandemic-related events and travel restrictions. Managing climate risk in the tourism sector is possible through innovative financial products of insurance. The instruments for predicting

⁵¹⁸ UNWTO World Tourism Barometer. Available at <https://www.unwto.org/unwto-world-tourism-barometer-data>

⁵¹⁹ https://webunwto.s3.eu-west-1.amazonaws.com/s3fs-public/2021-07/210721-barometer-en_1.pdf?l_rAoY3RRBm_E3oegjwKRMKWeXpBtPcl3

⁵²⁰ https://unctad.org/system/files/official-document/ditcinf2021d3_en_0.pdf

⁵²¹ Krasavac-Chroneos B., Radosavljević K., & Bradić-Martinović, A. (2018). SWOT analysis of the rural tourism as a channel of marketing for agricultural products in Serbia. *Economics of agriculture*, 65(4), p. 1582.

⁵²² Radosavljević, K., Vučić, I., & Plavšić, M. (2019). Expansion of marketing channels and their influence on trade in agri-food products: international experiences. *The Economics of Enterprise*, 5(6), p. 381.

weather trends, used by the energy and agriculture sectors, were first created in the late 1990s, and are called weather derivatives. They are not adjusted to the needs of the tourism sector, as they are based on paying premiums for an insurance policy that covers losses in infrastructure, in case of floods or other catastrophic events.²³ An obstacle here was the lack of data on weather changes that could be processed for the needs of insurance in the tourism sector. Interlinking precise and consistent data on the climate and tourism can make the work of insurance companies easier in regard to introducing weather threat insurance.²⁴

Weather derivatives can be created based on all measurable climatic conditions starting with temperature, which was the basis for the very first weather derivatives, to rain, snow, frost, and wind, which are traded on the Chicago Mercantile Exchange. Off-exchange trading offers an even more diverse market that includes humidity, sunshine (in days or hours), cloudy days, atmospheric pressure, snowmelt, sea temperature, wave height and other weather conditions that can be measured in some way.

For weather derivatives and all types of index-based insurance, it is very important to determine the monetary value of the index. The monetary value of the index is most commonly equal to the basic unit of measurement. For temperature, this is 1 degree Celsius (1°C), for precipitation, it is 1 litre per 1 square meter (1 l/m²). The index monetary is usually pre-determined, but can also be adjusted to the type of travel that is being insured. The premium is then often calculated as a product of the index monetary value and the expected value of the climatic parameters' absolute deviation from the multi-year average.

²³ Zeng, L. (2000). Weather Derivatives and Weather Insurance: Concept, Application and Analysis. *Bulletin of the American Meteorological Society*, 81(9), pp. 2081-2081.

²⁴ Hamilton, J. M., & Lau, M. A. (2005). The role of climate information in tourism destination choice decision-making. *Tourism and Global Environmental Change*. Gössling, S., & Hall, C. M. (eds.), London: Routledge; Gössling, S., Brechtberg, B., Randow, A., Svensson, P., & Swedlin, E. (2006). Tourist perceptions of climate change: A study of international tourists in Zanzibar. *Current Issues in Tourism* 9(4-5), pp. 419-435; Smith, K. (1990). Tourism and climate change. *Land Use Policy*, 7(2), pp. 176-180; Scott, D., McBoyle, G., & Schwartzentruber, M. (2004). Climate change and the distribution of climatic resources for tourism in North America. *Climate Research*, 27(2), pp. 105-117; Scott, D., Jones, B., & McBoyle, G. (2006). *Climate, Tourism and Recreation: A Bibliography 1936 to 2005*. Waterloo: University of Waterloo, Department of Geography, <http://www.fes.uwaterloo.ca/geography/faculty/dscott.html>

Table 1. Applications of weather derivative contracts in the tourism sector

Tourism Operator-Destination	Derivative Contract Details
Island of Barbados	Weather-related Challenge: low temperatures or heavy rain Weather Derivative Protection: The Barbados Perfect Weather Guarantee, gives travellers money back when daytime temperatures do not reach 26°C or when there is more than 5 mm of rain, is a recent weather derivative backed marketing campaign to promote perfect holiday weather on the island.
City of Victoria (Canada) Weather-	Weather-related Challenge: reputation for seasonal rainy conditions Weather Derivative Protection: Offers a 'Sunshine Guarantee' that will refund travellers a set amount if they experience more than 1.25 cm of rain in one day during their holiday.
Bombardier Motor Corp (Montreal)	Weather-related Challenge: limited snowfall Weather Derivative Protection: Promised buyers of new snowmobiles that if snowfall in their area was less than 50 per cent of a three-year average, they would receive a set payment.
Corney & Barrow (Wine Bar Chain, London)	Weather-related Challenge: low temperatures Weather Derivative Protection: Contract paid the company for every Thursday and Friday that temperatures did not reach over 24°C. The lower the temperature, the greater the payout.
Massive Ltd which operates 26 Pubs and Restaurants in London)	Weather-related Challenge: lack of snow or cold temperatures required for snowmaking Weather Derivative Protection: Purchase of seasonal weather protection for season pass holders and weekend protection for special events against inadequate precipitation (less

<p>PGA Championship: Greater Hickory Classic at Rock Barn, North Carolina</p>	<p>than two inches of liquid precipitation approximately two feet of snow) between 23 November and 23 March</p> <p>Weather-related Challenge: interruption of special event</p> <p>Weather Derivative Protection Purchase of derivative protection against rain event.</p> <p>Payment for rain accumulation over inches during the tournament.</p>
<p>Taste of Antwerp (Belgium)</p>	<p>Weather-related Challenge: interruption of festival with advance booking of tickets available</p> <p>Weather Derivative Protection Organizers will receive a payment should rainfall during the event exceed 9.7 mm.</p>
<p>Priceline.com "Sunshine Guaranteed" Vacation</p>	<p>Weather-related Challenge: during holiday tour</p> <p>Weather Derivative Protection Priceline.com offered consumers a "Sunshine Guarantee" that refunded travellers if it rained Europe (>0.50 inches per day) during half or more of their vacation days at over 100 destinations in the U.S., the Caribbean, Canada and Europe.</p>
<p>itravel2000.com "Let it Snow!" Weather Promotion</p>	<p>Weather-related Challenge: related travel delay</p> <p>Weather Derivative Protection itravel2000 offered consumers a refund for travel if it snowed 5 inches or more at Calgary, Halifax, Montreal or Toronto airports on New Year's Day, 1 January 2008.</p>

Source: Weather Bill (2008). *Sunshine Guaranteed or Your Money Back: Breaking Weather Refund Promotions*. WeatherBill White Paper. www.weatherderivatives.com/press.html

Table 1 shows us great potential for the application of weather derivative contracts in tourism and the possibility for cooperation with insurance companies in order to ensure tourist satisfaction.

It is interesting to note that climate change-related risks are not associated only with tourist destinations, but also with restaurants, as it is considered that alcohol consumption is affected by weather conditions. The London wine bar chain Corney & Barrow paid an insurance premium for every Thursday and Friday when the temperature fell below 24 degrees. Insurance pay-outs were proportional to the temperature drop below 24 degrees. Weather derivative contracts concluded since the end of the 1990s have an upward trend. In 2007-2008 the overall market value of weather derivative contracts was estimated to be 32 billion US dollars.⁵²⁵ An example of offering money-back guarantees in case of inadequate climatic conditions can be seen in the south of France, where travel agents are cooperating with the insurance company Aon France.⁵²⁶ Weather is a company that deals in climate risk technologies and provides tourists with weather guarantees. The cooperation between the company and the National Science Foundation merges theory with practice to analyse weather risks at a certain time in a certain place. The guarantee focuses on weather conditions during the travel and covers a certain time and place in relation to a certain kind of weather conditions. For example, if during the summer it rains for three hours at a seaside destination, the tourists are reimbursed for that day due to bad weather.

INSURANCE MARKET SENSITIVITY IN THE TOURISM SECTOR IN THE CASE OF THE REGIONAL EU MEMBER STATES

The insurance market is conditioned by the level of development of a national economy. Here, we will present the prospects for tourism insurance in Serbia by analysing the growth rate of GDP and the share that insurance premiums have in the GDP of the regional countries of Croatia and Slovenia, where the tourism sector is a major generator of GDP.

As it can be seen from the presented data, the share that insurance premiums have in the total gross domestic product of the Republic of Serbia is not very high and does not exceed 2.1% in the observed period. The lowest value of the share was reached in the period from 2012 to 2014, followed by an increase to 2.1% in 2015, and then 2.1% in 2016 and 2017, which was also the highest value.

Weather Risk Management Association (2009). Weather risk market value plunges by 53 pct-survey, <http://www.wrma.org/pdf/WeatherRiskMarketValuePlungesBy53PctSurveyReuters.com.pdf>

<http://www.dailymail.co.uk/travel/article-1200739/Sunshine-money-French-holiday-companies-gamble-weather.html?ITO=1490>

Figure 3. The trend of insurance premiums' share in the gross domestic product of Serbia, Slovenia, and Croatia.



Source: Own work, <https://nbs.rs/sr/fnansijske-institucije/osiguranje/ovom>
<https://www.zav-zdruzenje.si/en/statistics/>

The largest share of insurance premiums in the total gross domestic product of Slovenia was achieved in 2012 (5.3%), but relatively high values were reached in other years as well, with a minor but noticeable decline starting in 2017. At the end of 2020, the share of insurance premiums in the gross domestic product dropped to 3.5%, most likely as a result of the Coronavirus pandemic.

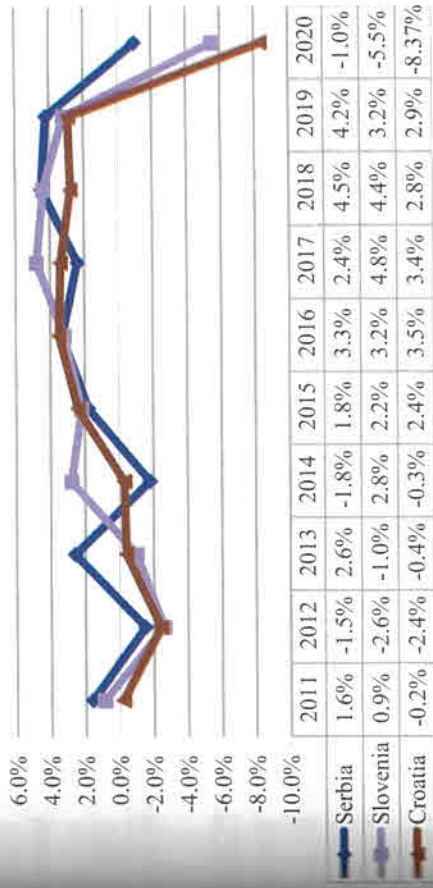
Based on the presented data, we can conclude that in Croatia insurance premiums have a more significant share in the gross domestic product than in the case in Serbia. The maximum value was reached in 2020 and equals 2.8%, while the lowest value in the observed period was reached in 2017 (2.48%).

Slovenia can be counted as one of the more developed economies of Europe and the world. The same is somewhat true for Croatia as well, although with a lesser degree of economic development. As an EU member state, Croatia can expect future progress, which may reflect positively on its insurance market. As a result, the insurance sector, as well as the financial system itself, is most developed in Slovenia than in Croatia. This allows the insurance market in Slovenia to further contribute to the development of the national economy, thus creating a disproportion in the level of development of the insurance market in these two countries. On the other hand, the Republic of Serbia does not belong to the developed economies of Europe and the world. It is an economy that has still not completed the process of transition, which is only one of the reasons why Serbia's economy is not advancing at the desired pace. This causes its financial system, including the entire insurance market, to be less developed compared to Croatia. With the further development of Croatia and Slovenia, the development of their insurance markets can also be expected, as well as the

increase in the disparity between these two countries and the Republic of Serbia, in terms of the level of development of the insurance markets. In order to improve the economic environment and consequently develop the insurance market in Serbia, the emphasis must be placed on improving the key determinants of an insurance market, such as gross domestic product, rate of employment, the standard of living, etc.

Compared to the Republic of Serbia, Croatia and Slovenia belong to the more developed economies in Europe. They base the value of their GDP on a more significant contribution of tourism and the hospitality industry, as well as an increased inflow of foreign capital, given that they are EU member states. On the other hand, for many years Serbia has based its GDP on the processing industry, dominated by the products in the lower stages of processing and primary products that don't generate a high value.

Figure 4. GDP growth rate for Serbia, Slovenia, and Croatia



Source: www.stat.gov.rs, www.stat.si, <https://www.dzs.hr>

The data presented in the Figure 4. show us that in 2020, during the Coronavirus pandemic, Slovenia and Croatia had a negative GDP growth rate of 4.5% and -8.37%, respectively. In Serbia, the effect of the pandemic on the GDP growth rate in 2020 was reflected in a 1% drop.

The negative growth rates in Croatia and Slovenia are proportional to the share that tourism and the hospitality industry have in their gross domestic product. A higher growth rate in Serbia is a result of the dominant role that the processing industry has in generating the gross domestic product, but it is also a result of the development of domestic tourism in 2020 as a fallback during the Coronavirus pandemic.

4. INSURANCE AS A DEVELOPMENT OPPORTUNITY FOR THE TOURISM SECTOR IN SERBIA

Serbia is an interesting destination for the development of health tourism, with its great geographical, natural, and cultural-historical potential. The insurance sector plays a significant role in the development of the tourism economy, as it contributes to the satisfaction, safety, and security of all those who participate in tourist activities. Namely, Serbia is a country where civilizations, cultures, religions, climates and relief meet and entwine³⁷. Mountains, national parks, rivers and lakes offer excellent locations for development of mountain and nautical tourism, as well as active vacation in nature – from hunting and fishing to extreme sports³⁸. Tourists, tour operators, and insurance companies are all participants in the process of travel arrangement risk mitigation. Prevention is essential to insurance in tourism, and its adequate implementation requires a risk analysis and the formulation of a corresponding offer on the insurance companies' market.

Table 2. An overview of various types of Travel Insurance and Tour Operator Insurance in Serbia

Travel Insurance	Tour Operator Insurance
Travel health insurance for travelling abroad	Tour operator's professional indemnity insurance
Travel health insurance with assistance when travelling outside of the place of residence	Public liability insurance (covers accidents and injuries of guests, visitors, excursionists, and tourists)
Trip cancellation insurance	Tour operator's insolvency insurance

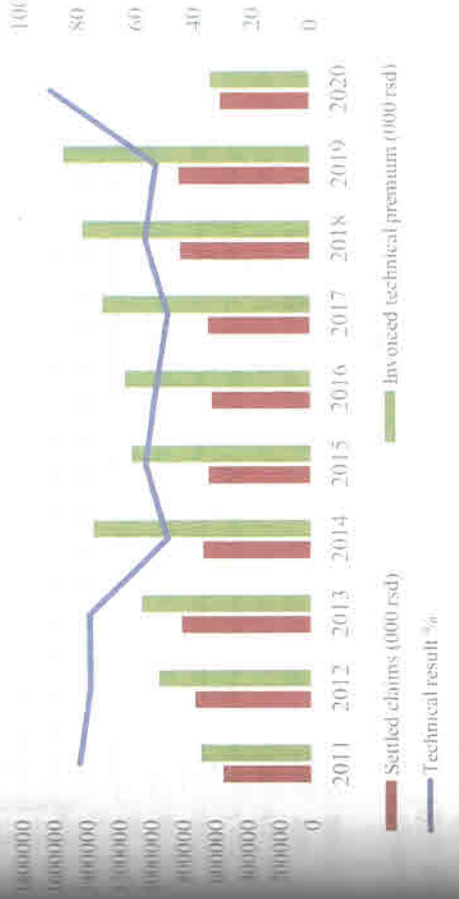
Source: Own work

Grouping the types of insurance by the participant in Table 2 facilitates the analysis and the overview of the tourism insurance market from 2011 to 2020. Being the criterium for classifying insurance as either travel insurance or tour operator insurance, the participant is defined as an entity that takes the insurance and pays the premium.

The average technical result for travel insurance for the period 2011-2020 was 4.19%, which means that the insurance companies did business above the break-even point in this domain (the break-even point is at 100%). The invoiced

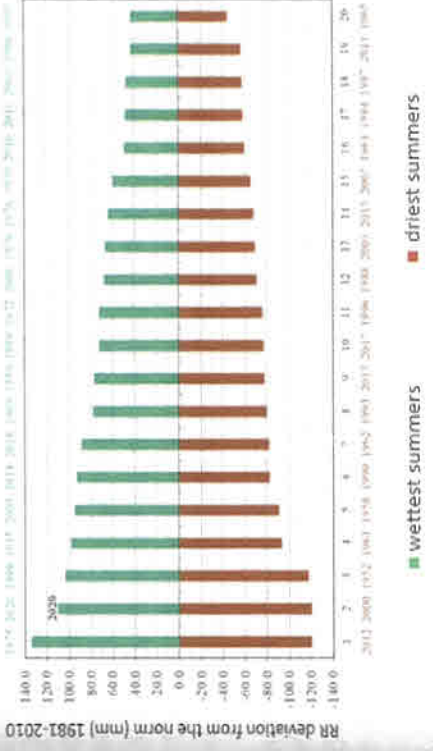
technical premium exceeded the settled claims of tourists every year in the observed period. The lowest value of the technical result was reached in 2017 with 49.32%, and the highest in 2020 with 89.58%. The consequences of a 15% spike in the technical result for *Trip cancellation insurance* (caused by the COVID-19 pandemic in 2020), were mitigated by the positive technical result of 94.35% for *Travel health insurance for travelling abroad* as well as the positive technical result of 64.40% for *Travel health insurance with assistance when travelling outside of the place of residence*, during the period 2011-2020.

Figure 5. Settled claims, Invoiced technical premium and Technical result in travel insurance in Serbia for the period 2011-2020



Source: <https://nbs.rs>

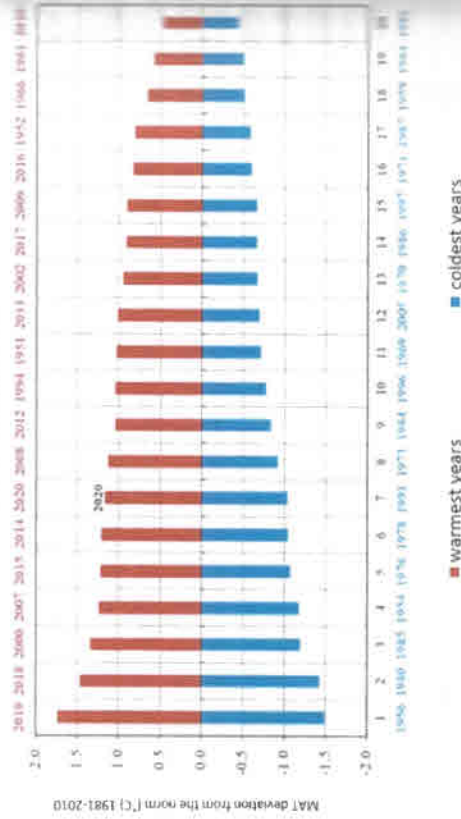
Figure 6. The wettest and the driest summers in Serbia from 1951 to 2020, in a descending order



Source: Republic Hydrometeorological Service of Serbia, <https://www.hidmet.gov.rs>

The summer of 2020 was the second wettest summer in Serbia in the last 70 years. Since 1951 twenty driest summers were recorded, five of which occurred between 2011 and 2020.

Figure 7. The warmest and the coldest years in Serbia from 1951 to 2020, in descending order



Source: Republic Hydrometeorological Service of Serbia, <https://www.hidmet.gov.rs>

The data in Figure 7 show that 2019 and 2018 were the two warmest years in Serbia since 1951. Six out of ten warmest years in Serbia since 1951 were recorded from 2011 to 2020.

Taking into account RHMZ's previously presented data for the observed period as well as the impact of climate change on tourism (the risk of which is low, but the probability high), introducing weather risk coverage would mitigate the trend of uncertainty in tourism, which is additionally bolstered by the COVID-19 pandemic. The average technical result of 64.19% shows that insurance companies are doing business with a profit, even during a global pandemic. In regard to travel insurance, there is room for insurance companies to decrease the cost of the premiums. With adequate premiums, introducing weather insurance would contribute to the development of the tourism sector.

The insurance market in the tourism sector of Serbia is not regulated in such a way as to provide adequate guarantees to policyholders. The existing coverage limit on the amounts that are paid to tourists as indemnification, based on the percentage of their losses, is not a good solution for the security of tourists. The insolvency and liability coverages provided by tour operators do not protect tourists to a sufficient extent. In case of a tour operator bankruptcy, tourists are

either partially indemnified or are not indemnified at all. Individual policies, that tourists could take out when purchasing travel arrangements, would provide 100% protection for tourists in case of a tour operator's insolvency.

* * *

Predictions say that climatic extremes will amplify in the next 50 years and that harmful gas emissions will reach alarmingly high levels, which will only further affect climate change. Having this in mind, introducing climate change to the tourism insurance sector is fully justified.⁵²⁹

The rise in global temperature, caused by both natural factors and irresponsible human behaviour, is more and more often triggering extreme heatwaves, which in turn disrupt public health and cause droughts, floods, and climate change. There can be no prosperity in the development of the tourism sector, without taking into account the issues related to climate change risks and the impact on the environment. Mitigating climate change risks via weather insurance would create a tool that could provide security to tourism events, travel, and vacations. Simultaneously, the awareness of the critical role that the human factor has in the care for the environment will grow, which will further incentivize sustainable development.

In recent years, losses caused by natural disasters have been increasing. Sectors such as trade, agriculture, and tourism are particularly susceptible to the effects of climate change. Therefore, many developed countries have introduced insurance against multiple types of risk and new insurance models such as covering crops and yields based on weather derivatives, insuring the total value of crop production, or insuring the income derived from crop production.⁵³⁰

In order to successfully confront the risks, it is necessary to have protection from risks related to the occurrence of climate change consequences, by way of the tourism sector insurance. To successfully overcome obstacles, action is required on both the micro and the macro level. Action is also required on the part of both the public and the private sectors. It is up to the government to secure an environment where actions will be taken without any impediments to

The World Bank (2014). *WDR: World Development Report Risk and Opportunity: Managing Risk for Development*. Washington, DC: World Bank Publishing
 Radosavljević, K. (2021). Agricultural insurance as a means of financial protection of agribusiness in Serbia. *Contemporary Challenges and Sustainability of the Insurance Industry*, Kočović, J., Jovanović Gavrilović, B., Boričić, B., Koprivica, M. (eds.), Belgrade: University of Belgrade - Faculty of Economics, p. 208

improve the situation in terms of natural disasters. Coordination and data exchange between meteorological organizations, specialized regional centres or tracking weather conditions, tour operators, and tourists is essential for the development of insurance against weather risks.

One of the recommendations is to organize workshops in larger tourism regions that would raise awareness about the significance of insuring tourists and tour operators against climate change risks.

Within the tourism sector of Serbia, we should increase investment in tourism, increase the capacity of certain regions, implement modern technology, and promote Serbia as a unique and safe tourist destination.

The government should revamp the laws, policies and regulations related to climate change in the tourism domain. We should raise awareness among all participants in the tourism industry about the risk of climate change.

The republic of Serbia still does not have a developed insurance culture, due to which there is an enormous lack of information and education in terms of finances, as well as a strong aversion to financial services of this kind, which is why great effort needs to be put into educating the public.⁵³¹

Positive aspects of the presence of foreign insurance companies are the influx of modern methods of work and management, enhancement of employee qualifications, implementation of modern technology, etc. However, excessive participation of foreign insurance companies leads to their dominance in the market. In addition, foreign investors are mainly interested in the most profitable sectors, so they may develop their insurance activities in accordance with the interests of large commercial companies, putting aside the insurance of natural persons, which is certainly not a positive circumstance in terms of insurance market development.⁵³²

The importance of this subject to the current moment is further confirmed by the fact that the Global Sustainable Tourism Council has determined the criteria for destinations by analysing the performance indicators and the goals of sustainable development. In December 2019, the Board of Directors of the Global Sustainable Tourism Council adopted the criteria and the indicators

⁵³¹ Olević, S. (2016). Perspektive razvoja životnog osiguranja u Srbiji. *Tokovi Osiguranja*, 32(4), pp. 63-82.

⁵³² Kočović, J., & Jovović, M. (2016). Uticaj liberalizacije i privatizacije na tržišta osiguranja u Srbiji. *Tokovi Osiguranja*, 1(3), pp. 5-20.

pertaining to climate change. The recommendation is to adapt to climate change by identifying risks and opportunities related to a certain destination.

The strategies for adapting to climate change are also applied to the positioning, design, development and management of tourist facilities. In order to raise awareness, residents, companies, and visitors are all provided with information about the predicted changes in climate, associated risks, insurance, and future conditions.