

Comparative Analysis of Physical Natural Parameters Influencing Baltic Sea Coastal Tourism in the Context of Climate Change

Authors : Akvelina Čuladytė, Inga Dailidienė

Abstract : Climate change and sustainable development are among the most significant global challenges, directly impacting various economic sectors, including coastal tourism. The United Nations (UN) and its specialized agencies, such as the World Tourism Organization (UNWTO) and the United Nations Convention on the Law of the Sea (UNCLOS), examine coastal tourism from multiple perspectives, emphasizing its economic, social, and environmental importance, as well as the challenges related to sustainability. Sustainability, linked to climate change, is an integral concept requiring a holistic approach to managing natural resources, reducing emissions, protecting ecosystems, and implementing adaptation strategies. Only by integrating these principles can we adapt to the impacts of climate change, reduce the carbon footprint of the tourism sector, and manage tourist flows to prevent excessive strain on marine and coastal ecosystems. Climate change is having an increasing impact on the Baltic Sea region, causing rising temperatures, sea level rise, more frequent extreme weather events, and coastal erosion. These changes can significantly affect the tourism sector, which is important not only economically but also socially. The primary aim of this study is to analyze changes in physical natural parameters (temperature, precipitation, water quality, sea level rise, and coastal erosion) that influence Baltic Sea coastal tourism in order to identify and assess how climate change impacts coastal tourism. The Baltic States, with its long and diverse coastlines, are particularly sensitive to the impacts of climate change, which can influence the geography of coastal tourism. Therefore, the aim is to assess how these factors determine the attractiveness and opportunities for tourism. In studying the effects of climate change on the geography of coastal tourism, methods used in climatology, as well as historical meteorological and hydrological data, are applied. Analyzing historical data on extreme events, such as storms, heatwaves, and floods, helps determine their impact on tourism infrastructure and visitor numbers. Based on the North Atlantic Oscillation (NAO) index, both limiting and enhancing factors for tourism are identified, including the benefits of a longer warm season and the increasing frequency of extreme weather conditions. The expected research results provide insights into how climate change and sustainable development strategies can shape and transform the structure and trends of coastal tourism in the region. The findings indicate that meteorological conditions and climate change play a significant role in regulating tourism flows.

Keywords : coastal tourism, climate change impacts, physical natural parameters, NAO index

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