

<https://doi.org/10.7250/CONNECT.2024.071>

METHODS FOR MEASURING THE IMPACT OF SUSTAINABLE TOURISM DEVELOPMENT ON CLIMATE AND ENVIRONMENT

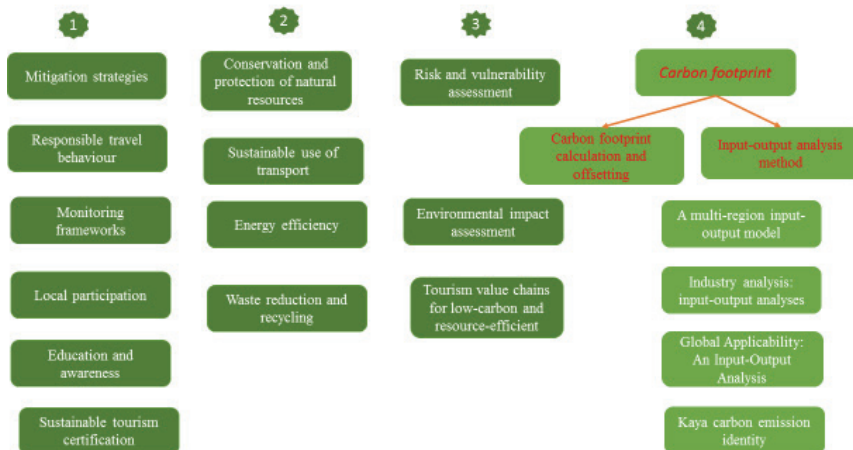
Tamara GRIZANE^{1*}, Dagnija BLUMBERGA²

^{1,2} Institute of Energy Systems and Environment, Riga Technical University, Āzenes iela 12/1, Riga, LV-1048, Latvia

* **Corresponding author.** Email address: tamara.grizane@inbox.lv

Abstract – Climate and environmental change is a growing topic in the post-Covid-19 period when tourism growth is recovering. Tourism is a significant polluter of the environment, and a rapid response to climate change is needed. Methods for assessing the climate and environmental impact of sustainable tourism development help to measure and communicate the environmental impact of tourism activities, but they are difficult to select and often lack indicators. The aim of the study was to choose methods for assessing the climate and environmental impact of sustainable tourism development in the context of Latvia. The study was based on the analysis of scientific literature, the grouping of methods for assessing the climate and environmental impact of sustainable tourism development according to their functional characteristics, i.e. ‘preventive’, ‘protective’, ‘estimating’ and ‘carbon emission determining’ methods. A multi-criteria decision-making method was used for the selection of evaluation methods – analytical hierarchy process with empirical analysis (AHA) of the obtained weights. By summarising the environmental and climate indicators available for a specific region of Latvia regarding the impact of tourism and experts evaluating the obtained results, the most suitable method for evaluating the impact of tourism development on the climate and environment is the Tourism value chain for low carbon content and efficient use of resources. However, the authors’ recommendation for researchers is as follows: 1) when evaluating the impact of tourism development on the climate and environment, the choice of method ought to be based on evaluation indicators available for a specific study; 2) in research combinations of sets of ‘evaluative’ and ‘carbon emission determining’ methods should be used.

Keywords – Assessment methods; carbon footprint; CO₂ emissions; value chains



Methods of assessing the impact of sustainable tourism on the climate and environment. Note: 1 – ‘preventive’ methods; 2 – ‘protective’ methods; 3 – ‘evaluative’ methods 4 – ‘carbon determining’ methods.