

ECONOMIC IMPACTS OF SEA LEVEL RISE CAUSED BY CLIMATE CHANGE

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Abstract

Purpose – Sea level rise represents potentially one of the costliest impacts of climate change on the Croatian coast. Therefore, the purpose and goal of this paper is analysing the potential effects of sea level rise on Croatia and the preventive measures to be taken in order to reduce the negative effects of sea level rise.

Methodology – In the paper, the authors developed a model which allows calculations of the cost of land loss, the cost of relocating people and the cost of protection as a result of future sea level rise by 50 and 88 cm in Croatia.

Findings – The main findings of this work refer to the estimate of economic costs of future sea level rise. The model consists of three parameters to be considered, namely: the value of the submerged land, the cost of protection as a result of sea level rise and the costs caused by the displacement of people due to the loss of land.

Contribution – The main contribution of this work lies in the fact that, in Croatia, there is presently a limited number of studies dealing with current and future sea level rise caused by climate change. In case of a significant sea level rise in the future, certain problems are to be expected, such as: the destruction of a number of commercial and fishing ports, the contamination of coastal freshwater springs, potential damage to swamps and wetlands, destruction and submersion of beaches, and the negative impact on tourism. It is important to emphasize that the rise of sea level is a slow and gradual process, and that the possibility of a sudden large increase of sea level is very low.

Keywords economic impacts, climate change, sea level rise, mitigation measures

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