

Assessing the impact of economic, demographic, climatic and trade factors on coastal ecological footprints: A cross-national analysis

By AMRA SHIRIN FAISAL

ABSTRACT

Coastal ecological footprint forms one of the six components of the ecological footprint measure. It accounts for the marine area required to sustain current levels of seafood consumption within a nation. It is estimated by drawing on the calculation of net primary production—or the amount of solar energy converted into organic matter through photosynthesis needed to support a fishery (Clark et al., 2018). Coastal ecosystems, found along continental margins are regions of extraordinary productivity and accessibility which also makes them vulnerable to degradation. Hence studying their footprint becomes important. This paper seeks to find the driving factors behind coastal ecological footprint using data from 117 countries for a period of two decades from 1992 to 2012. We test a set of economic, demographic, climatic and trade variables to find which variables have the biggest impact on coastal ecological footprint. Results suggest that temperature which is a climatic factor affects the coastal ecological footprint the most consistently for a majority of the countries in the analysis. This suggests that countries need to be more enthusiastic in implementing policies combating climate change in general and that will complement the efforts to conserve and protect coastal ecosystems in particular.

Keywords: Ecological footprint; Coastal ecological footprint; Coastal ecological biocapacity; Cross national analysis; FAOstat

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