

THE CLIMATE CHANGE INFLUENCE ON THE PACIFIC SMALL ISLAND DEVELOPING STATES ECONOMIES

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This article provides an overview of the impact of climate change on the Pacific Small Island Developing States (SIDS) by examining such factors as temperature increases, rising sea levels, extreme weather events, ocean acidification and their impact on tourism and fishing, the key industries of the analyzed region. The article will also explore the efforts made by the Pacific SIDS to adapt to climate change.

Keywords: small island developing states, climate change, tourism, fishing.

ВЛИЯНИЕ ИЗМЕНЕНИЯ КЛИМАТА НА ЭКОНОМИКУ МАЛЫХ ОСТРОВНЫХ РАЗВИВАЮЩИХСЯ ГОСУДАРСТВ ТИХОГО ОКЕАНА

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В данной статье представлен обзор влияния изменения климата на малые островные развивающиеся государства (МОРАГ) Тихого океана путем рассмотрения таких факторов, как повышение температуры, повышение уровня моря, экстремальные погодные явления, закисление океана и их воздействие на туризм и рыболовство - ключевые отрасли экономики анализируемого региона. В статье также будут рассмотрены усилия, предпринимаемые тихоокеанскими МОРАГ для адаптации к изменению климата.

Ключевые слова: малые островные развивающиеся государства, изменение климата, туризм, рыболовство.

The Pacific small island developing states (SIDS) are some of the most vulnerable nations to the impacts of climate change. These countries consist of small islands located in the Pacific Ocean, many of which are prone to rising sea levels, extreme weather events and ocean acidification. The economies of these

nations are heavily dependent on natural resources and tourism, making them particularly vulnerable to the effects of climate change. Economic risks of climate change for SIDS are projected to be higher than the global average, with projected average annual losses by 2030 between 0.75% and 6.5% of GDP for Pacific SIDS compared to the global average of 0.5% [1].

One of the most significant challenges facing Pacific SIDS economies due to climate change is the threat to their natural resources. Warming waters and ocean acidification are causing widespread coral bleaching and death. Coral reefs are projected to decline by 70–90% at warming levels 1.5°C and almost to die at warming above 2°C [ibid]. This has a significant impact on tourism and fishing, the key sectors of the SIDS economy in the Pacific region.

Many of these nations rely on fisheries as a primary source of income and food security. More particularly, fishing for tuna plays a vital role in the economic development of most of the 22 Pacific Island countries and territories, but especially for the ten SIDS that are considered to be tuna-dependent [2]. More than 95% of tuna purse-seine fishing in the Pacific Island region comes from their combined exclusive economic zones (EEZs), and access fees paid by industrial fishing fleets provide an average of 37% of their government revenue [3].

The economic implications arise from the fact that changes in tuna biomass are expected to affect purse-seine catches. According to the high-emission scenario, by 2050 the purse-seine catch from the combined EEZs of Pacific SIDS is estimated to decrease by an average of 20%, which represents 284,000 tons of tuna. These changes could reduce total earnings from access fees by an average of \$90 million per year for Pacific SIDS, and reduce annual total government revenue for individual SIDS by up to 13% [4].

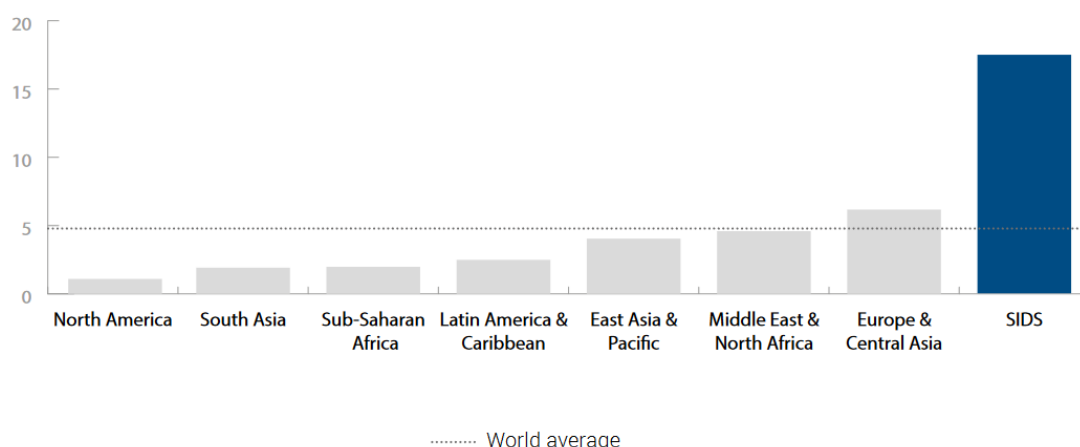
According to the moderate emissions scenario, by 2050 purse-seine fishing in the EEZs is estimated to decrease by an average of only 3% and amount to 47,000 tons of tuna. The average total damage from access fees will be \$12 million, while total government revenue will decrease by an average of 1% in just three out of ten Pacific SIDS [ibid].

Tourism is the primary source of foreign exchange earnings and a key driver of economic development in many SIDS (figure), and the Pacific region is no exception too.

The impacts of climate change, such as severe storms, coral bleaching and beach erosion, deter tourists and damage infrastructure. This results in reduced revenue and job losses. The consequences are far-reaching for the local economies, which rely heavily on tourism as a source of income and employment.

A prime example of the impact of climate change on the tourism sector is the Solomon Islands, located in the Pacific region. In 2014 they experienced a natural disaster caused by floods along the river Matanikou, resulting in 49,000 people becoming homeless [6].

The consequences had a significant impact on the tourism sector's growth and overall economic development, causing an estimated USD 107.7 million in damages [7]. This crisis has had a negative impact on the local tourism business and the country as a whole.



Tourism receipts (% GDP), by region. *Source:* [5]

Note. International tourism receipts are expenditures by international inbound visitors, including payments to national carriers for international transport. These receipts include any other prepayment made for goods or services received in the destination country.

In response to these challenges the Pacific SIDS have been taking steps to adapt to the effects of climate change. Many nations have developed national climate change strategies and implementing measures to protect marine ecosystems and coastal areas.

There has been a trend toward developing Joint National Action Plans in the Pacific SIDS, which bring together climate adaptation and disaster risk reduction in a single coherent framework [1].

However, despite these efforts, the economic challenges posed by climate change remain a significant threat to the sustainable development of the Pacific SIDS. But the high cost of adaptation measures and limited financial resources pose significant barriers to progress.

In order to ensure the long-term sustainability and prosperity of these countries, it is essential for the international community to continue to support and collaborate with the Pacific SIDS in addressing the climate change challenges that are facing their economies.

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