

CHAPTER I INTRODUCTION

In the Conference of Parties Special Report on Climate and Health, it was stated that climate change has had a significant impact on health. This health impact is caused by various factors, one of which is the increasingly frequent extreme weather phenomena.¹ Heat waves, cold waves, hurricanes, tropical cyclones, floods, droughts, heavy rain, and snowfalls are some examples of extreme weather events. Anthropogenic climate change is not only linked to a single extreme weather event. However, scientists argue that climate change is a growing factor for changing the odds of occurrence and the intensity of these phenomena.²

Extreme weather brought on by climate change can have a variety of direct and indirect effects on health, such as: The life cycles of the organisms that cause the disease or those of other species that spread those diseases to humans may be impacted by variations in rainfall and temperature. There could be a variety of these effects.

- Variations in rainfall and temperature will impact agricultural productivity, raising the possibility of malnutrition, harvest failure, and a variety of other health issues.
- The changes in hydrology and rainfall may possess an impact on sanitation and water availability, raising the possibility of water-borne illnesses.
- Extreme weather events may destroy settlements or income-generating resources and facilities, leading to direct physical harm, loss of income and consequent well-being, psychological stress, and other direct and indirect human health consequences.³

In the Climate Risk Profile report, Indonesia is ranked in the top third of countries regarding the severity of climate risk, with high vulnerability to all types of flooding and extreme heat.⁴ Extreme weather is a key factor in this tragedy. For example, heavy rains can lead to flash floods, which result in a variety of diseases. It cannot be denied that Indonesia as a tropical country has a high risk of vector-borne diseases. In addition to high rainfall, air temperature also plays an indirect role in the dynamics of malaria and dengue transmission. Temperature greatly affects various biological processes of mosquitoes.⁵ The transmission of vector diseases faced by Indonesia is a major challenge for Indonesia's resilience in terms of climate change, this is evidenced in the ASEAN State of Climate Change Report document, Indonesia has reported that the increase in dengue fever is one of the impacts of environmental changes faced by Indonesia in the health sector.⁶

Furthermore, in 2023, Indonesia experienced extreme heat events with temperatures reaching 38 degrees Celsius.⁷ Indonesia found an increase in the number of warm days during the daytime while decreasing the number of colder days at night.⁸ This shows that in Indonesia there has been a rise in global temperatures. Although the heat wave that occurred

¹ UNICEF (2021). Ringkasa Kebijakan. Kesiapan Sektor Kesehatan dalam Mendukung Komitmen Nasional pada Adaptasi Perubahan Iklim: Akses dan Ketersediaan Data

² J. H. Hashim, & Z. Hashim, Climate change, extreme weather events, and human health implications in the Asia Pacific region. *As. Pac. J. of Pub. Health.* **28**, 4 (2016).

³ Haryanto, B., Lestari, F., & Nurlambang, T. Extreme events, disasters, and health impacts in Indonesia. *Extreme man Health: International Case Studies.* Springer International publish. AG. **227**, 245 (2020)

Indonesia (2021): The World Bank Group and Asian Development Bank
an RI. Badan Penelitian dan pengembangan Kesehatan (2021). Data dan Informasi Dampak Kesehatan Berbasis Bukti di Indonesia

., Thalib, W., Ayuningtyas, D., Bawazier, N., & Buskens, E. Building health systems resilience: , economic, and cultural impacts of climate change from stakeholders' perspectives in Indonesia. *1*, 82(1), 1-11 (2024).



in Indonesia is not as severe as that in other southeast Asia, however, the Indonesian government must be aware of the health impacts caused by these weather anomalies as explained in the 2019-2020 RPJMN report that efforts to deal with rising temperatures due to the effects of climate change must be prioritised in the 2020-2024 RPJMN period.⁹

The connection between health and global climate change is complex, involving interrelated causal factors and intersecting responsibilities. Indonesia has made important commitments to climate adaptation and mitigation strategies, one form of Indonesia's commitment to strengthening climate resilience is developing the National Action Plan for Climate Change Adaptation (RAN-API), which recognizes the health sector as an important subject to adapt to climate change. Therefore, this study will analyze existing national policies, and mitigation and adaptation programs designed to address the impacts of climate change and provide recommendations to strengthen adaptation and mitigation strategies to reduce the harmful impacts of extreme weather phenomena on public health in Indonesia.



Peraturan Presiden (Perpres) Nomor 18 Tahun 2020 tentang Rencana Pembangunan Jangka Panjang 2020-2024

Optimized using
trial version
www.balesio.com

CHAPTER II RESEARCH METHOD

This study's methodology combines a review of the literature with an analysis of state practices. In order to obtain a comprehensive understanding of the adaptation and mitigation strategies of extreme weather on public health in Indonesia, a thorough review of pertinent academic publications, scholarly articles, reports, and legal documents were conducted.

Through descriptive analysis, the literature review focuses on national legal frameworks and policies pertaining to adaptation and mitigation from a normative perspective. Additionally, it examines scientific studies on the effects of severe weather. The analysis of the study includes the challenges and solutions in accordance with state practice in developing and committing mitigation and adaptation plans.

