Policy Notes

Policy Interpretation of the China National Climate Change Health Adaptation Action Plan (2024–2030)

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ABSTRACT

To better protect public health under climate change, in September 2024, the National Disease Control and Prevention Administration of the People's Republic of China, in collaboration with 12 other relevant departments, jointly released the China National Climate Change Health Adaptation Action Plan (2024–2030) (hereinafter referred to as the Action Plan), and innovatively proposed ten strategic prior actions. This study provides a systematic interpretation on the Action Plan, introducing its background, methodology and evidence used in production process, main concepts and content, the road map of implementation, as well as several possible challenges and solutions, which helps to give an overall understanding of the Action Plan.

Climate change has become one of the most complex public health issues of the 21st century (*1*). Since climate change trends are difficult to mitigate in the short term, improving the adaptation to climate change has become the key strategy in global efforts attempting to cope with climate change. In September 2024, the National Disease Control and Prevention Administration of the People's Republic of China, in collaboration with 12 other relevant departments, jointly released the China National Climate Change Health Adaptation Action Plan (2024–2030) (hereinafter referred to as the Action Plan) (*2*). This Action Plan outlines strategies for health adaptation to climate change in China and proposes ten key tasks, which is important for integrating health into climate policy and foster diverse, multi-level health adaptation policies and collaborative actions, as well as strengthening climate change adaptation and risk prevention capacities. The release of the Action Plan demonstrates China's role as a major country in the global climate change response process and reflects the national vision of prioritizing people's health in a strategic position. The World Health Organization (WHO) Representative Office in China highly commended the Action Plan (*3*). This article interprets the Action Plan's background, objectives, innovations, and challenges.

BACKGROUND

Climate Change and Its Health Impacts

As climate change characterized by global warming continues to intensify, extreme weather and climate events such as heatwaves, floods, cold waves, and typhoons have become more frequent and severe in recent years (*4*). According to the latest report of the Lancet Countdown on health and climate change, in 2023, the global average number of hours of high-temperature exposure per capita increased by 27.7%, and the proportion of land areas experiencing an increase in the number of days with extreme precipitation rose to 61% compared to the baseline of 1961 to 1990, both hitting new historical records (*5*). Extreme weather and climate events, such as global extreme heatwaves, typhoons, and floods, have resulted in 53% more direct economic losses compared to the historical average during 1992–2021 (*4*). In China, the average number of heatwave exposure days per person in 2023 reached over three times the historical average (1986–2005), which resulted in a 1.9 times surge in heatwave-related deaths. At the same time, drought and extreme rainfall led to a 15.1% and 2.4% higher excess risk of related infectious diarrhea from 2013–2022 (*6*). As the latest data in China Climate Bulletin (2024) indicated, the national average temperature reached 10.9 ℃ in 2024, breaking the historical record and leading to the hottest year. Human survival, life, and health are facing significant challenges.

Global and Domestic Policy Background

Enhancing health adaptation and risk prevention

capabilities in response to climate change is an urgent priority. The WHO has long called on countries to integrate health adaptation into their climate change policies and has identified "Respond to climate change, an escalating health threat in the 21st century" as one of its six strategic goals in its Fourteenth General Programme of Work, 2025–2028 (*7*). Countries should formulate and implement National Adaptation Plans (NAP) as well as Health National Adaptation Plans (HNAP), to achieve the goal of building climate-resilient health systems that can anticipate, absorb, and transform in a changing climate to protect population health (*8*). In China, national climate change adaptation actions are urgently needed to fulfill the mandate of comprehensive promotion of climate change health adaptation actions outlined in the National Climate Change Adaptation Strategy 2035 (*9*), and contribute to the "Healthy China" and "Beautiful China" initiatives.

METHODS

Who Was Involved in the Production of the Action Plan

The Action Plan was developed based on an in-depth investigation into the evidence linking climate change and health as well as adaptation, and extensive consultations and deliberations with experts and governors from the interdisciplinary fields, such as public health, ecology and environment, meteorology, water resources, agriculture, transportation, emergency management, finance, culture and tourism, and construction and urban-rural development. A clear and evidence-based framework for discussion as well as promote feedback mechanism were applied to balance the opinions of experts in different fields.

Evidence Considered in the Production of the Action Plan

To develop an evidence-based, needs-oriented, and capabilities-driven action plan, a comprehensive analysis of domestic and international evidence on climate change and health, as well as policy contexts of climate change adaptation, were conducted. Key evidence was adopted to ensure the scientific rigor, systematic consideration and rationality of policy formulation. These evidences include:

The core essence and new concept of global and national-level climate health policy and low-carbon strategy was taken into account, such as the guideline of WHO on how to build climate-resilient and low-carbon health system, the main concept of health adaptation delivered from the United Arab Emirates Declaration on Climate and Health of the 28th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP28), the Building Resilience Against Climate Effect (BRACE) framework of the United States, and the experience of low-carbon construction from the 'Net Zero' National Health Service in United Kingdom England.

The latest domestic climate policy and actions, including the National Climate Change Adaptation Strategy 2035, etc.

Current trend and characteristics of climate change reported in series reports of the IPCC (*10*) as well as China Climate Bulletin in recent years; both national and regional climate change characteristics were taken into account, given the country's diverse climate and health challenges.

The public health impact of climate change (*5*,*6*) based on global evidence. Infectious diseases such as plague, dengue, malaria, Japanese encephalitis, zoonotic diseases, as well as chronic conditions influenced by climate, including cardiovascular diseases, respiratory diseases, mental health disorders, and allergies, were all considered.

Multi-sectoral actions and policies regarding climate change (*6*,*10*). Multiple sectors in China, in accordance with its respective responsibilities, have implemented a series of initiatives to address climate change mitigation and adaptation, with comprehensive coverage spanning policy regulatory frameworks, scientific and technological advancements, as well as engineering construction undertakings.

RATIONALE AND EVIDENCE

The Overall Target of the Action Plan by 2030

This Action Plan aims to prevent climate change related health risks, strengthen health adaptation actions, and advance health promotion capabilities. This emphasizes moving the focus of disease prevention forward, prioritizing an adaptation interconnected mechanism driven by construction of the health early warning systems, fostering diverse and multi-level health adaptation policies and collaborative actions, and strengthening adaptation and risk prevention capacities.

Innovations and Strategic Prior Actions

The Action Plan is a groundbreaking policy representing a strategic leap towards a better incorporated health considerations throughout the entire course of climate policies. A distinctive innovation of this Action Plan is the emphasis of a balanced approach to mitigation and adaptation and the integration of health adaptation principles throughout the climate change policy system.

To align with the global framework of health adaptation, and comprehensively integrate the country' s health priorities and climate change challenges, the Action Plan outlines ten specific measures for national climate change adaptation by 2030, referred to as the "Ten Actions for Health", including:

1) Strengthening the inter-departmental collaboration mechanism on climate change and health;

2) Improving the policy and standards system for climate change and health;

3) Strengthening early warnings for climate-sensitive diseases;

4) Enhancing dynamic assessments of climate change-related health risks, vulnerabilities, and adaptation capacities;

5) Enhancing climate change related health risk prevention and comprehensive intervention capabilities;

6) Strengthening health guarantee capabilities for climate change;

7) Enhancing climate resilience of healthcare and public health systems;

8) Creating friendly environments for climate change health adaptation across the entire society;

9) Accelerating technological innovation for climate change health adaptation;

10) Advancing global initiatives on climate change health adaptation.

PRESENTATION

The Road Map of Action Plan Implementation

The Action Plan established goals for two phases. By 2025, a collaborative, multi-departmental mechanism addressing climate change and health will be improved, and a policy and standards framework will be constructed; the construction of climate-sensitive diseases monitoring systems will be strengthened, and climate change and health evaluation indicators will be developed; the first round of assessments on health risks, vulnerabilities, and adaptation capacities related to climate change will be completed. By 2030, a system of policies and standards for climate change and health will be primarily established; monitoring and early warning capacities will be consistently strengthened; assessment system for health risks, vulnerabilities, and adaption capacities will be well-developed; the climate resilience of key regions and sectors, as well as health systems, will be significantly enhanced; a friendly environment supporting climate change health adaptation across the entire society will be preliminarily formed.

To fulfill the goals in 2025 and 2030, a road map for a systematic implementation of the Action Plan is designed. It includes the following actions:

Construct a collaborative, multi-departmental working mechanism: The Action Plan emphasizes the construction of a collaborative, multi-departmental mechanism addressing climate change and health, establish a comprehensive and integrated cross-departmental system encompassing 'Planning–Monitoring–Warning–Assessment–Intervention'.

Build up health risk early warnings: The Action Plan encourages to build up health risk early warnings to strengthen public health intervention. This effort includes delivering health reminders to key populations and advancing diversified public health services.

Strengthen the health emergency response to extreme weather disasters: The Action Plan addresses strengthening health emergency response capabilities for infectious disease prevention and control, drinking water safety, environmental hygiene, and health emergency response. It also emphasizes enhancing the resilience and recovery capabilities of healthcare facilities for extreme weather and climate events.

Provide health protection guidance to the public: The Action Plan focuses on providing targeted health protection guidelines to enhance public awareness of risks and improve self-protection and self-rescue abilities, particularly to vulnerable populations such as pregnant women, children, the elderly, individuals with chronic diseases, and outdoor workers.

Integrate climate mitigation and adaptation: On one hand, the Action Plan emphasizes educating and guiding the public to adopt green and low-carbon lifestyles voluntarily. On the other hand, it also promotes the development of green and low-carbon healthcare facilities, by applying land-, energy-, water-, and material-efficient construction and technological integration (e.g., IoT, AI-driven platforms). The Action Plan finally aims to foster a friendly

environment for climate change health adaptation across the entire society.

Challenges and Support Measures

Interdepartmental collaboration: Considering the different responsibilities and work focuses of each department, there may be difficulties in effective coordination in data sharing and joint work. The Action Plan emphasizes enhancing organizational leadership to promote effective collaborations at both the local and national levels, such as to promote the establishment of interdepartmental information sharing platforms, joint work groups and mechanism.

Climate and health professionals: Climate change health adaptation is a highly interdisciplinary field that requires individual with knowledge in climate change, public health, environmental science, and other related fields. The shortage of such professionals may make it difficult to meet the needs of plan implementation. The Action Plan emphasizes the need to promote training in climate change and health skills and practical exercises to increase professional skillsets. Also, the Action Plan mandates the establishment of a National Expert Committee on Climate Change and Health to consolidate interdisciplinary expertise.

Dynamic adjustment of action implementation: Climate change and health issues are dynamic and uncertain, and the plan needs to be evaluated and adjusted dynamically according to the actual situation. Integrated indicators and metrics for the evaluation should be developed. The Action Plan requires public health departments to strengthen guidance on implementation and perform effectiveness evaluations as needed.

CONCLUSION

Amid intensifying health threats posed by climate change, the Action Plan underscores China's resolve to safeguard population health while advancing its dual carbon neutrality and resilience-building goals. As an active promoter and contributor to global climate action, China will vigorously promote the implementation of this Action Plan and provide support for global climate change health governance.

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