


Chapter 4

Climate Action Meets Social Justice: Designing Public Policies That Address Global Warming and Promote Sustainable Development

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ABSTRACT

Global warming represents an urgent crisis requiring immediate action. According to the IPCC's latest report, human-induced climate change is causing widespread disruption to nature and affecting billions worldwide, with vulnerable populations bearing the heaviest burden. While multiple feasible solutions exist to reduce emissions and adapt to climate change, immediate action is crucial for securing a liveable future. The challenge of addressing climate change is intrinsically linked to social justice and sustainable development. Marginalized communities, often having the least resources to adapt, face disproportionate impacts from rising sea levels, extreme weather events, and food insecurity. Effective climate policies must therefore embrace climate justice principles while ensuring a just transition for workers in carbon-intensive industries. Success requires integrating climate action with broader sustainable development goals, including poverty alleviation, food security, and gender equality. By pursuing these synergies, policymakers can maximize benefits.

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1. INTRODUCTION

The convergence of climate change mitigation and social justice represents one of the most pressing challenges facing humanity in the 21st century. Recent evidence indicates that the climate crisis has reached unprecedented levels of urgency, with the Intergovernmental Panel on Climate Change (IPCC, 2023) warning that the window for limiting global temperature rise to 1.5°C above pre-industrial levels is rapidly closing. This situation is further emphasized by NASA and NOAA's (2024) confirmation that 2023 was the warmest year on record, with global temperatures averaging 1.18°C above the pre-industrial baseline, highlighting the critical nature of immediate action. The severity of the climate crisis is underscored by multiple indicators that have surpassed previous projections. The World Meteorological Organization (2024) reports that atmospheric CO₂ concentrations have reached 421.7 ppm, the highest level in 2 million years. Ocean heat content has achieved record levels, with significant implications for marine ecosystems and coastal communities (von Schuckmann et al., 2024). These changes have manifested in increasingly frequent and severe extreme weather events, which affected over 185 million people in 2023 alone, with economic losses exceeding \$290 billion (Stroeve & Notz, 2023).

The integration of social justice considerations into climate policy has become increasingly crucial as evidence mounts regarding the disproportionate impact of climate change on vulnerable populations. The World Bank (2024) reports that low-income communities face 5-6 times higher exposure to climate risks compared to affluent populations. This disparity is particularly evident in indigenous communities, which bear disproportionate climate impacts despite contributing minimally to emissions (United Nations Development Programme, 2024). Gender disparities in climate vulnerability persist, with women facing higher risks in developing regions (UN Women, 2024). Recent research has demonstrated that successful climate policies must address both environmental sustainability and social equity to achieve lasting impact.

The United Nations Development Programme's Human Development Report (2024) emphasizes that community-based adaptation programs show 40% higher success rates when incorporating local knowledge and participatory approaches. This finding aligns with emerging evidence that integrated approaches combining climate action with sustainable development goals demonstrate superior outcomes in both environmental and social dimensions. The urgency of addressing these interlinked challenges requires a comprehensive policy framework that acknowledges both the environmental and social dimensions of climate change.

As global temperatures continue to rise and climate impacts intensify, the need for policies that promote both climate resilience and social equity becomes increasingly apparent. The evidence suggests that successful climate action must

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