


Chapter 1

Designing Effective Public Policies to Address Global Warming

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ABSTRACT

As one of the most urgent, multidimensional and deepening problems of our time, global warming represents one of the greatest challenges in human history. So why does this crisis require such an urgent response? How are rising temperatures, melting glaciers and increasing extreme weather events affecting our planet's ecosystems and human communities? Is climate change merely an environmental disaster, or is it an issue that deepens social inequalities, shakes economic systems and tests global cooperation? Moreover, what steps should governments, societies and individuals take to build an effective response to this threat? These questions reveal that global warming is not only a scientific reality, but also a complex challenge that requires the shared responsibility and solidarity of humanity.

INTRODUCTION

As one of the most urgent, multidimensional and deepening problems of our time, global warming represents one of the greatest challenges in human history. But why does this crisis require such an urgent response? How are rising temperatures, melting

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glaciers and increasing extreme weather events affecting our planet's ecosystems and human communities? Is climate change merely an environmental disaster, or is it an issue that deepens social inequalities, shakes economic systems and tests global cooperation? Moreover, what steps should governments, societies and individuals take to build an effective response to this threat? These questions reveal that global warming is not only a scientific reality, but also a complex challenge that requires the shared responsibility and solidarity of humanity. The concentration of greenhouse gases released into the atmosphere since the Industrial Revolution has caused global average temperatures to rise by more than 1.1°C compared to pre-industrial times. The findings of the United Nations Intergovernmental Panel on Climate Change (IPCC) for 2023 indicate that if current emission trends continue, this increase could range between 2.4°C and 3.5°C by the end of the century. This would not only lead to the destruction of natural habitats, but also to dramatic declines in agricultural production, vulnerability in food security, mass climate migration and increased social unrest. However, global warming is not only an environmental challenge, but also a crisis that tests social justice with low-income countries disproportionately affected, economic sustainability with fossil fuel dependency, and global cooperation with a lack of international commitments. In this context, designing effective public policies against global warming should not be limited to reducing emissions, but should also strengthen adaptation strategies, promote technological innovation and put climate justice at the center. By blending scientific data with societal needs, public policies should both respond to current crises and build a livable world for future generations. This paper aims to provide a framework for the design of effective public policies by addressing the urgency and multidimensional impacts of global warming. Beginning with a section on “The Urgency of Climate Action”, it proposes a framework for designing proactive, equitable and innovative public policies to address the climate crisis in light of scientific findings, socio-economic dynamics and policy imperatives.

THE URGENCY OF CLIMATE ACTION

Climate change is not only a threat that is expected to emerge in the future, but a concrete reality that is already being experienced and profoundly transforming the dynamics of our age with its multidimensional impacts. This transformation necessitates radical, preventive and systemic interventions that go beyond superficial regulations in public policies (Kaya, 2025). So why does this crisis require such an urgent intervention? Because the rapid approach to irreversible thresholds in the climate system is not only limited to the deterioration of ecological balances, but also has multidimensional consequences such as the erosion of social structures,

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