



Background Paper

Committee: United Nations Environment Programme

Topic: Sustainable Agriculture and Food Security in a Changing Climate

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Sustainable agriculture and food security in a changing climate represent a critical global concern due to the need to feed a growing population and the increase in the challenges posed by climate change. With nearly 10 billion people expected by 2050, ensuring food security is paramount. Climate change exacerbates agricultural vulnerabilities through erratic weather patterns, posing threats to crop yields.

The challenge of sustainable agriculture and food security within the evolving landscape of a changing climate has deep historical roots, marked by humanity's continual quest to feed its growing population. Throughout history, agriculture has been the base of civilizations, shaping societies and economies while fostering the development of human communities. From ancient agricultural practices that relied on natural cycles to the Green Revolution's introduction of abundant varieties and modern technologies, the narrative of food production has undergone transformative shifts. However, these advancements have come with ecological repercussions, including soil degradation, water scarcity, loss of biodiversity, and increased greenhouse gas emissions. Against the backdrop of climate change, historical agricultural practices are being revisited, with a renewed emphasis on sustainability and resilience.

Addressing this issue is necessary to ensure food security for a growing world population, estimated to reach 9 billion people by 2050, and requires a comprehensive approach to address the effects of climate change on agriculture. Failure to address this issue could lead to food shortages, malnutrition, social unrest, and environmental degradation.

This problem is actively at work in erratic weather patterns, droughts, floods, and rising temperatures are disrupting agricultural ecosystems. The result is lower crop yields, loss of biodiversity, soil degradation, and increased vulnerability of smallholder farmers, particularly in developing countries. Numerous initiatives and interventions have been implemented at local, national, and international levels. These include the promotion of climate-resilient farming practices, investment in research and development of drought and heat-resistant crops, capacity-building for farmers, and policies supporting sustainable land management.

Attention should be given to fostering innovation, technology transfer, and equitable access to resources, emphasizing the role of smallholder farmers, and promoting policies that encourage sustainable practices without compromising food security. The focus should be on seeking multifaceted solutions that balance environmental conservation, economic viability, and social equity in the face of a rapidly changing climate.

Works Cited

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