



**BSAMUN 2023**  
**Advancing**  
**Sustainable**  
**Agriculture to**  
**Address Food**  
**Insecurity**

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# Introduction

Advancing sustainable agriculture is critical to address global food insecurity, which is a pressing challenge facing humanity today. With an estimated 690 million people worldwide suffering from hunger and malnutrition, the need to produce more food in an environmentally sustainable manner has become more urgent than ever. By the year 2050, the global human population is estimated to have reached 9.7 billion, a dangerous number threatening the increase of the 9% already suffering with food insecurity today. Sustainable agriculture involves methods of food production that are ecologically sound, economically viable, and socially responsible. These methods focus on promoting soil health, conserving natural resources, and reducing greenhouse gas emissions, among other things. Sustainable agriculture practices include crop rotation, agroforestry, integrated pest management, conservation tillage, and the use of organic fertilisers. Advancing sustainable agriculture is crucial to achieving food security, as it can increase yields, improve soil fertility, and promote biodiversity. By implementing sustainable farming practices, farmers can also reduce their reliance on chemical fertilisers and pesticides, which can harm the environment and human health. Additionally, sustainable agriculture can help to mitigate the impacts of climate change by reducing greenhouse gas emissions and sequestering carbon in soil. Addressing food insecurity through sustainable agriculture requires collaborative efforts from all stakeholders, including governments, farmers, agribusinesses, civil society organisations, and consumers. Governments can play a crucial role in promoting sustainable agriculture by providing incentives, investing in research and development, and implementing policies that support sustainable farming practices. Farmers and agribusinesses can adopt sustainable practices, while civil society organisations and consumers can raise awareness about the importance of sustainable agriculture and promote sustainable food choices. Sustainable agriculture can help improve food security in several ways. Sustainable agriculture practices such as crop rotation, intercropping, and agroforestry can improve soil health and fertility, resulting in increased crop yields. This can help farmers produce more food and reduce the risk of crop failure due to drought, pests, or diseases. Sustainable agriculture promotes the cultivation of a variety of crops, including indigenous and traditional crops, which can provide a diverse range of nutrients and help ensure food security in times of crop failure or other shocks. Sustainable agriculture practices such as conservation tillage, cover cropping, and the use of natural pest management techniques can help conserve natural resources such as soil, water, and biodiversity, which are essential for sustainable food production. Sustainable agriculture can also help improve

access to food for small-scale farmers and rural communities, who often face challenges such as limited access to markets, credit, and technology. By promoting local food production and marketing, sustainable agriculture can help ensure that food is available and accessible to those who need it most. Overall, sustainable agriculture can play a critical role in improving food security by increasing production, diversifying crops, conserving natural resources, and improving access to food for vulnerable populations. Advancing sustainable agriculture is essential to address global food insecurity, promote environmental sustainability, and build resilience in agricultural systems. By working together and adopting sustainable farming practices, we can achieve a more equitable and sustainable food system for all.

## Definition of key terms

**Sustainable agriculture:** Methods of food production that are ecologically sound, economically viable, and socially responsible, focusing on promoting soil health, conserving natural resources, and reducing greenhouse gas emissions, among other things.

**Food insecurity:** A state where people lack access to sufficient, safe, and nutritious food to meet their dietary needs, which can result in malnutrition and hunger.

**Crop rotation:** The practice of growing different crops on the same land in successive growing seasons to improve soil health and fertility, reduce pest and disease pressure, and increase crop yields.

**Agroforestry:** A land-use system that integrates trees and shrubs with crops and livestock to promote biodiversity, improve soil health and fertility, and increase resilience to climate change.

**Integrated pest management:** A strategy for managing pests that involves using a combination of cultural, biological, and chemical methods to reduce pest populations while minimising environmental and health risks. Conservation tillage: a system of crop cultivation that minimises soil disturbance to improve soil health and reduce erosion, while also reducing the use of fossil fuels and greenhouse gas emissions.

**Greenhouse gas emissions:** Gases that trap heat in the Earth's atmosphere, contributing to global climate change. The most common greenhouse gases are carbon dioxide,

methane, and nitrous oxide. **Biodiversity:** the variety of life on Earth, including the diversity of species, ecosystems, and genetic variation within species.

**Environmental degradation:** Refers to the deterioration of the environment, including the loss of biodiversity, soil degradation, pollution, and climate change.

**Industrial agriculture:** Refers to a method of farming that is characterised by large-scale monoculture farming, heavy use of synthetic fertilisers and pesticides, and the use of machinery. **Organic farming:** Refers to a method of farming that avoids the use of synthetic fertilisers and pesticides and instead relies on natural processes, such as composting and crop rotation, to maintain soil fertility and control pests.

**Genetically modified crops:** Refers to crops that have been genetically engineered to have specific traits, such as resistance to pests or drought.

**NGOs:** Refers to non-governmental organisations, which are non-profit organisations that operate independently of governments and are usually focused on a specific social or environmental issue.

**Extension programs:** Refers to programs that provide education and training to farmers to help them improve their agricultural practices and increase their productivity.

**Agroecology:** A science-based approach to agriculture that integrates ecological principles into agricultural systems, promoting biodiversity, soil health, and the use of traditional knowledge and practices.

**FAO:** The Food and Agriculture Organization of the United Nations, which is a specialised agency of the UN that leads international efforts to defeat hunger and improve agriculture.

**IFAD:** The International Fund for Agricultural Development, which is a specialised agency of the UN that focuses on empowering poor rural people to achieve food security and improve their livelihoods.

**CGIAR:** The Consultative Group on International Agricultural Research, which is a global research partnership that focuses on developing innovative solutions to food insecurity and environmental challenges through sustainable agriculture research.

**Climate-smart agriculture:** An approach to agriculture that involves practices that promote adaptation and mitigation to climate change, such as the use of drought-resistant crops, conservation tillage, and agroforestry. RCEP: The Regional Comprehensive Economic Partnership, a free trade agreement between 15 Asia-Pacific countries.


**NAFTA:** The North American Free Trade Agreement, a trade agreement between the United States, Canada, and Mexico. Mercosur: The Southern Common Market, a trade bloc in South America that includes Brazil, Argentina, Uruguay, and Paraguay.

**UNCTAD:** The United Nations Conference on Trade and Development, an organization that works to promote fair trade practices and protect the interests of developing countries in international trade agreements.

## General Overview

While the concept of sustainable agriculture to address food insecurity is a positive objective hoping to reduce the issues worldwide, the idea has raised some concerns, tensions, and backlash by the international community. History of the topic and rising tensions The concept of sustainable agriculture has been around for centuries, as farmers have always tried to manage their land and resources in a way that ensures long-term productivity. However, the modern movement towards sustainable agriculture began in the 20th century, as concerns about food security, environmental degradation, and the negative impacts of industrial agriculture grew. One of the early pioneers of sustainable agriculture was Sir Albert Howard, a British agronomist who worked in India in the 1920s and 1930s. Howard advocated for the use of organic farming methods, including the use of compost and green manures, to improve soil fertility and promote sustainable food production. In the 1960s and 1970s, the Green Revolution was a major effort to increase agricultural productivity in developing countries through the use of new high-yield crop varieties, fertilisers, and pesticides. While the Green Revolution had some success in increasing crop yields and reducing hunger, it also had negative environmental and social impacts, such as soil degradation, loss of biodiversity, and displacement of small-scale farmers. Evidence of this revolution was, for example, what occurred in the United States. The modern sustainable agriculture movement began to gain traction in the same time period, as a response to the negative impacts of industrial agriculture and concerns about environmental pollution and food safety. This movement was led by a group of farmers, researchers, and activists who called for a more holistic and sustainable approach to agriculture, one that would protect natural resources and

promote the health and well-being of farmers and rural communities. In the 1980s and 1990s, sustainable agriculture gained wider recognition, as governments and international organisations began to recognize the need for more sustainable and resilient food systems. The United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992, called for the promotion of sustainable agriculture as a key strategy for addressing global environmental challenges, including food insecurity. In the 1990s, the development of genetically modified (GM) crops became a contentious issue in the promotion of sustainable agriculture. While some saw GM crops as a potential solution to food insecurity, others raised concerns about the environmental and health impacts of GM crops, as well as the potential impact on small-scale farmers. In the 1990s and 2000s, international trade agreements became a major point of tension in the promotion of sustainable agriculture. Some countries raised concerns about the impact of these agreements on local food systems and small-scale farmers, arguing that they could lead to the displacement of small-scale farmers and the concentration of power in the hands of large agribusiness corporations. In recent years, climate change has become a major challenge for the promotion of sustainable agriculture. Rising temperatures, changing precipitation patterns, and extreme weather events are posing significant challenges for farmers and food systems around the world. There are tensions around how best to adapt to these challenges, with some advocating for the adoption of climate-smart agriculture practices, while others argue for more radical shifts in agricultural systems. Despite these tensions, there is growing recognition of the importance of advancing sustainable agriculture to address food insecurity and build more resilient and sustainable food systems. Many organisations are working together to promote sustainable agriculture and share best practices, and there is a growing sense of urgency to address the pressing challenges of hunger and environmental degradation. Sustainable agriculture has become a major focus of research and policy development, with governments, NGOs, and international organisations investing in sustainable agriculture research, training, and extension programs. Today, sustainable agriculture is recognized as a critical tool for addressing food insecurity, environmental degradation, and social inequality, and is seen as a key component of efforts to build more resilient and sustainable food systems. Current happenings concerning the topic There is currently a growing movement towards advancing sustainable agriculture to address food insecurity. Many governments, NGOs, and international organisations are investing in sustainable agriculture research, training, and extension programs to support these efforts. One approach that many organisations are promoting is agroecology. Agroecology is a science-based approach that integrates ecological principles into agricultural systems, promoting biodiversity, soil health, and the use of traditional knowledge and practices. The Food and Agriculture Organization of the



United Nations (FAO) has been a strong advocate for agroecology and has launched several initiatives to promote its adoption. Another area of focus is supporting small-scale farmers, who often face the greatest challenges in accessing resources and technologies for sustainable agriculture. The International Fund for Agricultural Development (IFAD) has launched several programs to support small-scale farmers, including the Adaptation for Smallholder Agriculture Program, which provides funding and technical assistance for climate-resilient farming practices. Governments and international organisations are also investing in research and development to support sustainable agriculture. The Consultative Group on International Agricultural Research (CGIAR) is a global research partnership that focuses on developing innovative solutions to food insecurity and environmental challenges through sustainable agriculture research. In the face of climate change, many organisations are promoting climate-smart agriculture, which involves practices that promote adaptation and mitigation, such as the use of drought-resistant crops, conservation tillage, and agroforestry. To promote sustainable agriculture and address food insecurity, many organisations are working to build public-private partnerships. The World Business Council for Sustainable Development has launched numerous initiatives to promote sustainable agriculture, including the Action for Sustainable Agriculture initiative, which brings together companies, governments, and NGOs to promote sustainable agriculture practices. Overall, there is growing recognition of the importance of advancing sustainable agriculture to address food insecurity and build more resilient and sustainable food systems. Many organisations are working together to promote sustainable agriculture and share best practices, and there is a growing sense of urgency to address the pressing challenges of hunger and environmental degradation.

## Major Parties Involved

Advancing sustainable agriculture to address food insecurity is a global effort that involves numerous parties and countries. Governments, NGOs, international organisations, and private companies are all playing significant roles in promoting sustainable agriculture practices.

The Food and Agriculture Organization of the United Nations (FAO) has been a strong advocate for sustainable agriculture and has launched several initiatives to promote its adoption. FAO works with governments, NGOs, and local communities to promote agroecology and sustainable farming practices. The FAO also provides technical assistance and capacity building programs to support sustainable agriculture in

developing countries. Furthermore, The International Fund for Agricultural Development (IFAD) is another organisation that is actively involved in promoting sustainable agriculture. IFAD works to improve the livelihoods of small-scale farmers in developing countries by providing funding, technical assistance, and promoting sustainable agricultural practices. IFAD also works with governments and other partners to develop policies and programs that support sustainable agriculture.

Many governments are also investing in sustainable agriculture research and development. The Consultative Group on International Agricultural Research (CGIAR) is a global research partnership that focuses on developing innovative solutions to food insecurity and environmental challenges through sustainable agriculture research. Countries such as the United States, Canada, and Australia are also investing in sustainable agriculture research to improve crop yields and promote sustainable farming practices. Next to that, private companies are also involved in promoting sustainable agriculture. The World Business Council for Sustainable Development (WBCSD) has launched several initiatives to promote sustainable agriculture practices. Companies such as Cargill, Nestle, and Unilever have also committed to sourcing sustainable ingredients for their products.

#### Tensions between certain states

##### Genetically modified crops (GMOs)

There have been some tensions between countries over the promotion of sustainable agriculture to address food insecurity. One area of tension has been around the use of genetically modified (GM) crops, which some countries see as a potential solution to food insecurity, while others have concerns about the environmental and health impacts of GM crops.

The United States, for example, has been a strong advocate for GM crops and has pushed for their adoption in other countries as a way to increase crop yields and reduce hunger. However, many developing countries have been resistant to the use of GM crops, citing concerns about the potential risks to the environment and human health, as well as concerns about the impact on small-scale farmers who may not have the resources to purchase GM seeds and associated technologies. here is a list of some countries that have implemented restrictions or bans on GMOs: Austria, Hungary, Greece, Italy, France, Germany, Luxembourg, Poland, Switzerland, Venezuela, Russia, Algeria, Egypt, Madagascar, Zambia. It's worth noting that some of these countries have only implemented partial restrictions or bans on GMOs, while others have more



comprehensive policies. Additionally, some countries have restrictions on specific types of GMOs, such as only allowing certain genetically modified crops to be grown.

### Trade policies

Another area of tension has been around trade policies, particularly with regard to the import and export of agricultural products. Some countries have raised concerns about the impact of international trade agreements on local food systems and small-scale farmers. For example, some have criticised the focus on export-oriented agriculture in trade agreements, arguing that this can lead to the displacement of small-scale farmers and the concentration of power in the hands of large agribusiness corporations.

For example, India has raised concerns about the impact of the Regional Comprehensive Economic Partnership (RCEP) on its farmers, as the agreement could lead to increased imports of agricultural products and undercut domestic production. Indian farmers have expressed concerns that they will be unable to compete with imports, which could result in job losses and lower incomes. Mexico: Mexico has raised concerns about the impact of the North American Free Trade Agreement (NAFTA) on its agricultural sector, as the agreement led to increased imports of subsidised agricultural products from the United States.

Next to that, Mexican farmers have struggled to compete with these imports, which has led to job losses and reduced incomes. Brazil: Brazil has raised concerns about the impact of the Mercosur-European Union trade agreement on its farmers, as the agreement could lead to increased imports of agricultural products and undercut domestic production. Brazilian farmers have expressed concerns that they will be unable to compete with imports, which could result in job losses and lower incomes.

The European Union has raised concerns about the impact of trade agreements on its small-scale farmers, as increased imports of agricultural products could lead to job losses and lower incomes. The EU has pushed for protections for its farmers in trade negotiations, including measures to prevent unfair competition and protect geographic indicators. Lastly, International organisations, such as the United Nations Conference on Trade and Development (UNCTAD) and the International Fund for Agricultural Development (IFAD), have raised concerns about the impact of trade agreements on local food systems and small-scale farmers. These organisations have called for greater protections for small-scale farmers and the promotion of fair trade practices in international trade agreements.

## Distribution of resources

There have also been tensions around the distribution of resources for sustainable agriculture programs. Some countries have raised concerns that funding for sustainable agriculture programs may be concentrated in a few countries or regions, leading to a lack of support for other areas with high levels of food insecurity. For example, some African countries have expressed concern that funding for sustainable agriculture programs tends to be concentrated in other regions, such as Latin America and Asia. This can create challenges for African countries seeking to promote sustainable agriculture and address food insecurity within their own borders. The African Union, India, and NGOs like Oxfam and ActionAid, among others have raised concerns. This has led to a lack of support for other areas with high levels of food insecurity. The United States has also echoed these concerns and called for a more equitable distribution of funding and resources to ensure all countries have access to the resources needed to address food insecurity.

Similarly, some organisations have raised concerns that funding for sustainable agriculture may be focused on a few priority areas, leaving other regions without adequate support. For example, the International Fund for Agricultural Development (IFAD) has noted that funding for sustainable agriculture tends to be concentrated in a few priority countries and regions, leading to a lack of support for other areas with high levels of food insecurity. To address these concerns, there have been calls for increased funding and support for sustainable agriculture programs in underrepresented regions. The FAO and other organisations have emphasised the importance of equitable access to funding and resources to promote sustainable agriculture and address food insecurity globally.

Despite these tensions, there is growing recognition of the importance of sustainable agriculture in addressing food insecurity and building more resilient and sustainable food systems. Many countries are working together to promote sustainable agriculture and share best practices, and international organisations are investing in sustainable agriculture research, training, and extension programs to support these efforts.

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## Possible Solutions

1. The issue requires thorough and focussed international cooperation and collaboration. Tensions have arisen between countries and parties due to different priorities, interests, and approaches. However, there are some possible solutions to these tensions.
2. Communication is key to resolving conflicts and finding common ground. Countries and parties can engage in dialogue to understand each other's perspectives and concerns, share information and knowledge, and work towards common goals. This can be done through bilateral or multilateral meetings, conferences, and workshops. Partnerships and collaborations between countries and parties can help leverage resources, expertise, and networks to achieve sustainable agriculture goals. This can involve joint research and development projects, technology transfer, capacity building, and trade agreements.
3. Inequalities in economic and political power can lead to tensions and conflicts. Addressing these inequalities can promote fairness and justice, and reduce tensions between countries and parties. This can involve measures such as fair trade policies, debt relief, and support for small-scale farmers. International agreements and frameworks can provide a common vision and set of principles for sustainable agriculture. These can include the UN Sustainable Development Goals, the Paris Agreement on Climate Change, and the Convention on Biological Diversity. Countries and parties can work towards implementing these agreements and frameworks, and holding each other accountable.
4. Foster innovation and technology transfer: Innovation and technology transfer can help improve agricultural productivity and sustainability. Countries and parties can work together to develop and transfer innovative technologies and practices, such as precision agriculture, regenerative agriculture, and agroecology. Social and cultural factors, such as gender inequality, can also affect sustainable agriculture. Addressing these factors can promote equality and social justice, and reduce tensions between the countries at present.

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