

Committee: ENVIRONMENT

Topic: The question of developing sustainable agricultural processes

Chair: Maria- Anissia Mone

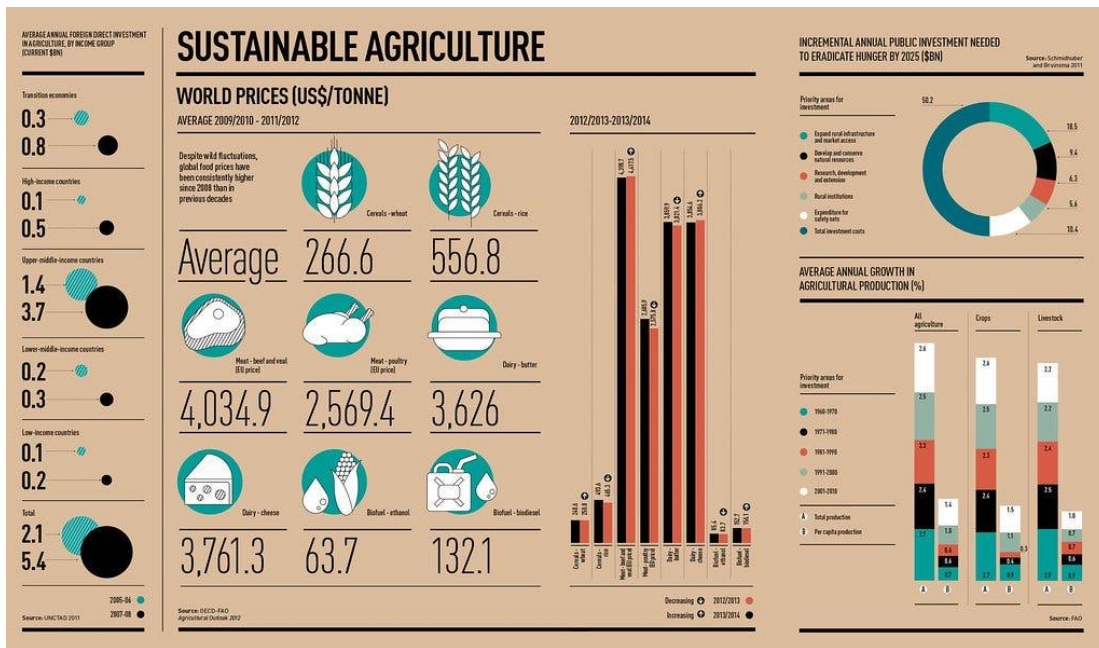
School: George Coşbuc National Bilingual Highschool

Summary

One of the biggest challenges today is developing agriculture that can be sustained. By 2050, we are expected to have a population of 9.7 billion hence there is a need for not only effective and productive agricultural systems but also those which would be just and environmentally sound. Agriculture is vital for sustaining human life while enabling economic development, yet it has a multitude of negative effects on nature. Deforestation, soil erosion, loss of species diversity, and societal problems such as sex trade (especially among young girls) can all be attributed to agriculture's large share in the total greenhouse gas emissions released into the atmosphere. Regions characterised by extreme poverty and malnutrition; climate change makes food insecurity worse than before. These constellations of issues warrant urgent interventions for sustainable agricultural practice formation because they form short-term solutions to long term problems that threaten global existence itself.

The world today faces the challenge of developing sustainable agricultural practices. Food production methods that are efficient, productive, fair and environmentally friendly must be employed especially with a projected world population of 9.7 billion in 2050. While agriculture is crucial for human survival and economic progress it causes significant environmental impacts including deforestation; reduced biodiversity; land degradation and is one of the biggest sources of greenhouse gas emissions. Climate change intensifies these existing issues particularly when it comes to food insecurity which is a major problem in some parts of the world today. As such, responding to these problems is not just important but essential for our future.

Consequently, it is equally necessary to make agricultural systems resilient and able to restore natural resources as well as socially just, and this should go hand in hand with raising productivity in sustainable agriculture.



Definition of Key Terms

Sustainable agriculture means planting and breeding animals or growth of crops as well in any single locality with respect to its climate conditions without depletion after any one agrarian generation. It aims at meeting human needs for food and fibre without putting pressure on natural resources; it should also be so conducted that environmental quality may be improved among other things like using up all available resources both renewable and non-renewable, making farms financially viable and improving farmers' lives as well as those living in their vicinity.

Agroecology is a scientific discipline that employs ecological theories to research, design, manage and evaluate productive yet resource-conserving agriculture systems. This aspect has led to Agroecology being touted as a possible foundation for sustainable agriculture since it combines indigenous agricultural knowledge with modern ecological science.

CSA (climate smart agriculture) is a way to change agricultural systems, so they can supply food through periods of climate change, but still help with development. The CSA community directed agriculture aims at boosting agricultural productivity in environmentally friendly ways,

building resilience against climate change, and minimising or entirely removing harmful gases from the atmosphere.

Food security refers to a condition where people can get adequate healthy food at all times both physically, socially and financially in such a way that it meets their nutritional requirements and preferences so they can be able to have vibrant lives that are also healthy. Food security refers to a condition where people can always get adequate healthy food both physically, socially and financially in such a way that it meets their nutritional requirements and preferences so they can be able to have vibrant lives that are also healthy.

Agroforestry is a type of sustainable land management that combines crops and pastureland with trees or shrubs. This technique can improve soil quality and its structure, reduce erosion rates, enhance biodiversity, and increase agricultural yield.

Regenerative agriculture comprises a collection of agricultural approaches and techniques which emphasise on biological diversity; it pays special attention to water management as well as soil health within the context aiming at restoration and enhancement of overall farm ecosystems. Some examples include holistic livestock grazing practices, use of cover crops, crop rotations alongside no-till farming methods.

Background Information

Transitioning to sustainable agriculture systems is pressing because of climate change. Climate change is not just one of agriculture's most important problems, but a significant factor in its temperature change, precipitation change, and impact on food security. More specifically, agriculture is influenced by climate change—the latter having something to do with fluctuations in temperature, precipitation patterns and occurrences of unusual weather conditions that ultimately affect the yield of crops. This poses risk factors to the availability of food especially within areas that are highly affected by inaccessibility to food.

Firstly, when people think about farming, they picture picturesque rolling fields dotted with barns and animals. However, conventional farming has an adverse impact on our environment. This is majorly attributed to deforestation, methane produced by livestock and nitrous oxide resulting from fertilisers used in agriculture leading to about twenty four percent of global greenhouse gases (GHG) coming from this industry. Moreover, agriculture is a major driver of land use

change as it turns large expanses of grasslands and forests into cropland areas and pasture lands thereby causing habitat fragmentation followed by high rates of biodiversity loss.

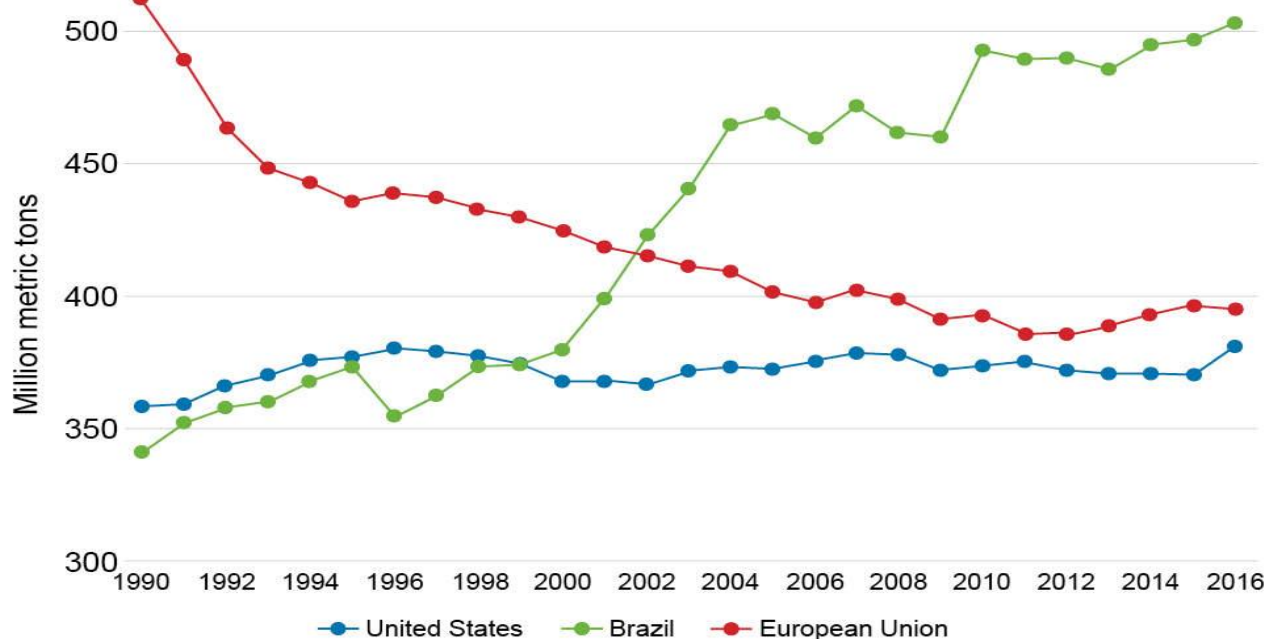
In addition, another big problem is soil erosion. The degradation of almost one-third of the earth's soils has already negatively impacted on food production and carbon sequestration. Unsustainable agriculture has diminished the ability of soils to keep on holding nutrients while at the same time contributing to high rates of soil erosion as well as reducing their water holding capacity. These practices include mono cropping, excessive tillage and wrong application of fertilisers. This is because additional obstacles arise when it comes to using water for agriculture. The use of irrigation for agricultural purposes accounts for approximately 70% of all freshwater extractions in the world, affecting water table levels, river flow, and lake levels negatively. The situation is aggravated by fertiliser and pesticide runoff that causes pollution that results in eutrophication hence threatening aquatic life as well as human health.

Moreover, social issues may arise from current strategies for agriculture. Smallholder farmhouses produce significant proportions of global food but often face financial vulnerability due to fluctuating markets, limited resource access and climate change effects. Women in agriculture continue to encounter challenges such as land acquisition or control constraints that prevent their access to finance or technology, despite being instrumental in feeding the world.

Lastly, the urgency of transitioning to sustainable agricultural systems is underscored by the challenge of climate change. Agriculture is not only a major contributor to climate change but is also highly vulnerable to its impacts. Plus, changes in temperature, precipitation patterns, and the frequency of extreme weather events are already affecting crop yields, threatening food security, particularly in regions that are already food insecure.

Major Countries and Organizations Involved

Agriculture greenhouse gas emissions* for the US, Brazil and the European Union



*Excludes emissions related to land use change and forestry, including emissions related to deforestation. Brazil's emissions from land use change and forestry were estimated at 329 million metric tons in 2016.

Source: climatewatchdata.org

Brazil

- Brazil is a major player in the global discussions on sustainable agriculture, primarily because it is one of the largest producers of crops globally. Besides being the largest sugar cane producer and cattle rancher and one among top five soybean farmers worldwide, its agrarian sector carries with itself huge challenges like deforestation especially rampant in Amazon rain forest. Brazil continues to receive international criticism for its environmental policies making it more difficult to reconcile conservation with farm output.

India

- The agriculture sector in India employs more than half of the country's workforce. Sustainable agriculture faces a lot of challenges including soil erosion, water scarcity and climate change effects. One of the various undertakings that Indian government has launched to support sustainable practices is the National Mission for Sustainable Agriculture aimed at enhancing resilience against climate change in Indian agriculture. Apart from other programs in India that foster sustainability, raising the level of climate

change resilience in agriculture is one aspect that the National Mission for Sustainable Agriculture aims at achieving.

The United States

- The US is one of the world's largest agricultural product producers and exporters. The nation has also made strides in supporting sustainable practices with programs such as the Conservation Reserve Program that encourages farmers to return marginal lands to their original ecosystems. In terms of the ecological setbacks that may arise due to the place of extensive agricultural practices particularly when it comes down to GMOs, this remains an issue.

The European Union

- Through its Common Agricultural Policy (CAP), which includes measures to support organic farming, reduce greenhouse gas emissions, and promote biodiversity, the EU has been at the forefront of promoting sustainable agriculture. Part of the European Green Deal, the EU's Farm to Fork Strategy aims to make food systems more distributed, healthier and environmentally friendly.

The United Nations Food and Agriculture Organization

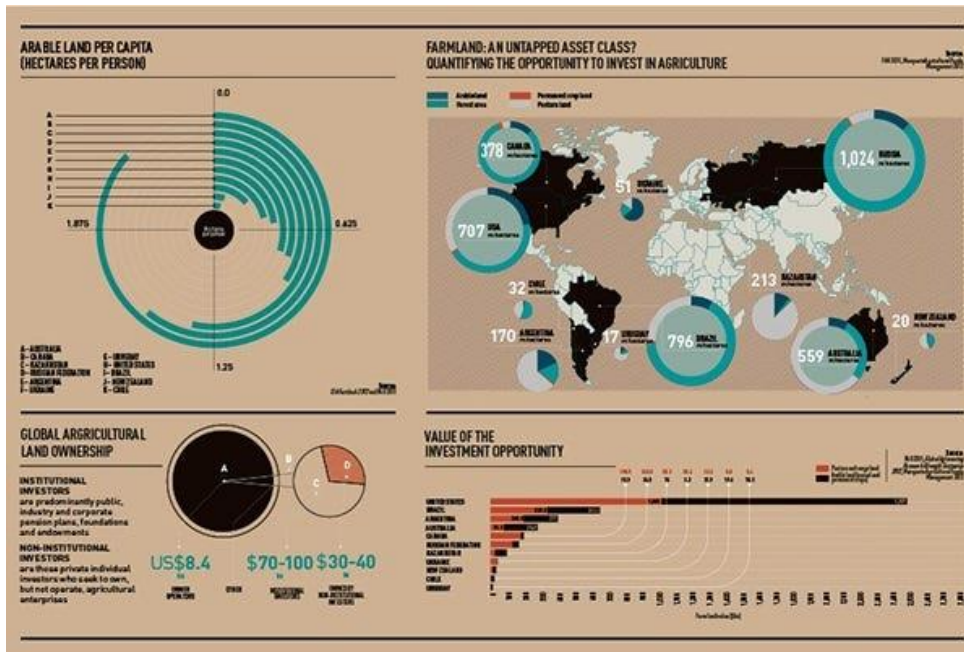
- The FAO is an international organisation that is committed to the achievement of food security for everyone and to ensuring regular access by people to enough good quality food, enabling them to live active, healthy lives. There are different programs and initiatives such as the Global Soil Partnership and the Climate- Smart Agriculture which are supported by FAO in promoting sustainable agriculture.

The International Fund for Agricultural Development

- As a United Nations organisation devoted to abating poverty and hunger in countryside areas of developing countries, IFAD is one of its agencies with specialisation. To encourage the sustainable farming practices, IFAD assist small farmers through offering financial help as well as technical advice.

The World Bank

- The World Bank offers financing and technical assistance for projects focused on increasing agricultural production and protecting the environment while helping to alleviate poverty in rural areas. This Agriculture Action Plan states that it is essential to invest in sustainable land and water management, climate-smart agriculture, and reduction of climate change gases according to the World Bank.



Timeline of Events

Date	Description
1944	The United Nations establishes the FAO (Food and Agriculture Organization) that spearheads global campaigns against chronic famine.
1960's - 1970's	The initiation of the Green Revolution resulted in a boost in agricultural output, however it also brought about dire consequences for the ecosystem.
1992	Sustainable agriculture was emphasized at the United Nations Conference on Environment and Development (Earth Summit) held in Rio de Janeiro.
2002	Sustainable farming was accepted as necessary at the United Nations Conference on Environment and Development (Earth Summit) held in Rio de Janeiro.
2012	It was the conference Rio+20 where yet it was reiterated again how agriculture that can be sustained was so significant in relation to a development that is sustainable.

2015	SDGs have been adopted so that hunger is over, food security is achieved, and agriculture can be sustainable, which is what Goal number 2 focuses on.
2021	The UN Food Systems Summit has given the perfect platform for changing the world's food systems to meet the Sustainable Development Goals by 2030.

Relevant UN Treaties and Events

Agenda 21 is a worldwide action plan to be executed on the global, national and local levels by the UN organizations, governments, and important public organizations when it comes to everything concerning human actions that influence the environment. Chapter 14 deals with sustainable farming and rural growth.

The main aim of The Kyoto Protocol (1997) was to reduce greenhouse gas emissions by putting in place mechanisms that influence agriculture like carbon trading and incentives for reforestation thus encouraging sustainable land use.

The Paris Agreement made in 2015 is a follow-up of the Kyoto Protocol, which makes it clear that for the climate objectives to be met in sustainable land-use is something that has an important role especially in relation to agriculture. This agreement puts emphasis on the need to decrease carbon dioxide from farming and increase climate smartness.

The Convention on Biological Diversity (CBD) was adopted in 1992, and objectives promote conservation, sustainable use of its elements and fair sharing of the advantages derived from genetic resources. The convention's main subject is agricultural biodiversity.

The UN Framework Convention on Climate Change encourages international collaboration on climate change with notable effects on agriculture. For instance, the Koronivia Joint Work on Agriculture, which was created under UNFCCC, places emphasis on how agriculture adapts to climate change and how it contributes to mitigation efforts.

Previous Attempts to solve the Issue

The Green Revolution: A Double-Edged Sword

- To start off, global agriculture underwent a large change during The Green Revolution, which began in the 1960s. The main objectives were food production increase through high-yielding crop varieties, chemical fertilizers, and advanced irrigation systems. The impacts were impressive: yield of crops went up to record levels leading to abating hunger especially in developing nations like India as well as Mexico. A point that is often made about The Green Revolution is that it has saved many lives and changed farming systems in different ways.
- However, like a double-edged sword, Green Revolution's success not only increased food production but it also left behind havoc on environment. Soil health was compromised due to excessive application of fertilizers and chemicals as nutrients were exhausted at a faster rate compared to their renewability. Groundwater depletion occurred in many areas as excessive irrigation used up precious water sources. On top of that, monoculture, which is characterized by growing single-type extensive farms translated into loss of genetic variety making it hard for ecosystems against pests, diseases or even fluctuations in climate. In short, while the Green Revolution had positive impacts of expanding the food supply it revealed how conventional farming practices were unsustainable and hence the need for finding alternative sustainable methods.

Conservation Agriculture: A Step Towards Sustainability

- The second go at this thing was to counteract the ecological crises generated by regular farm activities. It was then that Conservation Agriculture was established as a sustainable option. No-till farming, crop rotation, and cover cropping are some of the key features that define Conservation Agriculture. This approach focuses on minimising soil erosion, enhancing the fertility of the soil, improving its water retention capabilities and ultimately leading to sustainable agricultural productivity that does not degrade the resources of nature in the long run.
- For instance, no-till agriculture involves cultivating plants without tilling the ground. The method helps maintain soil composition, helps prevent soil erosion, and positively affects water retention capacity in soils. The sequential cultivation of various crops on the same land is referred to as crop rotation and this practice is important for the control of pests and diseases timelines, enhancement of soil fertility and crop yields. In contrast, cover cropping is a practice that entails growing certain crops (usually legumes and grasses)

during the slack seasons to prevent soil erosion, enhance its quality or to suppress weed growth.

- Although Conservation Agriculture has been successful in many territories including sections of Africa and South America, its application worldwide stays restricted. Adoptability challenges are among other reasons hindering it which includes high starting capital requirements for such practices, insufficient training and education, necessity for an enabling governmental backing. Nonetheless, the implementation of Conservation Agriculture is an important component towards more sustainable agriculture and acquisition on a wider basis could lead to a decrease in ecological impact from agricultural activities.

Organic Farming: Balancing Sustainability with Practicality

- Revolution in agriculture—organic farming is what has been termed as this latest method which is gaining momentous strides as an alternative. It does not make use of artificial substances or GMO, rather it concentrates on utilizing the natural procedures for improving ground nutrients and warding off insects without resorting the man-made ones therefore saving the planet from dangers stemming from industrialized agriculture. Organic farming involves applying compost, manure as fertilizers, shifting crops around (crop rotation), using biological pest control methods and cultivating different varieties of crops to support a robust and sustainable ecosystem.
- The charm of organic farming is in its all-encompassing attitude towards agronomy that places premium on ecological wellbeing, animal rights and farmer's labour conditions. Usually bio-farms exhibit richer species diversity, improved ground fertility and reduced atmospheric pollutants than traditional fields. In addition, organic products are increasingly being sought after by consumers who are mindful of the environmental and health consequences of their food choices.
- Nevertheless, there are some challenges facing organic farming. One of the major concerns is its lower potential yield when compared to conventional farming. Although organic farming can be very productive in the long term; short-term yields are often lower, particularly in areas with poor soil fertilization or limited access to organic inputs. It is often the case that things that are grown organically might not be easily affordable or accessible to those with no money in their pockets. It might result from the high labour

input involved in organic farming which leads to increased costs in production that makes them find it impossible buying those products. Consequently, they find it hard accepting this farming method in every part of the world due to its costliness. Even with all these problems, though, organic farming is still one of the important parts of the fight for a sustainable agriculture, a way to farm that respects the earth and societies.

Agroforestry: Integrating Trees into Agricultural Landscapes

- Agriculture system known as agroforestry employs tree planting in farms thereby providing farmers with permanent solutions to their problems. Essentially, it integrates both agriculture and forestry systems resulting into more diverse ecosystems that improve soil fertility due to removal of carbon from atmosphere while also creating alternative sources of income to the farmer which may include timber production, fruit growing, nut collection etc.
- Farmer Managed Natural Regeneration (FMNR) prevalent in Niger is a great example of Agroforestry. In this regard, they managed to restore thousands of hectares through planting naturally occurring shrubs-like trees on their cultivations. This has made those areas more resilient to climatic variations while at the same time sustainably satisfying demand for wood fuels or animal feeds via soil improvement and increased farming outputs.
- Agroforestry systems also enable mitigation and adaptation to climate variations. Within trees, thus reducing greenhouse emissions, they reduce carbon. They also prevent soil erosion given that they have deep roots that enable them to drain water. They can grow on agroforestry systems resisting various diseases and pests that target them, unlike other plants that will die if there is excessive rainfall or drought in the region.
- There are many challenges that impede the adoption of agroforestry despite its benefits such as long growing periods for trees, land tenure issues and lack of technical skills and assistance. In areas prone to deforestation, soil degradation and climate change which pose major challenges agroforestry offers sustainable agricultural solutions.

Climate-Smart Agriculture: Adapting to and Mitigating Climate Change

- From the global community, Climate Smart Agriculture (CSA) has emerged as a comprehensive strategy to deal with problems related to climate change affecting

agricultural production. It aims at reducing greenhouse gases, building resilience to climatic variants and increasing farm outputs; all opposite goals that were previously supposed to be incompatible. Activities classified under CSA include: improved water management, utilizing various forms of crops to increase diversity, integrating livestock into farming systems and planting crop varieties resistant to climatic disasters amongst others.

- Enhanced water management is one of the important parts of CSA, especially in regions where there is an issue of water scarcity. For instance, farmers can use methods like rainwater harvesting, drought resistant crops as well as drip irrigation to manage their water use efficiently during dry spells and thus maintain yields. Other resilience strategies may include integrating livestock and crop diversification to spread risks and provide different sources of income.
- The CSA also puts emphasis on how important it is to reduce the adverse effects of agriculture on the environment. This involves practices that enhance soil carbon sequestration like conservation tillage and agroforestry in addition to other practices that lower methane emissions coming from animals, for instance better animal feed and waste disposal management. The Community Supported Agriculture (CSA) model is a holistic approach toward sustainable agricultural development which seeks to achieve food security alongside climate change mitigation and adaptation simultaneously.
- Adopting CSA, however, will not be easy as it needs high financial resources, expertise and technology access, in addition to supporting policies. To enable CSA to thrive on a global basis, governments, international organisations, private sector actors and local communities must align their efforts to develop and disseminate appropriate technologies and practices for CSA.
- The Role of the Sustainable Development Goals (SDGs) in Promoting Sustainable Agriculture
- We have re-looked at the importance of sustainable agriculture again when it comes to international attention through 2015 Sustainable Development Goals (SDGs). Particularly, sustainable food production systems, conserving biodiversity as well as restoring destroyed ecosystems are greatly emphasized by these SDGs like Zero Hunger-Goal #2 and Life on Land-Goal #15. Accordingly, this is why they are seen as detailed structures for action which countries use to promote legislation and practices for sustainable agriculture among other sectors.

- Sustainable agriculture is the aim of goal 2, one which also includes eradicating hunger, achieving food security and improving nutrition. The goal emphasizes on importance of raising agricultural productivity while maintaining environmental safety, building climate change resilience and supporting smallholder farmers. In contrast, terrestrial ecosystems such as drylands, wetlands and forests are protected as part of Goal 15 that look into their conservation, restoration and sustainable utilization. This entails taking measures to put an end to biodiversity loss, combat desertification and achieve sustainable forest management.
- While the SDGs have inspired global initiatives to enhance sustainable agriculture practices on a large scale, this cannot happen without a consumption of huge amounts of money, political will on the part of governments and interests from different sectors together. There is also an emphasis on ignoring social aspects such as gender equity, poverty alleviation as well as education and healthcare that come with these objectives. Therefore, aligning agricultural practices with overall sustainable development objectives, leads to a more just and equitable world according to SDGs.

Possible Solutions

- **Encouraging Agricultural Ecology:** Agroecology combines conventional agricultural knowledge with contemporary ecological ideas to create robust, stress-resistant farming systems. Policies that support agroecological practices such as crop diversification, integrated pest control, and dependence on organic farming methods must be given top priority. Governments may encourage this type of farming by providing market access and incentives like subsidies or technical assistance.
- **Advancing Climate-smart Agriculture:** Increasing climate-smart agriculture is necessary due to the pressing need to improve soil health, water management techniques, and crop types resistant to climate change. The only way to do this is to make significant investments in R&D with the goal of developing new technologies and sharing knowledge about already-existing ones.
- **Strengthening Land Rights:** For agriculture to be sustainable land tenure has to be secured. Smallholder farmers especially women can be empowered through government policies that promote their land rights while also providing guidelines for investing

sustainably. Additionally, there is a need for legal frameworks that support community land management and prohibit land grabbing.

- **Reduce waste:** Approximately one-sixth of the food produced globally is lost or wasted. Reducing food waste may have a significant impact on farming's ecological footprint. Among these are enhancing storage facilities, expediting supply chain procedures, and launching consumer education initiatives around food waste.
- **Encouraging Small Holder Farmers:** Although they contribute significantly to the world's food supply, smallholder farmers lack access to markets, resources, and technology. Smallholders would be better equipped to adopt more sustainable practices and increase their resilience to the effects of climate change with financial support, loan availability, and training in sustainable ways.
- **Including Sustainable Practices in Trade Policy:** Sustainable development objectives must be considered when crafting international trade policy. This might involve encouraging fair trade standards, lowering tariffs on items made responsibly, and prohibiting the import and export of commodities that worsen environmental conditions like deforestation.
- **Innovation and exploration in agriculture are investments in the industry:** Governments and international organisations should allocate more funds to research on sustainable agriculture techniques, such as creating drought-resistant crops, precision farming technology, and enhancing soil health. Public-private collaborations have the potential to accelerate the adoption rate of innovative solutions.
- **Education Programs and Raising Public Awareness:** Raising awareness of sustainable agriculture among farmers and other members of the public is crucial. Campaigns to raise awareness can aid in the adoption of ecologically friendly practices or inspire support for goods that come from sustainably farmed crops. Education programs in schools and colleges also encourage young people who want to work as scientists or farmers in the future to be sustainable in whatever they do.

Bibliography

(Altieri, Miguel A., et al. "Agroecology: The Ecology of Food Systems." ResearchGate,

https://www.researchgate.net/publication/233138094_Agroecology_The_Ecology_of_Food_Systems

Meybeck, Alexandre, and Vincent Gitz. "'Climate-Smart' Agriculture: Policies, Practices and Financing for Food Security, Adaptation and Mitigation." ResearchGate, Sept. 2010,

[https://www.researchgate.net/publication/328569762_Climate-](https://www.researchgate.net/publication/328569762_Climate-Smart_Agriculture_Policies_Practices_and_Financing_for_Food_Security_Adaptation_and_Mitigation)

[Smart_Agriculture_Policies_Practices_and_Financing_for_Food_Security_Adaptation_and_Mitigation.](https://www.researchgate.net/publication/328569762_Climate-Smart_Agriculture_Policies_Practices_and_Financing_for_Food_Security_Adaptation_and_Mitigation)

Food and Agriculture Organization of the United Nations. "Building Resilience for Adaptation to Climate Change in the Agriculture Sector." FAO,

<https://www.fao.org/4/i3325e/i3325e.pdf>.

FAO, IFAD, UNICEF, WFP and WHO. "The State of Food Security and Nutrition in the World 2021."

FAO eBooks, 2021,

<https://doi.org/10.4060/cb4474en>.

Ranganathan, Janet. "Regenerative Agriculture: Good for Soil Health, but Limited Potential to Mitigate Climate Change." World Resources Institute,

<https://www.wri.org/insights/regenerative-agriculture-good-soil-health-limited-potential-mitigate-climate-change>.

European Parliament. "The Farm to Fork Strategy | Fact Sheets on the European Union." European Parliament,

[https://www.europarl.europa.eu/factsheets/en/sheet/293547/the-farm-to-fork-](https://www.europarl.europa.eu/factsheets/en/sheet/293547/the-farm-to-fork-strategy#:~:text=The%20Farm%20to%20Fork%20(F2F,more%20sustainable%20and%20environmentally%20friendly)

[strategy#:~:text=The%20Farm%20to%20Fork%20\(F2F,more%20sustainable%20and%20environmentally%20friendly](https://www.europarl.europa.eu/factsheets/en/sheet/293547/the-farm-to-fork-strategy#:~:text=The%20Farm%20to%20Fork%20(F2F,more%20sustainable%20and%20environmentally%20friendly).

Food and Agriculture Organization of the United Nations. "Transforming Food and Agriculture to Achieve the SDGs." FAO,

<https://openknowledge.fao.org/server/api/core/bitstreams/dc8a38cc-d8be-42c1-94ea-6e02bb6da850/content>.

United Nations Department of Economic and Social Affairs. "Agenda 21." United Nations Sustainable Development,

<https://sustainabledevelopment.un.org/outcomedocuments/agenda21>.

Wikipedia contributors. "Agenda 21." Wikipedia, 14 Aug. 2024,

https://en.wikipedia.org/wiki/Agenda_21.

Murgueitio, Enrique, et al. "Agroforestry: A Way Forward for Sustainable Development." ResearchGate,

https://bdspublishing.com/_webedit/uploaded-files/All%20Files/Bookshop/Agroforestry%20extract.pdf.

Sarveswaran S, Vishal Johar, Vikram Singh, and Raghunanyhan C. "Agroforestry: A Way Forward for Sustainable Development." ResearchGate,

https://www.researchgate.net/publication/370953285_Agroforestry_A_Way_Forward_for_Sustainable_Development.

United Nations. "The Sustainable Development Goals Report 2021." United Nations,

<https://unstats.un.org/sdgs/report/2021/#:~:text=Progress%20had%20been%20made%20in,had%20either%20stalled%20or%20reversed>.

World Resources Institute. "Reducing Food Loss and Food Waste." World Resources Institute,

<https://www.wri.org/insights/reducing-food-loss-and-food-waste>.

Food and Agriculture Organization of the United Nations. "Sustainable Development of Agriculture, Forestry, and Fisheries." FAO,
<https://www.fao.org/4/w5830e/w5830e0m.htm>.

EOS Data Analytics. "Sustainable Agriculture: The Basics and 7 Key Principles." EOS,
<https://eos.com/blog/sustainable-agriculture/>.

Teixeira, Renato F.M., and Mark A. Sutton. "Sustainable Agriculture and Its Importance for Environmental Conservation." Intech Open,
<https://www.intechopen.com/chapters/88111>.

World Wildlife Fund. "Sustainable Agriculture." World Wildlife Fund,
<https://www.worldwildlife.org/industries/sustainable-agriculture>.

Garnett, Tara, et al. "Sustainable Agricultural Practices Adoption: Evidence from the Field." ScienceDirect, <https://www.sciencedirect.com/science/article/pii/S0308521X23000392>.

Regenerative Agriculture Initiative. "Sustainable Agriculture Practices: A Holistic Approach." Regenx,
<https://regenx.ag/blog/sustainable-agriculture-practices/>.

Union of Concerned Scientists. "What Is Sustainable Agriculture?" Union of Concerned Scientists,
<https://www.ucsusa.org/resources/what-sustainable-agriculture>.