



## **ECOSOC- 1- Measures To Reduce The Impact Of Climate Change On Agriculture And Global Food Security**

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### 1. ECOSOC – Information on our committee

The Economic and Social Council is one of the six main bodies of the United Nations. It was established by the UN Charter in 1945, which means that it is as old as the UN itself.

As the name already implies, ECOSOC deals with the economic and social work of the UN. It focuses on promoting global cooperation to improve the standard of living all over the world. Additionally, it coordinates international cooperation regarding culture and education.

Furthermore, it focuses on achieving the Sustainable Development Goals (SDG) by providing a forum for dialogue and advocacy for member states. In this way, they are able to find solutions for the major global economic and social issues. The work of ECOSOC includes the mobilisation of financial resources for developing countries. This is really important as those countries are oftentimes key to solving social issues like poverty or crime prevention, which are without question of global concern.

In order to carry out these tasks, ECOSOC conducts research and formulates recommendations for policies that countries should implement. ECOSOC's agencies and commissions are at least equally important for the committee to fulfil its mandate. They include the Commission on the Status of Women (CSW), the Commission on Crime Prevention and Criminal Justice (CCPJ), the Commission on Sustainable Development (CSD) and many more.

## 2. Introduction to the topic, current situation and dangers:

In our committee, we are going to deal with the topic of imposing measures to reduce the impact of climate change on agriculture and global food security. The effects of climate change could immensely influence crop yields, as well as the livestock and fishing industry.

First it is necessary to make clear that it is consensually agreed upon throughout all sciences that the climate crisis will have widespread effects on every area of life. As estimated by the IPCC, these include a loss of biodiversity by 14% (1.5°C) or even 29% (3.0°), a sea level rise of 0.28m (1.5°C) to 0.76m (3°C), a decrease of coral reefs by a whopping 99%(2.0°C), and cases of extreme heat incidents rising to 45 (1.5°C) or even 87 (3°C) per year.

While these are concerning on their own, the effects on food security and agriculture are to be put to focus. If global warming were to be limited to 1.5°C, what would effect agriculture would be the following:

- 0.95b of dryland population being exposed to droughts per year
- an increase of 24% of population exposed to floods annually

That will lead to a yearly spending of 63b \$ per year to adapt to the costs of damage to major crops. Already, 20 million people have been forced out of their homes since 2008, fleeing from food shortages stemming from floods and storms. Furthermore, in Africa, there has been a reported decrease of crop productivity by 1/3 since the 1960s.

Yet, low degrees of warming and a higher concentration of carbon dioxide may lead to higher crop yields in countries further north. For example, the US has experienced a more than twice as high yield of Bushels per Acre during the time from 1960 to 2010. However, countries nearing the equator are already experiencing severe yield reduces. Also, more severe warming and resulting extreme weather incidents will reduce yields even in countries that at the moment benefit in terms of higher annual yields.

- a. Specific dangers to crops and livestock:
  - i. Parasites
  - ii. Droughts
  - iii. Floods
  - iv. Storms
  - v. Wildfires

In the latest update of the world bank, they report numbers of inflation higher than “5% in 70.6% of low-income countries, 90.9% of lower-middle-income countries, and 87.0% of upper-middle-income countries and many experiencing double-digit inflation”. Apparently, 84.2% of countries ranked as high income ones also experience high levels of inflation.

### 3. Measures already taken

The Food and Agriculture Organisation of the United Nations (FAO), is supporting Nation Adaption Plans (NAP) financially, with personnel as well as resources. For example, the FAO supports a 20 million euro programme for African countries, together with the United Nations Development Programme with funds from the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection.

They also launched programmes to, for example, help countries implement green energy, reduce livestock green-house emissions, build “green cities”, reduce irrigation and restore forest landscapes.

Further, The World Bank heavily funds a number of projects that aim to reduce the impact of climate change on food security. They made 30 billion \$ available that are spent on programmes such as, but not limited to the West Africa Food Systems Resilience Program, the Emergency Food Security and Resilience Support Project and the Food Systems Resilience Program for Eastern and Southern Africa. Together with the G7-Presidency, they established the Global Alliance for Food Security.

Of course, every national action to reduce greenhouse emissions also contributes to global food security. Consequentially, the UN calls especially for highly industrialised countries to further implement measures that drastically reduce greenhouse emissions and is a strong advocate for the Paris Climate Agreement.

### 4. Measures to be taken

In order to adapt agriculture to the challenges of climate change, it is necessary to support farmers in regard to adapting to new, carbon free technologies. They need to be educated upon these technologies and, if required, funded by the government.

Additionally, it is crucial for countries to implement modern and high-functioning warning systems. In this way, farmers would be able to prepare in advance, should an extreme weather incident be on its way.

Another important step is to ensure accessibility to watering mechanisms, in case of highly fluctuating rain patterns. By this, farmers would be more likely to rescue their crops in case of droughts and high temperatures.

Moreover, experts recommend measures as have been listed by the World Bank:

- “Strengthening safety nets to ensure that vulnerable families have access to food and water—and money in their pockets to make vital purchases
- Delivering expedited emergency support by fast-tracking financing through existing projects to respond to crisis situations
- Engaging with countries and development partners to address food security challenges. Instruments include rapid country diagnostics and data-based monitoring instruments and partnerships such as the Famine Action Mechanism and the Agriculture Observatory
- Promoting farming systems that use climate-smart techniques, and produce a more diverse mix of foods, to improve food systems’ resilience, increase farm incomes and enable greater availability and affordability of nutrient-dense foods
- Improving supply chains to reduce post-harvest food losses, improve hygiene in food distribution channels, and better link production and consumption centers”

Lastly, one of the most crucial measures is that the international community strives to work together. Global risks like climate change and food security can and will only be solved, if every member state agrees to work together and contributes to a constructive debate.

## 5. Useful links

To make your research easier, you can of course use the links in the bibliography. However, here is a list of useful links:

- a. <https://www.ipcc.ch/report/ar6/syr/> - The IPCC report is made by a highly trusted board of scientists and is the basis for multiple decisions of policy makers. Having a look in it could give you an idea on the impacts of climate change
- b. <https://www.giz.de/expertise/html/60132.html> - This article can help giving you an overview of our topic
- c. <https://www.sciencedirect.com/journal/global-food-security> - This site contains various well researched articles on food security
- d. <https://www.wfp.org/> - The World Food Programme has made many contributions to food security. On their website, they list measures as well as make the global risks clear
- e. <https://www.oecd.org/agriculture/topics/> - The OECD lists a number of articles concerning this topic.

## 6. Bibliography

- <https://www.ipcc.ch/report/ar6/wg2/>
- <https://www.worldbank.org/en/topic/agriculture/brief/food-security-update>
- <https://www.fao.org/climate-change/projects-and-programmes/2/en>
- <https://www.worldbank.org/en/topic/agriculture/brief/food-security-update/our-projects>
- <https://www.wfp.org/>