

Committee: SOCHUM 1

Topic: The question of climate change in LEDCs

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Summary

Climate change can be regarded as one of the biggest challenges that the world faces currently against a time stamp. With evidence, it can be shown that one of the main causes of climate change is humans themselves. Examples can include using petrol cars with large volumes of emissions, burning of coal, and also the disposal of plastics into the worldwide oceans. All these examples have led to a catastrophic impact onto the environment which may lead to damaging effects beyond our ability to change.

However, there are potential solutions to help reduce the impact of climate change on the planet which have been implanted so far. Some well backed examples include, using plastic free alternatives, using electric cars, increasing renewable and more sustainable energy, and most importantly planting trees to help offset carbon emissions. These solutions can be implemented into many countries' attempts to tackle climate change. But unfortunately, for LEDCs, it may be more difficult to use some of these solutions. LEDCs are likely to have lower funding, lack of resources and limited information into combatting the issue of climate change. This means that if they don't have cooperation or assistance from MEDCs then climate change will remain a big issue in their countries and still for the world as a whole.

The question of climate change heavily impacts LEDCs and smaller islands. Some challenges that face these countries due to climate change are water scarcity, higher temperatures which can cause lower crop yields, and extreme climate events which can cause a risk to human health. Also, for many coastal countries and islands, sea level rises are likely to occur with higher water temperatures that can cause damage and risk towards marine life. In order to maintain and combat climate change large sums of funding are required so that countries can meet Sustainable Development Goals (SDG's). However, many LEDCs will be unlikely able to afford combatting the issue as it may require around \$35 billion USD a year. This means that as a whole global cooperation and help is required to help LEDCs in particular to fix the issue of climate change.

Definition of Key Terms

Climate Change – long term shifts and significant changes in global temperatures, precipitations and other measures of the climate which occur over several decades or longer.

LEDCs – Less Economically Developed Countries – includes countries that have low GDP and low standard of living.

MEDCs – More Economically Developed Countries – countries that have a developed economy and higher standard of living compared to LEDCs.

Global Climate Risk Index – an index which identifies the extent to which countries have been affected by extreme weather events, including tropical storms, floods or wildfires.

Greenhouse Gases – Gases which contribute to the greenhouse effect by absorbing infrared radiation.

Sustainable development goals – A collection of 17 interlinked global goals which are designed as a blueprint for all countries to follow.

Food insecure regions – regions which are lacking reliable access to sufficient quantity of affordable, nutritious food.

Greenhouse gases – gases that contribute to the greenhouse effect by absorbing infrared radiation.

Ozone layer – a layer in the earth's atmosphere that contains a high concentration of ozone which absorbs most of the ultraviolet radiation reaching the earth from the sun.

Background Information

Climate change has gained prevalence in recent decades from scientists, politicians and the overall global population with everyone realising the devastating impact it has on the world. Even though global emissions were reduced during the pandemic, the previous year, 2019, was recorded as the second warmest year ever. This emphasises the global rise in carbon dioxide levels and other greenhouse gases means that temperatures are soaring. Additionally, recent forest fires in Australia during 2019-2020 where around 60 million acres of land had been burnt during the bushfire season. Here this shows how current catastrophes are occurring more frequently which may not have happened in previous years. With large affects to the globe, in particular to LEDCs, harm and damage is made to worldwide agriculture, sea-life and environmental ecosystems. Furthermore, climate change in LEDCs can lead to cuts in crop yields, more so in food insecure regions which include countries like Ethiopia, South Sudan, Nigeria and Yemen. A large proportion of people in these less developed countries are subsistence farmers, so they require and rely on crops and large yields to feed themselves and their families. By farming being their only way of disposable income and also letting them feed their families, it can be argued that they are most impacted by climate change. Bearing in mind, agriculture, forestry, and land use change are responsible for about 25% of global greenhouse gas emissions. This highlights how the agricultural sector is causing most harm to the world and that change, and solutions are needed to address the climate challenge.

At the same time, this means that cooperation is needed for countries to unite and share ideas to combat this challenge. With each of these countries having different conditions, needs and priorities respectively, this would require each country to observe from other what solutions are working for this issue and what isn't. However, with this idea to work, large funding would be required to help pass information and fund resources which LEDCs aren't able to do.

Major Countries and Organizations Involved

UNEP (United Nations Environment Programme) – This programme was established in 1972 to address environmental issues at the global and regional level for the United Nations. Their mission is to “provide leadership and encourage partnership in caring for the environment by inspiring, informing and enabling nations and peoples to improve their quality of life without compromising that of future generations”. To aid and accomplish its mission, the UNEP, assess environmental conditions and tends at global regional and national levels. They also develop international agreements and national environmental instruments and help strengthen institutions for wise environmental management. The UNEP works closely with its 193 member states and other representatives from business and major groups to help tackle the environmental issues through the UN Environment Assembly, which is the world's highest-level decision-making body on the environment.

Madagascar is one of the LEDCs that is currently most affected by climate change. Based on facts in 2018, the country is rated 15.83 on the Climate Risk Index. This is a relatively low score considering that there are only 3 other countries lower than Madagascar, these include: Germany, Philippines and Japan. Global warming and climate risks threaten the survival of the lemur and other endemic animal species on the island. Additionally, adverse weather events have meant that the country is one of the most vulnerable to climate change with 72 deaths, 0.27 per 100000 inhabitants, with \$568 million in economic losses leading to a drop in GDP per capita by 1.32%.

In addition, in 1988 the **IPCC (Intergovernmental Panel on Climate Change)** was established to provide policymakers with regular scientific assessments on the current state of knowledge about climate change. The IPCC is one of the leading international bodies for assessing climate change and is a key source for information and guidance to the **UNFCCC (United Nations Framework Convention on Climate Change)**, the **Kyoto Protocol** and the **Paris Agreement**. The IPCC provides governments at all levels which scientific information they can use to develop climate policies. It currently has 195 members and is an organisation of governments which are members of the UN or the World Meteorological Organisation (WMO).

Overall, many countries worldwide have been severely impacted by the effect of climate change. For example, **Afghanistan** has seen an increase in temperatures by 1.8 degrees Celsius between the years 1950 and 2010. Potentially even more of a concern, is the fact that the country has an optimistic view of

a minimum increase by 1.4 C by 2050 and a worst case scenario is an increase of 6 degrees by the end of the century. Here, these astonishing figures highlight how severe in some cases climate change affects countries. Moreover, Bangladesh is another country at risk to receive and experiencing the damaging impact of climate change. Whilst being on the coast of the Bay of Bengal, many coastal communities are facing high risks which are associated with the rising sea levels. While fighting this issue for many decades, the country is currently number 7 on the Climate Risk Index. During the years 2000-2019 the country has also experienced 185 extreme weather events which has caused a total of \$3.72 billion in costs and repairs.

Timeline of Events

Date	Description
1890's-	Two scientists independently calculated that the burning of fossil fuels could cause carbon dioxide to build up gradually in the atmosphere, hence leading to global warming. Both scientists were unaware of the current situation and that the process had already started.
1890's to 1940's-	A rise in surface temperature of 0.25 degrees Celsius was recorded
1957 –	Scientists begin to warn population about effects of greenhouse gas emissions into the atmosphere. David Keeling sets up the first continual monitoring of CO ₂ in the atmosphere. Figures rise annually.
1972-	The UNEP was established to address environmental issues alongside the UN
1979-	First world climate conference is held with climate change a key part of agenda.
Late 1980's-	Warmest years on record alongside the IPCC being introduced to produce scientific information about climate change.
June 1992-	In Rio de Janeiro, Brazil, there was an Earth Summit in which over 178 countries adopted agenda 21 to build a global cooperation for sustainable development. Ere the UNFCCC opted for signature.
1995-	The first COP meeting was held in Berlin, Germany in March. Now every year the COP (Conference of the Parties) meet to discuss decisions.
February 2005-	Kyoto protocol was introduced to set mandatory limits on greenhouse gas emissions.
December 2009-	Copenhagen Accord was developed at the UN Climate Change conference/

December 2012- Kyoto Protocol was amended in Doha in Qatar, which meant the protocol can be preferred to as the Doha Amendment.

September 2015- In New York, the UN sustainable development summit was held. The 2030 Agenda for sustainable development was adopted including the 17 SDGs in its principle.

December 2015- Paris Agreement was created to set out a global framework to avoid dangerous climate change.

2019-2020 – Australia experienced domestic bushfires which affected over 80% of the population. Recent figures and research have shown that climate change made the conditions for the unprecedented wildfires 30% more likely.

2020- During the COVID-19 pandemic, global carbon dioxide emissions fell by 6.4% which is equivalent to 2.3 billion tonnes.

Relevant UN Treaties and Events

Firstly, in March 1994, the UNFCCC (United Nations Framework Convention on Climate Change) was created and established with 198 parties a part of the organisation. The convention is used by the UN to support the global response to the threat of climate change. The convention is the parent treaty to the 2015 Paris Agreement and also the 1997 Kyoto Protocol. The overall objective of all these three agreements is to stabilize greenhouse gas volumes and concentrations in the atmosphere at a certain level that causes less harm and prevents human interference with the climate system.

As stated, the Kyoto Protocol in 1997 was another key event in trying to address the climate change issue. It is an international treaty among industrialized nations which set out mandatory limits on greenhouse gas emissions. The agreement set out relative targets and the implementation of these required participating members to create policies and measure to reduce domestic emissions and increase absorption of greenhouse gases. As of late 2013, all UN member states apart from 4 signed and ratified the treaty which is overseen by the UNFCCC.

The last agreement that is controlled by the convention is the Paris Agreement. Adopted by 196 parties in Paris during December 2015 at COP 21, the agreement came into force during November 2016. The overall goal is to reduce global warming to well below 2 degrees Celsius with an even better preference of below 1.5 degrees in comparison to pre-industrial levels. Even though this goal might be long term, ideally all these countries aim to reach global peaking of emissions as soon as possible to ensure and achieve a climate neutral world by mid-century. Additionally, the binding agreement brings all these nations into a common cause to undertake ambitious efforts to combat the climate issue, which is the first time in the climate change process.

The UN have also created a side committee named the UNECE which stands for the United Nations Economic Commission for Europe. While overseeing Europe and more economic problems, they have a committee with a strong environmental policy. The UNECE have been working on environmental matters since 1971. A separate group named the Committee on Environmental Policy (CEP) was established in 1994. The CEP is guided to set out future projections and goals to help create a strategy and plan for the future and how the environment can be protected.

Previous Attempts to solve the Issue

Even though climate change is portrayed heavily in the media and by scientists, the climate emergency is still ever present and more can definitely be done. Especially in LEDCs, there can be far more important challenges and issues that affect them more in the short-term including unemployment, state of the economy and welfare of the population for example. But, in contrast, climate change should be seen as the greatest challenge to humans as the environment which the global population heavily relies on is damaged and is worsening year on year.

However, there is evidence that countries and organisations are trying different approaches to gather ideas to try and figure out the best plan to combat climate change. Most noticeably, the Montreal Protocol in 1987 was a historic accord to help future references on the issues. Even though it wasn't directly supposed to tackle climate change, every country in the world did eventually ratify the treaty, leading them to stop producing substances that damage the ozone layer, including CFCs (chlorofluorocarbons). Overall, this protocol was largely successful as it eliminated nearly 99 percent of these ozone depleting substances. The next step after this led to parties agreeing in 2016 to the Kigali Amendment. This included these parties to reduce their production of hydrofluorocarbons (HFCs) which are very powerful greenhouse gases which largely contribute to climate change.

Additionally, during a meeting held pursuant to the General Assembly resolution 72/217 (2017), there was a greater sense of urgency by world leaders to help preserve and protect the global climate in the present for future generations. The General Assembly President, Maria Fernanda Espinosa Garces, stated how we are the last generation to prevent the irreparable damage to the planet, and stressed that there are only 11 years that remain to prevent the catastrophe. Ms. Espinosa stated that she also wanted an intergenerational approach to climate change for the way forward by calling on member states to act responsibly and collaboratively. During this speech, Ms Espinosa also referred to human consumption levels, and how a change is needed with 1.3 billion tons of food wasted each year with 2 billion people suffering from malnutrition. By reducing these numbers, then it is likely the percentage of carbon emissions related to human activities will lower. Moreover, a reference to Cyclone Idai was

made, with the thousands and millions affected in Malawi, Zimbabwe and Mozambique. The UN Secretary General, Antonio Guterres, stated that such events like the cyclone are becoming more frequent and will become worse without urgent and immediate action. Overall, this discussion between the UN and its member states was largely informative, detailed and further outlined and reminded all countries of the current issue on climate change and emphasised that action needs to occur globally to combat the issue.

Possible Solutions

For the issue of climate change in particular, solutions to address the issue need to be more global with lots of cooperation with the countries that need resources, funding and information the most such as LEDCs. Without this help, it would be largely impossible for the world as a whole to fully combat climate change. Since the Paris Agreement emerged at the same time as the UN Sustainable Development Goals, both can be used as a signal and assistance for countries. Especially for the 47 LEDCs, both the Paris agreement and SDGs represent a different and new approach to climate change and development. For both accords, they highlight how emissions need to be lowered, including developing countries as well. Even though they may not have the resources to perfectly monitor their emissions, both accords highlight overall how a global reduction in emissions is an achievable target. Additionally, the use of SDGs is a good way for LEDCs to monitor their progress in combatting climate change and also addressing other worldwide issues that affect the environment.

Another solution and way that LEDCs have tried to address the issue of climate change was during COP22 in Marrakech during 2016. Here, 24 less developed countries of the Climate Vulnerable Forum pledged to use 100 percent renewable energy by the year 2050. This target to use a more sustainable resource for energy is the type of targets each country needs to set with a specific date to reach this. By doing so, this allows for each country to assess their current stance and situation, then what they require from overseas or a global organization in order to achieve these goals. This is one of the most likely solutions by member states to use in target setting as it allows for them to ask for assistance and cooperation from others to achieve a greater goal.

On a more domestic level there could be alternatives and potential solutions that states, and governments can implement into policies and law to change human behaviour. For example, an alternative to cars in many countries could be used. Walking, cycling and public transport can be viable options to using petrol cars which release large volumes of CO₂ emissions. A potential implementation of recycling in LEDCs can be used. Alongside this, more education on the benefits of recycling and emphasising the use that these hold can provide benefits in these countries. Similar to recycling, more attention to wasting food can be held in reducing the global carbon footprint. With great volumes of food wasted each year, more education, information and assistance can be given to LEDCs to help limit the

amount of food thrown away. In conclusion, there are many solutions and possible actions that can be taken to reduce the impact of climate change and more in particular for LEDCs help from organizations and other countries can help them reduce their carbon footprint.

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