

SPECPOL Topic 2:

MEASURES TO PREVENT FURTHER DAMAGING CONSEQUENCES WHICH WERE CAUSED BY CLIMATE CHANGE FOR PACIFIC ISLAND COUNTRIES AS WELL AS MEASURES TO IMPROVE THE SITUATION FOR THEIR POPULATION.

Structure

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Recommended reading

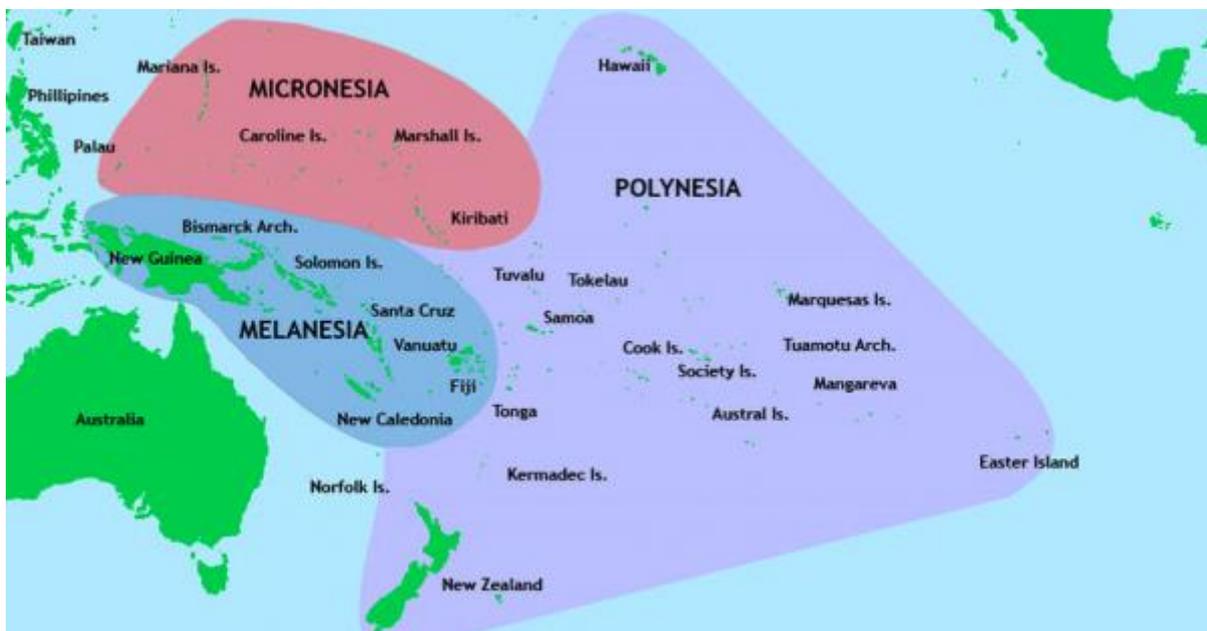
Introduction

Since the happening of the big bang 14 billion years ago the earth has passed through different geological eras. Different climate situations due to several grave climate changes were caused by glacial and interglacial periods. Since the ice age – the last glacial period - ended 10,000 years ago, we're currently living in an interglacial period and the earth's temperature has increased slowly during thousands of years.

Since the beginning of industrialisation the anthropogenic greenhouse gas emissions have amplified the natural greenhouse effect. The consequences are a considerable rise of global average temperatures, global warming. In turn, some consequences of global warming are e.g. sea level rises caused by glacial melting.

One of the most affected regions by sea level rise are the Pacific Islands, which are mostly not even a meter above the sea level, due to the fact that sea level rise in Micronesia and the Solomon Islands - situated in the western Pacific - have risen by up to 12 millimetres per year since the early 1990s.

Pacific Island States



Pacific Islands states are the islands in the area of the Pacific Ocean. This area is partitioned into three different ethnogeographic groups of islands: Polynesia, Micronesia and Melanesia.

The Pacific Island region covers more than 300,000 square miles (5,000 square km) of land and millions of square miles of ocean. It consists of more than 25,000 islands grouped into several states, such as Vanuatu, Tuvalu, Tonga, Solomon Islands, Samoa,

Papua New Guinea, Palau, New Zealand, Nauru, Marshall Islands, Kiribati, Fiji, and Federated States of Micronesia where more than 7,000,000 inhabitants live.

Pacific Island countries face common challenges resulting from their small size, geographic isolation and natural disaster vulnerability as well as the fact that they exist on a territory that mostly rises only a few meters above sea level or less.

It is estimated that first civilizations lived there already 2,000 BC. In the past the islands represented interests of different empires and were conquered several times.

Climate Change and Global Warming

Climate change, also called global warming, refers to the rise in average surface temperatures on Earth. The main cause of the current global warming is human expansion of the "greenhouse effect".

The greenhouse effect is the problem caused by increased quantities of gases, such as carbon dioxide, released into the air. These gases trap the heat from the sun and cause a gradual rise in the temperature of the earth's atmosphere. The greenhouse effect refers to the way the earth's atmosphere traps some of the energy from the sun. Solar energy generally radiating back from the Earth's surface into space is absorbed by atmospheric greenhouse gases and re-emitted in all directions.

The energy that radiates down to the planet heats both the lower atmosphere and the planet's surface. Without this effect, the Earth would be about 30° Celsius colder, making our planet hostile to life.

On Earth, human activities are changing the natural greenhouse effect. Over the last century the burning of fossil fuels, like coal and oil, has increased the concentration of atmospheric carbon dioxide (CO₂). The consequences of the human intervention are rising temperatures on the Earth because the gases trap heat within the atmosphere.

Global climate change has already had noticeable effects on the environment. Glaciers have shrunk, ice on rivers, rising sea level and lakes occur earlier than expected, plant and animal ranges have shifted and trees are blossoming sooner. Effects that scientists predicted as result from global climate change in the past are now apparant.

The Earth's average temperature has gone up by 1.4° Fahrenheit over the past century and scientists strongly assume that global temperatures will continue to rise for decades. The Intergovernmental Panel on Climate Change (IPCC) forecasts a temperature rise of 2.5 to 10 degrees Fahrenheit over the next century.

Sea level rise

A sea level rise is an increase in global mean sea level as a result of an increase in the volume of water in the world's oceans. Sea level rise is usually attributed to global climate change by thermal expansion of the water in the oceans and by melting of ice sheets and glaciers on land.

Core samples, tide gauge readings, and, most recently, satellite measurements tell us that, over the past century, the Global Mean Sea Level (GMSL) has risen by 4 to 8 inches (10 to 20 centimeters). However, the annual rate of rise over the past 20 years has been 0.13 inches (3.2 millimeters) a year, roughly twice the average speed of the preceding 80 years. The rise in sea levels is linked to three primary factors, all induced by this ongoing global climate change: thermal expansion, melting of glaciers and polar ice caps and ice loss from Greenland and West Antarctica.

When sea levels rise rapidly, even a small increase can have devastating effects on coastal habitats. As seawater reaches farther inland, it can cause destructive erosion, wetland flooding, aquifer and agricultural soil contamination, and habitat loss for fish, birds, and plants. Further, there are states with coastal regions as their total area. Due to the sea level rise in the Pacific Ocean they might be at risk of complete submersion. Because of their location and geophysical characteristics, Islands in the Pacific Ocean are particularly vulnerable to the effects of global warming and sea level rise.

The Intergovernmental Panel on Climate Change (IPCC) predicts that sea levels will rise by a total of 0.18 to 0.6 meters (7 inches to 2 feet) between 1990 and 2100.

Population

Climate refugees

Climate refugees are people who must leave their homes and communities because of the effects of climate change and global warming.

They belong to a larger group of immigrants known as environmental refugees, which includes immigrants forced to flee because of natural disasters, such as volcanoes and tsunamis.

Resettlement of inhabitants

The UNHRC defines resettlement as the transfer of refugees from an asylum country to another state that has agreed to admit them and ultimately grant them permanent settlement.

Considering the fact that some Pacific islands are endangered with submersion, resettlement of inhabitants might be an undisputed action to take.

Integration

It is necessary to mention that inhabitants of Pacific island states cannot move temporarily. There is no chance left to return back home, therefore, the industrialized countries should be prepared to provide new permanent homes in addition to escape routes climate refugees should take to get from their homeland to another country. Their help should also be focused on humanitarian aid, education, inclusion in the labor market, etc. Furthermore, a good integration should be ensured in consideration of their cultural background and situation.

Previous attempts to resolve the conflict

- **COP21**

The international political response to climate change began at the Rio Earth Summit in 1992, when the 'Rio Convention' included the adoption of the UN Framework on Climate Change (UNFCCC). This convention set out a framework for action aimed at avoiding "dangerous anthropogenic interference with the climate system." The UNFCCC entered into force in 1994 and has a near-universal membership of 196 countries today. The main objective of the annual Conference of Parties (COP) is to review the Convention's implementation. The COP21 in Paris 2015 agreed on a legally binding global climate target with the aim of capping climate change well below two degrees of warming.

The resolution is attached below:

<https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>

- **Sustainable Development Goals**

On September 25th, 2015, countries adopted a set of goals to end poverty, protect the planet and ensure prosperity for all as part of a new sustainable development agenda. Each goal has specific targets to be achieved over the next 15 years. Goal 13 is about taking urgent action to combat climate change and its impacts and includes the COP21 in Paris.

All goals can be seen here:

<http://www.un.org/sustainabledevelopment/sustainable-development-goals/>

- **Pacific Sea Level Monitoring**

The Pacific Sea Level Monitoring (PSLM) operates under the Climate and Oceans Support Program in the Pacific (COSPPac). The primary goal of the project is to generate an accurate record of variance in long-term sea level for the Pacific region.

<http://www.bom.gov.au/pacific/projects/pslm/>

- **The Papua New Guinea Help Initiative**

The PNG HLP initiative assists in facilitating resettlement solutions for displaced people from four atolls which are in the process of being inundated to the island of Bougainville in Papua New Guinea,. In 2007, the national government of PNG and the autonomous Bougainville government agreed to resettle the 6,000 inhabitants of the Carteret and three other atolls to the much larger island of Bougainville. Some 3,500 Carteret Islanders and another 2,500 island dwellers from three other nearby atolls (the Mortlock Tasman and Nuguria Islands) will need to resettle on Bougainville due to increasing land loss, salt water inundation and growing food insecurity.

Their resettlement scheme is attached below:

<http://displacementsolutions.org/wp-content/uploads/BG.pdf>

Current situation and why it needs to be tackled

Even though there are already some attempts to stop climate change and global warming it is still progressing. Ice sheets and glaciers are still melting, which leads to a continuous sea level rise. Many islands in the Pacific Ocean approach their decline and, furthermore, their submersion. Sea levels are currently increasing by an average of 3 millimetres per year around the world due to climate change and even faster in the western Pacific, where a cycle of natural trade winds has caused an extra build-up of water over the last half-century. In Micronesia and the Solomon Islands, which lie in the western Pacific, sea levels have risen by up to 12 millimetres per year since the early 1990s. Several low-lying reef islands – mostly to the south of the main island – have shrunk considerably, some islands have disappeared entirely. Local people provided information about two former islands called Kepidau en Pehleing and Nahlapenlohd - both appear to have vanished within the last century. Aerial images revealed that another six low-lying islands – in the unpopulated Laiap, Nahtik and Ros island chains – became submerged between 2007 and 2014. Each had a size about 100 square metres .

These changes in Micronesia are a preview for other low-lying Pacific island states and, furthermore, for other low-lying nations around the world. As sea levels continue to rise, many inhabitants will be forced to move to higher ground. This is already happening in the low-lying Carteret Islands of Papua New Guinea, where a resettlement scheme is underway to move the population to Bougainville, a higher island 90 kilometres away.

Moreover, the population of the Pacific island states can literally see how their homes get destroyed. All the population can do is leave - but the industrialized countries are able to help them.

Measures to prevent further damaging consequences as well as measures to improve the situation for their population are needed.

Recommended reading

- Pacific Island States:
<http://www.pacific.undp.org/content/pacific/en/home/countryinfo.html>
<https://www.pacsafe.com/blog/a-beginners-guide-to-the-pacific-island-nations.html>
- Resettlement:
<http://www.unhcr.org/resettlement.html>
- Australian Government: Pacific Sea Level Monitoring
<http://www.bom.gov.au/oceanography/projects/spslcmp/data/monthly.shtml>
- Climate refugee:
<https://www.nationalgeographic.org/encyclopedia/climate-refugee/>
- Sea level rise in the pacific ocean:
<https://theconversation.com/sea-level-rise-has-claimed-five-whole-islands-in-the-pacific-first-scientific-evidence-58511>
<https://www.newscientist.com/article/2146594-eight-low-lying-pacific-islands-swallowed-whole-by-rising-seas/>
<https://www.nationalgeographic.com/environment/global-warming/sea-level-rise/>