

Climate Change and Southern Voices

INTRO

A Swedish climate activist, Greta Thunberg, spoke on the video. She summarised the cause of climate change and what should be done about it. George Monbiot, an author and a journalist who writes a weekly column for The Guardian was also featured in the video.

CLIMATE CHANGE

Climate change caused by humans is the result of humankind producing enormous amounts of greenhouse gases that intensify the greenhouse effect. As a result, the climate changes. The most significant greenhouse gases produced by humans are carbon dioxide (CO₂), methane (CH₄) and nitrous oxide.

The major sources of emissions are the usage of **fossil fuels, i.e., coal, oil and natural gas** in energy production and traffic. In addition, **agriculture, industrial processes, landfills and forest fires generate greenhouse gases**. Furthermore, as a result of **logging and peat production**, considerable amounts of carbon dioxide and methane are released into the atmosphere.

THE SIXTH MASS EXTINCTION

At the moment, we are in the midst of the so-called sixth mass extinction: wild animal populations have diminished during 1970-2020 by over 50 percent.

The major threats to biodiversity and wildlife species are the disappearance and deterioration of natural habitats. The reasons for the disappearance of habitats include, for example, the expansion of built environment, energy production, climate change, poaching and overfishing.

Due to climate change, numerous species must adapt to completely new conditions in order to survive. Poaching and overfishing have driven the populations of several species close to an unsustainable level.

Biodiversity is threatened also in Finland. Every ninth species is endangered, and 31% of these live in forests.

INEQUALITY

Inequality, i.e., the uneven division of resources increases the challenges we face and makes it more difficult to solve them.

The industrialised countries have become wealthy partly as a result of colonialism during which countries many countries of the global South were the producers of cheap raw materials. While colonies do not exist anymore and those countries have become independent, the same structure is still present in our current economic system which is based mainly on cheap production of raw materials and goods in the global South.

The uneven division of wealth is pointed out for example by the fact that the richest 1% owns approximately half of the world's wealth today.

THE LIFE CYCLE OF PRODUCTS

When you think about the negative effects of production, you have to take the whole lifespan of products into consideration. Many other resources than, for example, fabric or cotton have been used in the production of goods.

One example is a **cotton t-shirt** whose production has required

- a lot of water, approx. 2700 l/shirt
- **chemicals** such as pesticides and fertilisers have been used in cultivation; about 50% of all pesticides used in agriculture are sprayed over cotton fields
- **energy** (fossil fuels)
- the shirt has most likely been dyed with toxic chemicals that contaminate water bodies
- finally, the shirt has been **transported** to shops (more fossil fuels) where someone might buy it, for example, for 10 Euros, use it for six months and throw it into trash
- or perhaps the shirt will be **recycled?** - recycling, for its part, requires also energy.

This is just one example. Think about all the products we use, and their volume and impact on the environment and the climate.

CLIMATE JUSTICE

Inequality is linked to climate change in a significant way.

The impacts of climate change hit hardest the countries who have not been the ones causing it. That is why it is important to think about **who have caused it, who should pay for it and who have the best opportunities to pay**: this is called climate justice.

Industrialised countries cause over half of the world's emissions whereas the least developed countries cause less than one percent, even though the tenth of the world's population inhabit them.

If we observe emissions on an individual level, an Indian is responsible for an average of 2 tonnes of climate emissions, a Chinese 4,2 tonnes and a Finn 10,4 tonnes per year (Sitra 2019).

Finns for example, with 10 tonnes of yearly emissions per capita, can contemplate whether or not they can afford to say that what they do doesn't matter.

Furthermore, if rich welfare states like Finland who are in "a good position" cannot do anything – then who can?

UNDERSTANDING COMPLEX CONNECTIONS

In order to understand the global challenges we face, we must understand the complex ways in which the phenomena are interconnected.

Connection 1. Industrial meat production causes deforestation that reduces regional rains affecting the production and economy in a large area.

- The expansion of the Amazon forest fires into record-breaking numbers in 2019 was mainly caused by intensive meat production because forests were being cut down

to make way for pastures and fodder crops. As a result of deforestation, carbon dioxide that forests have absorbed, releases into the atmosphere. This accelerates climate change even more. A rainforest has an important role in the circulation of water. 70% of the economy of the area is dependent on the water supply sustained by rainforests. Thus, if rainforests were to be destroyed, it would affect the production and economy of the whole area. In addition, 10% of the world's species would become extinct and numerous important medicinal plants would disappear.

Connection 2. Pesticides cause bee deaths that affect food production. If food production collapses, people will go hungry.

- When insects pollinate seed plants, they carry the pollen from the stamen to the stigma of the pistil of another plant. Some of the plants do not produce seeds or crops without pollination. Over 75% of the most important food plants on the planet are dependent on or benefit from pollinators. Without pollinators our diet would lack berries, fruit, many vegetables, nuts, coffee and cocoa, among other things. Pollinators are threatened by changes in land use, intensive agriculture and **the usage of pesticides**, pollution of the environment, invasive alien species, pathogens and climate change. In the biological cycle, the effect of pollinators is enormous. Thus, losing them would most likely cause even more sizeable effects than the collapse of our food production.

Connection 3. Climate change causes drought which is the reason for the loss of crops – people will have to move into cities where conflicts arise and drive people into exile.

- During 2006-2010, Syria faced a severe drought that reduced the country's agriculture production by a third. As many as 1,5 million people had to leave the countryside to live on the outskirts of cities. Since the year 1900, the region has warmed 1-1,2 degrees, and the rains during the rainy season have reduced by 10%. According to scientists, natural variation alone does not explain this. Migration resulted in local overpopulation, unemployment and political unrest. Finally, the situation led to a civil war that forced people to flee. The drought caused by climate change did not cause the war by itself but it was one of the factors that contributed to the situation. The refugee crisis was noticeable in many parts of Europe. In Finland, in 2015 the number of asylum seekers increased nearly tenfold from approximately 3000 to over 32 000 people compared to the previous year.

WE ARE DEPENDENT ON A HEALTHY PLANET

We can summarize our dependence on a healthy planet with the Cree Indian Prophecy:

"Only when the last tree has been cut down, the last fish been caught, and the last stream poisoned - you will realize that you cannot eat money."

We live in a society based on continuous economic growth and consumption. At the same time, we have limited natural resources that are not considered in the system. This is not sustainable. Something has to change.

We are dependent on a healthy planet! If the ecosystems collapse, the humankind will collapse too!

SOMETIMES IT CAN FEEL LIKE THIS *GAS MASK* -> FEELINGS AND REACTIONS

The difficult challenges we face cause many kinds of feelings and reactions.

DENYING THE FACTS: One reaction is to deny the facts because they are so unpleasant.

- The questioning of the facts also serve many instances with a lot of power and money, for example, the oil industry. Because if climate change is taken seriously oil companies will run out of business.

Let's take a look at the typical anti-climate change arguments more closely.

"Climate change caused by humans is not real."

→ There is a scientific consensus that humans have an impact on climate change.

- Approximately **97% of scientific publications** agree on it and only 3% claim something else.
- According to researches, the so-called "denialists", i.e., those who question the existence of climate change, have been given relatively more media coverage.
- many of them are lobbyists financed by oil companies.

→ Sometimes you also hear the argument "Climate has always changed."

- It is true that the climate has always changed but it has never changed this **rapidly, and as a result of the actions of one species.**
- Weather and climate are two different things – weather refers to short-term changes while climate describes the variation over a long period of time. One cold winter or a cold, snowy period does not mean that the average temperature over a longer period of time has not risen.

"Climate change happens somewhere else and does not concern us. "

→ Although many of the most severe impacts of climate change are first seen in the Global South and many Southern countries are in a more vulnerable position in adapting to climate change, **the changes are unpredictable**; we cannot completely know what they will be in the future since various **chain reactions** are possible.

- For instance, the changes in the salinity and temperature of oceans caused by climate change cause changes in ocean currents. As a result, the Gulf Stream is slowing down. If it stopped, the whole Europe would grow significantly colder.
- Extreme weather phenomena have affected Finland as well. For example, as a result of the drought of summer 2018, Finland had the worst harvest in 26 years, even though the growing season has lengthened due to global warming.
- Northern species and ecosystems are threatened.
- Risks of flooding grow.
- Displacement and unrest all around the world affect us too.

"Finland is such a small country that it does not matter what we do." and "China or India should act."

→ The Finnish individual **consumes and produces many times more emissions compared** to the Chinese or Indians.

→ Our **products have mainly been produced in the Southern countries**, which means that the emissions caused by production have also been externalised to these countries.

→ India and China have already taken considerable actions to mitigate climate change:

- **India's** goal is to be the third largest solar energy producer in the world. At the moment, India is building so many solar energy plants that when the sun is shining, the amount of electricity they produce is equivalent to hundred nuclear power plants. The world's largest solar energy plant (you will be transferred to another service) was just completed. ((HS,2017)
- **China**, on the other hand, has become the world's biggest investor in renewable energy. The country has just suspended the construction of hundred large coal power plants (you will be transferred to another service) , and the growth in carbon dioxide emissions has stagnated a few years ago. (HS,2017)

→ **We need everyone to act.** Rich countries such as Finland if any, has a chance to be an example and lead the way towards a carbon neutral welfare society (if countries like Finland cannot then who can?)

- This also means creation of new jobs in sectors like renewable energy.
- The transition needs to be just and avoid harm to the most vulnerable.

HOPELESSNESS: Many people might also feel hopelessness in the current situation.

Hopelessness may generate ideas such as *"Don't bother because everything will be destroyed anyway!"* OR *"Let's spend it all while we still can!"*

→ However, according to studies **we still have a chance** to turn the tide towards a maximum of 1,5 degrees temperature rise. **The ways exist** but their implementation requires radical action and strong political will.

- **Time is running out** - the crucial decisions for Finland will be made during this government's term in office. Polluting must be made either expensive or impossible. Individual choices are not enough anymore.
- For example, there are massive **subsidies** (e.g. to fossil fuels and to forest industry) harmful to the environment that increase pollution and unsustainable use of natural resources that should be cut.
 - In this year's budget in Finland, there **are 3,5 billion Euros worth of subsidies** that are harmful to the environment while 100 million budgeted to the conservation of nature was considered a victory.

→ If not for yourself, perhaps it is important to act for the future generations?

→ There is still hope but what is **more important than talking about hope is ACTION, and action is what is needed from everyone now!**

AGENDA2030 SUSTAINABLE DEVELOPMENT GOALS

In the United Nations, the countries of the world have collectively agreed upon the Agenda2030 Sustainable Development Goals as an answer to the major challenges of today.

- 17 goals with sub-goals. This is an extensive package!

PHOTO CARDS

Next, let's concentrate on the causes and solutions of climate change, and see how they are linked to the Sustainable Development Goals. Let's do this with photo cards.

Question: How are the photos connected to climate change (cause/solution)? And where have the photos been taken or which one has been taken in Finland?

CHALLENGES IN ENERGY PRODUCTION

A coal pile/coal plant in Finland and a coal mine in Mongolia

- Coal is one of the major causes of climate change
- Coal is used in Finland but it is imported from abroad (from Poland and Russia)
- The other photo shows what it looks like at the coal production site
 - The impacts will remain in the production country: health issues, losses of land
 - There are often promises of jobs, but in reality, only a few people will be employed.

SOLUTIONS IN ENERGY PRODUCTION

A large solar energy plant in Thailand and solar panels on the roof in Finland

- Solar energy is renewable energy that can replace fossil fuels; therefore, it is a solution to help mitigate climate change
- Many Southern countries have started sizeable solar energy projects; the solutions are being actively explored in the South as well
- The price of solar energy has gone down and it has become an extremely competitive alternative
- Already on March onwards there will be enough sun in Finland for the solar panels to be productive

DEFORESTATION

Clear cutting area in Finland and clear cut rainforest in Indonesia

- Loggings cause climate change because forests absorb carbon dioxide and as a result of logging, the carbon sink of the forest will be lost
- The sceneries in the photos are very similar; in both places the soil is often peat

that releases methane (a greenhouse gas) into the atmosphere along with carbon dioxide released by forests

- The forest industry in Finland is very intense because the default practice for forests is clear cutting in which everything will be cleared
 - Every ninth of the Finnish species is endangered and 31% of them are forest-dwelling species; thus, the forest industry is not sustainable
- The rainforests in Indonesia are, for example, the only habitat of orangutans
- The major cause of deforestation in Indonesia is palm oil production; palm oil is commonly used in food products and cosmetics

FOREST CONSERVATION

Making a forest inventory in Finland and a mobile application for forest conservation in Brazil

- Forests should be conserved because they store carbon dioxide (a solution to climate change) and they are important for biological diversity
- Forests can be conserved by scouting, gathering information and reporting it o Here is an example of the voluntary activities of the Finnish Nature League: By making an inventory of endangered species and habitats and reporting about them, recommendations for forest conservation can be made.
- The other example is from Brazil where they have developed a smartphone application with which you can help to conserve forests.
 - What is also worth noting, is the indigenous peoples using smartphones in forest conservation action - contrary to the stereotypes relating to "indians"

CHALLENGES IN FOOD PRODUCTION

A broiler farm in Finland and a cattle farm in Brazil

- Meat production is a significant cause of climate change due to fact that land is cleared to make room for pastures and fodder crops, and also because cattle produce methane emissions as a by-product of digestion
- Did you guess that the broiler photo is from Finland? Intensive production of broilers is quite harsh here as well. They eat soy which has been produced, for example, in Brazil (thus, furthering deforestation)
- A more plant-based diet would be much more sustainable in terms of the environment

SOLUTIONS IN FOOD PRODUCTION

An allotment garden in Finland and agroforestry in Kenya

- In order for food production to be more sustainable, we should move away from intensive food production that uses a lot of chemicals and energy towards small-scale production that takes environment, soil and the survival of species into account
- Local and organic food production as well as different kinds of methods such as

agroecology are more sustainable alternatives

- At best, carbon dioxide can be stored with the help of agriculture so it might be a solution instead of a problem

TO SUMMARIZE: WITH THE HELP OF THESE PHOTO CARDS ONE CAN SEE THAT WE HAVE EXACTLY THE SAME CAUSES AND SOLUTIONS OF CLIMATE CHANGE ALL OVER THE WORLD!

ACT AND MAKE A DIFFERENCE

In the case of all these themes, **action is important!** Climate action does not wait, and the policy-makers must feel public pressure in order for the decisions to be made quickly enough.

Even if you are underaged and unable to vote, you can make a difference. You can do it as a citizen and with the choices you make every day.

Because our problems are mainly at a system level, civic participation has a very important role. In addition, individual choices act as an example and as a consumer, you can make a stand with them.

SHARING INFORMATION IS ONE WAY TO MAKE A DIFFERENCE

One way to make a difference is to gather and share information. Your next assignment is to make a Young Reporters for the Environment video project on the topic of your photo card (or your chosen topic on energy, forests or food in relation to climate change).

VIDEO PROJECT

The Siemenpuu Foundation is an organisation that funds the environmental and climate action of non-governmental organisations all over the world. Their partner organisations have produced us videos on themes connected to climate change: energy, forests and food.

Videos have been produced in Brazil, Argentina, Mali, Mozambique, India and Nepal.

Each group will watch one of the videos.

Your assignment is to make your own video on the same topic but from the point of views of your country/community.

You can work with the topic on a general level and consider the problems/solutions you might have in your country. Or if you want to be more ambitious, you can think about how the industry, consumption/products or companies in your country might be connected to the topic.

THE PHASES OF THE VIDEO PROJECT

Introduce the phases of the project and tell the students that you are now at the phase of **orientation and ideas**.

INSTRUCTIONS

make sure that the students are in video teams and assign one video per team

The students watch the videos and answer the video analysis questions either on the printed sheet or through the website (the questions are found below each video on the web page) by writing down the answers on paper.

Background for the videos:

ENERGY/Coal/Mozambique – the video shows how mining companies Jindal and Vale promised benefits (jobs, compensations) to local people but broke their promise. People defended their rights by means of civil disobedience and gained an open communication channel with the company. The producer of the video is Justica Ambiental, i.e., Friends of the Earth Mozambique.

ENERGY/Solar energy in the city/Mali - the video shows how the demand of electricity in Mali is increasing, how expensive it is and available only to a few. The production of electricity can be sustainable only with renewable energies, particularly with solar energy. The video has been made by the Finnish-Malian girls Sira ja Diane.

ENERGY/Solar energy in the countryside/Nepal - the video shows how the impacts of climate change are visible in the Himalayas. And how small-scale decentralised energy production, in this case solar energy, can significantly improve the quality of life in the countryside. Furthermore, it helps to save the forests because otherwise they would be cut to fulfil energy demands. The background organisation is the Nepalese HuRENDEC (the material has been filmed by Timo Kuronen from the Siemenpuu Foundation).

FOOD PRODUCTION/Pesticides/Argentina – the video tells about the effects that pesticides have on health, and about agroecology as a better alternative. The video also touches on the subject of human rights: agrobusiness does not taken human rights into consideration. The video has been produced by an organisation called Huerquen that works, for example, with food sovereignty.

FOOD PRODUCTION/Property rights of seeds/Argentina – Only for upper secondary school students. The theme of this video is slightly difficult because it deals with property rights of seeds, their importance to small farmers and the objective of multinational companies to control seeds and thereby also control the food production. The organisation behind this video is Huerquen which is also behind the other food production video.

FORESTS/Amazonia/Brazil - the video tells about the activities of young people in a local organisation and how the organisation aims to strengthen the young people's position as actors and participation in the decision-making. The background organisation is an organisation of local gatherers, CNS. The gatherers are one population of the Amazon region, among others. (The indigenous people, for example, have a different situation and rights.)

FORESTS/India - the video tells about how the locals became aware of their right to own the forest areas they manage. The video emphasises the significance of organisation and co-operation in defending land rights and protecting forests. The producer organisation of the video is the Indian JJBA whose international name is Save the Forests Movement.

GENERATING IDEAS FOR THE TOPIC OF THE VIDEO

Instruct the students to generate ideas for their own video with the help of the information gathered so far. Here they can broaden their view and think about energy, food and forests in a relatively general level first and then start narrowing it down for the video.

Encourage the students to consider:

- What could be the topic you want say something about?
- What would you like to know more about?
- How is the topic of the video linked to your country and its people?

And with the help of these question the students can generate ideas for the topic of their own video.

HOMEWORK

If you wish, you can ask the students to choose and read one of the articles compiled on the web page below the video. This will help them get more perspectives to the topic and perhaps deepen the idea for their own video project.