

# Topic Course Sustainability and Climate Change



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### 1. Organic Food

### **Dialogue**

I only buy organic food.

Do you think organic is better than regular food?

Yes. Less pesticides are used to produce it.

But it is very expensive.

I think it is worth it to spend more money for high quality food.

But is organic food really higher quality?

Organic farming is also better for biodiversity and ground water.

I guess some things are better, but it still doesn't change the quality.

I just don't want to eat food that has been treated with regular pesticides.

I understand your point. There is a lot of uncertainty around food production right now.

Exactly. And until we know more about chemical pesticides and fertilizers, I will trust organic food.

I guess it won't hurt to buy organic if you can afford it.



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### 2. Rainforest

#### **Dialogue**

I worry about the rainforest.

Why about the rainforest? It is far away.

It is the home of many animals and plants.

Why is it in danger?

It's getting smaller every day to make more space for farming and the paper industries.

Why do farms need more space?

The world needs more soy or palm oil.

Is it really that bad?

Yes it is. About 200,000 acres are destroyed every day.

#### That is a lot! Now I understand why you worry.



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#### 3. Fossil Fuels

### **Dialogue**

What are fossil fuels?

They are natural fuels formed in the past like coal or natural gas.

Is oil a fossil fuel?

Yes, petroleum is a fossil fuel.

Why do people not like them?

Because they produce CO2 and pollution when they are burned.

Is that the only reason?

Nature is also destroyed when they are extracted.

Then why do we use them?

Because we can produce energy very cheaply with them.

You mean we burn coal and petroleum to produce electricity?

Yes, most of our electricity comes from fossil fuels.



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## 4. Meat Consumption

#### **Dialogue**

Are you a vegetarian?

No, but I don't eat a lot of meat.

Why don't you eat a lot of meat?

Because the meat production is bad for the environment.

Why is it bad?

It produces a lot of CO2 and also uses a lot of water and land.

I don't think cows use more water, than a farmer for vegetables.

You are right. But you forget the water for the cows' feed.

Now I understand. You also need water to grow the feed for the animals.

Yes, and that is why I don't eat a lot of meat.

I'm also trying to eat less meat. Also because of the animal welfare.

That's great to hear. Animal welfare is another reason for me too.



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### 5. Biking

### **Dialogue**

I want my city to build more bike lanes!

Why more bike lanes? Do you bike a lot?

I use my bike every day. I love biking.

Do you also bike to work?

Yes, it is a good daily exercise.

Do you never use cars?

No, I don't need a car in my city.

I need more exercise, maybe I should get a bike too.

Do you want my old bike? I don't need it anymore.

#### Yes, thank you! Then I can bike to work too.



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#### 6. Plastic Waste

#### **Dialogue**

I'm really happy that many countries ban the use of plastic bags.

Why? They are so convenient.

They are convenient, but they also create a lot of pollution when they are produced, as well as a lot of trash.

I don't think a plastic bag or two really matters. They get recycled.

If everybody uses just a couple of bags a week, then that makes more than a hundred bags a year.

But so what? As long as they get recycled, then I don't see the problem.

But they don't always get recycled, and even if they do, it uses a lot of energy. And plastic can't be infinitely recycled like glass. I don't know. I haven't really thought about it that way.

Many people don't. That's why the ban on plastic bags is great. It makes people think.

You do have a point. I guess I'm just too lazy to bring my cotton bags with me every time I go shopping.

I just bring a big box. It's much easier to carry my groceries anyways.

You are like my voice of reason. I'll have to make a bigger effort.



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#### 7. Marine Pollution

#### **Dialogue**

I feel so bad when I see videos of turtles and birds eating plastic.

Me too. They become deformed or die because their stomachs are full of it.

What can we do to help them? We aren't even close to the ocean.

The biggest amount of plastic trash in the ocean actually comes from old fishing nets.

But I love eating fish.

I do too. But maybe it's time to eat less fish? And not use single use plastic bottles?

I never understood why people buy water in plastic bottles if they don't have to. I don't get it either. It's so easy to bring my water bottle.

Maybe I should write an article for my local newspaper and encourage people to use water bottles.

That's a great way to become involved. If everybody just changes their habits a little bit, a lot can be changed.



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#### 8. Enivornmental Pollution

#### **Dialogue**

Did you hear? There was an oil spill last week from the new pipeline.

Again? I think companies have to do better to protect the environment

I agree. Many pollute the nature around them.

They should not be allowed to pollute the environment.

I don't understand why they can get away with it.

Me neither. They should be responsible for every part of production.

They make a profit while polluting the environment, and the taxpayer has to clean it up.

It makes me sad that all they care about is money.

Me too. All the animals, plants, and even humans will suffer from this oil spill.

But what can we do?

We have to let the company and the government know that we are not happy!

Good idea. I will try to organize a local talk.



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#### 9. Water as a Resource

### **Dialogue**

Have you heard that some cities are sinking?

What do you mean with sinking?

Cities like Jakarta in Indonesia are sinking up to 15cm a year.

What? That is crazy! Why are they sinking?

It's because the city is pumping up too much of the ground water.

That sounds really bad.

Yes, it is. They are really struggling with too many people in such a small area.

I guess people need to be more careful with water.

Yes, it's really important to conserve water.

You're right. Everybody needs water. But we use too much and pollute it.

We should all pay more attention to saving water!



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### 10. Biodiversity

#### **Dialogue**

Do you want to sign for the bees?

Sign for the bees?

The honey bee population is dying really fast right now.

That doesn't sound good. Why is that?

Scientists are not sure yet. Some think because of pesticides.

I love honey. I don't want the bees to die.

It would be very bad for biodiversity. Our ecosystem needs the bees.

Why do we need bees? What else do they do other than make honey?

They pollinate fruit and vegetables.

I forgot about that. Without them there would be much less produce, right?

Some fruits would not grow at all without bees.

I couldn't eat cherries anymore? Where do I sign?



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### 11. Sharing Economy

#### **Dialogue**

Have you already signed up for City Car?

No. What is City Car?

It is a car sharing service. You can rent cars from them.

Why wouldn't I just rent from a regular car rental company?

They also allow you to rent for very short periods of time and are based all over the city.

You mean I could use their cars to go grocery shopping?

Exactly. It's called car sharing. That way less people need to have their own cars.

I've heard of that before. It's kind of like Airbnb, right?

Yes. Just with cars instead of rooms.

I like this idea of a shared economy. I have many things I barely ever use.

Me too. If we share things, we can save money and resources.



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### 12. Plastic Packaging

### **Dialogue**

What do you think about plastic in grocery stores?

What do you mean?

Most fruit and vegetables are covered in plastic at the store.

I dislike that as well. I don't think bananas need an extra plastic wrapper.

Why do the stores do that?

Maybe to make the long transport easier?

They should just use paper.

Wrapping everything in paper wouldn't be much better either.

Why? Isn't paper better?

Because producing paper also creates a lot of waste and pollution.

We should just go to our local market. The produce there isn't wrapped in plastic or paper.

Great idea. We would also support our local farmers!



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### 13. Recycling

#### **Dialogue**

Do you recycle?

No, I just throw everything in one trash can.

Why don't you recycle?

I don't know. I don't think recycling is doing much.

What do you mean?

A lot of our recycling is being burned or shipped abroad to developing countries.

That is true, but not all of it is being burned or shipped away.

Maybe. I just don't want to waste my time with sorting trash when it doesn't get recycled anyways.

But if nobody recycles, nothing will ever change.

Maybe you're right.

I think you should start recycling!

I will think about it. I guess doing nothing will change nothing.



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### 14. Reducing Consumption

#### **Dialogue**

What can we do to produce less CO2?

I think we should reduce our consumption.

How? We can't really eat less, right?

We can't eat less, but we can stop throwing away so much food.

That's true. Our society throws away so much good food.

We could also stop buying new clothes multiple times a year.

You have lots of good ideas. What else can we do?

In general, we should always ask ourselves if we need to buy something new.

I was just thinking about buying a new bike, but maybe I shouldn't now.

How about buying a used bike?

Good idea. I will do that. Thanks for all the input.

No worries, you are welcome!



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### **15. Effects of Climate Change**

#### **Dialogue**

Do you think climate change is already affecting us?

Yes, there are studies that show changes in the last 30 years.

Why in the last 30 years?

Climate is defined as a period of at least 30 years. So, to be able to look at changes, we have to look at the last 30 years.

That's interesting. I didn't know that. And what actually changed?

Many things have been changing. Glaciers and ice caps are melting, and storms are becoming more intense.

But is that really so bad?

We don't really know. Humans have adapted to climate in agriculture and many other areas. Fast changes are difficult to adapt to.

I'm not sure I understand. Can you give an example?

For example, less rain and more droughts. Farmers will have to change what they produce because their old crops won't get enough water anymore.

That makes sense. My uncle is a corn farmer and highly specialized. I don't think he could just change his whole farm without losing a lot of money.

And that is just one example. That's why many people are scared.



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### 16. Causes of Climate Change

#### **Dialogue**

I feel sorry for the people living close to the ocean.

Why? Because of climate change?

Yes. With rising sea levels and more intense storms, they are in danger.

I think it's a complex issue. In many places humans are also directly responsible for some of the dangers.

What do you mean?

For example through the deforestation of mangrove forests. The mangroves used to be a natural barrier against storms.

I didn't know that. Where do mangroves grow?

They grow for example in Asia. And lots of them have been cut down. People in these areas now suffer more from storms and floods.

I see. I guess it's easier to just blame climate change instead of looking at the actual problem.

But you are also right. They will probably suffer even more once climate change comes into full effect.

Makes sense. Once the sea level actually significantly rises, they really have no protection.



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### 17. Fridays For Future

#### **Dialogue**

Do you want to come to the next Fridays for Future demonstration with me?

I thought they are only for school children?

No, they are open to everyone who cares about climate change.

I'm still not convinced. I mean what are they actually protesting?

For their own future. They want politicians to be more active and actually stand by their word.

I guess you're right. Many promises from the Paris Climate Agreement have not been kept.

Exactly. They need a reminder that empty words won't satisfy us anymore.

Okay, you've convinced me. I'll join you. Have you been before?

Yes, a couple of times. It's always a peaceful demonstration and the posters are really creative.

Are you going to make a sign as well?

I already have one with a polar bear on it. If you want, I can make you one too?

Thanks for the offer, but I think I'll go without a sign for my first demonstration.



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## 18. Fridays for Future Discussion

### **Dialogue**

Have you heard about the "Fridays for Future" demonstrations?

You mean the children and students skipping school?

Yes, they are demonstrating for more political commitment and against climate change.

I think they could also demonstrate without skipping school. They are just lazy.

I don't think they are lazy. They just wanted to grab everybody's attention, and it worked admittedly.

They should focus on studying and leave the big decisions to people who know what they are doing.

I think you are being a bit harsh. It's their future as well, and they want politicians to do more for that future.

But what does protesting against climate change even mean? They don't have any answers either.

If you actually listened to them, you would have heard some of their demands.

If you know them so well, then name some.

They want politicians to commit to the Paris Climate Agreement or the coal phase-out.

I still think they should grow up first.

It's hopeless to have a productive discussion with you about this topic.

Sorry, but it's my opinion.



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### 19. Renewable Energies

### **Dialogue**

I'm installing some solar panels on my roof this week.

Really? I've been thinking about doing that too to cut down on my electricity bill.

That's one reason why I'm doing it. I also don't want to use electricity from coal or nuclear power plants anymore.

But what are you going to do at night?

I'm still connected to the grid. But I'll try to let things like the washing machine or the dryer run during the day with solar electricity.

Good idea. Are the panels expensive?

They aren't cheap, but electricity is so expensive that they will pay themselves off in a couple of years.

The city is also building a couple of wind mills in the hills.

I'm glad they are finally living up to their promises and are investing in renewable energies.

Me too. Oil and coal are eventually going to run out. We can't just ignore it and leave it to future generations.

I see we are on the same page with this topic. It was fun talking to you.



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### 20. Greenhouse Effect

### **Dialogue**

Are you scared of climate change?

A little bit. It's a complicated topic, and I don't really understand why it's happening.

Me too. I've been reading a book about it, and the uncertainty is scary to me.

Can you explain to me why the climate is changing?

Scientists think it's because of the greenhouse gases humans are producing.

What are greenhouse gases?

Carbon dioxide, water vapor, methane, and many others.

And what produces greenhouse gases?

Many things. Examples are: driving cars, coal power plants, or factory farming. They cause an enhanced greenhouse effect in the atmosphere.

What is a greenhouse effect?

It's a natural process that warms the earth. The gases reflect the sun's energy and keep the planet warm.

Now I understand. More gases mean that also more heat becomes trapped under them? Just like in an actual greenhouse.

Yes, you are correct. And that's why the climate is changing.



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## 21. Climate Technologies

### **Dialogue**

What is the difference between mitigation and adaption technologies?

Adaption technologies help people adapt to the changes in weather, like rainfall or droughts.

Can you give an example?

Sure. Drip irrigation is a good example. Farmers adapt to having less rainfall and only drip water directly on the plant.

And what about mitigation technologies?

They are trying to limit or prevent the emission of greenhouse gases to mitigate climate change.

That makes sense. Then solar panels would be a mitigation technology?

Yes, but also better insulation in homes or cooking stoves that use less energy.

I guess we will really need those technologies in the future, right?

If the climate continues to change this fast, we will definitely need to adapt.

I'm considering investing in solar panels to save money on my utility bill.

And while you're saving money, your also mitigating climate change. You should do it!



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# 22. Global Inequality

### **Dialogue**

I think it's unfair how companies take advantage of the countries in the global south.

How do they take advantage?

They produce products under bad working conditions and don't pay much.

What kind of work? Can you give an example?

For example, the clothing industries in Asia.

But they provide jobs and income to the people there.

That's true, but if they would pay a decent wage, people could actually improve their lives.

But then our clothing would cost more here. I don't want to pay more.

And that is why I think it's unfair. Because you want to save money, other people suffer.

You're right. I never thought about it like that. But I don't have that much money either.

I know you don't. But we need to support better companies.

You're right. If nobody buys these shirts, they will have to change something.



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### 23. Electric Cars

### **Dialogue**

I'm considering getting an electric car. What do you think about them?

I'm not sure. I like the idea of using electricity instead of gas.

Me too. But I read that they emit more emissions when produced.

And you need to use electricity from renewable energies.

Yes, I read that too. Only when you use energy from renewable sources does an electric car make a difference.

I think the biggest problem is the batteries. They still need improvement but more people buying one will increase pressure on the companies.

I guess you're right. And my electricity comes from a green provider.

Do you plan to drive long distances with the car?

No, not really. I just need it to get to work and run errands.

The infrastructure for electric cars is also constantly improving. I think you should go for it!

Thank you for all your input!



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