

Understanding Climate Change So We Can Change

ANDREW AND JEN BLACK

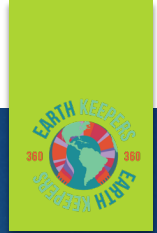


EARTHKEEPERS360



Totally New vs. Transformed World

- ▶ **How you think about the ultimate future guides how you live in the present**
- ▶ **Belief that the destiny of God's people is in "heaven," a place entirely detached from earth.**
 - ▶ Leave the Earth behind. No point in considering the current state of affairs because Jesus is coming back soon in to bring Armageddon. Our task is to save souls.
- ▶ **What did earliest Christians believe?**
 - ▶ Understood the world through the lens of the Resurrection
 - ▶ In Jesus, God is unfolding a new creation.
 - ▶ God's Kingdom will come "on Earth as in Heaven."
 - ▶ Heaven is "undoubtedly important, but its not the end of the world."
 - ▶ With Easter, Early Christians focused on new creation---a healing and redemption of the old.
 - ▶ New does not replace the old, but transformed, healed and redeemed---The Body of Christ.



Key Eschatological Biblical Texts

▶ **Isaiah 11:1-9**

- ▶ Images of Restoration of Creation
- ▶ The Earth will be redeemed to original harmony between humanity and creation.

▶ **Isaiah 65:17-25**

- ▶ Create “New Heavens and New Earth: The former things shall not be remembered or come to mind.”
- ▶ Return to Pre-Sin Eden—Go back to before the point of rupture and rebellion.
- ▶ “For since death came through a man, the resurrection of the dead comes through a man. For as in Adam all die, so in Christ all will be made alive.” 1 Cor. 15:21-22

▶ **Revelation 21 & 22**—Revelation doesn't end with Armageddon

- ▶ **Reverse Rapture**—God is raptured down to take up residence on Earth. Home is Among the People.
- ▶ **John 3:16**--For God so loved the world—“dwelt” among us.
- ▶ **Images of a Redeemed Creation from Genesis.**
- ▶ **Tree of Life**—Share in the goodness and healing of God's creation. No prohibitions, but abundance and healing.



Romans 8:18-27

“I consider that the sufferings of this present time are not worth comparing with the glory about to be revealed to us. For the creation waits with eager longing for the revealing of the children of God, for the creation was subjected to futility, not of its own will, but by the will of the one who subjected it, in hope that the creation itself will be set free from its enslavement to decay and will obtain the freedom of the glory of the children of God. We know that the whole creation has been groaning together as it suffers together the pains of labor, and not only the creation, but we ourselves, who have the first fruits of the Spirit, groan inwardly while we wait for adoption, the redemption of our bodies. For in hope we were saved. Now hope that is seen is not hope, for who hopes for what one already sees? ²⁵ But if we hope for what we do not see, we wait for it with patience.

Likewise the Spirit helps us in our weakness, for we do not know how to pray as we ought, but that very Spirit intercedes with groanings too deep for words. And God, who searches hearts, knows what is the mind of the Spirit, because the Spirit intercedes for the saints according to the will of God.”



Themes to Continue to Reflect On

- ▶ Newness vs. Renewal
- ▶ Heaven not as a place far away in the sky, but the dimension of God.
 - ▶ Coming, Reveal, Appear....
- ▶ How do we Understand the “Kingdom of God?”
- ▶ How do we pray “on Earth as it is in Heaven?”
- ▶ How do we participate in God's renewal, transformation, and healing of the world?
- ▶ How do we take seriously God's charge to “keep the Earth”? Genesis 2:15
- ▶ How are we Christ's Body?

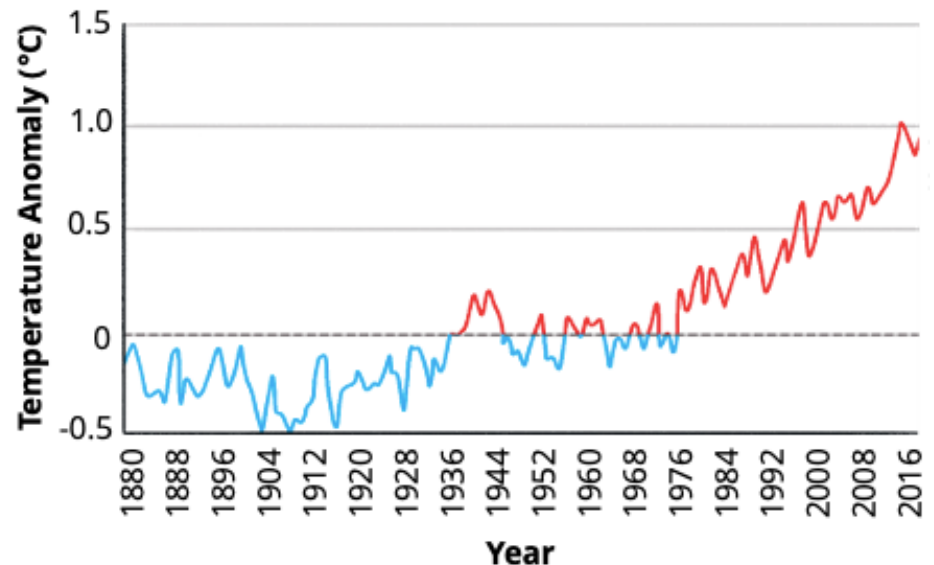


What Is Climate Change?

Climate change is a change in the average temperature and cycles of weather over a long period of time.

- ▶ Since 1880, scientists have kept thermometer-based records of the global surface temperature.
- ▶ What is happening to the global temperature?

The planet is becoming warmer; the climate is changing.





Why Is Climate Change a Problem?

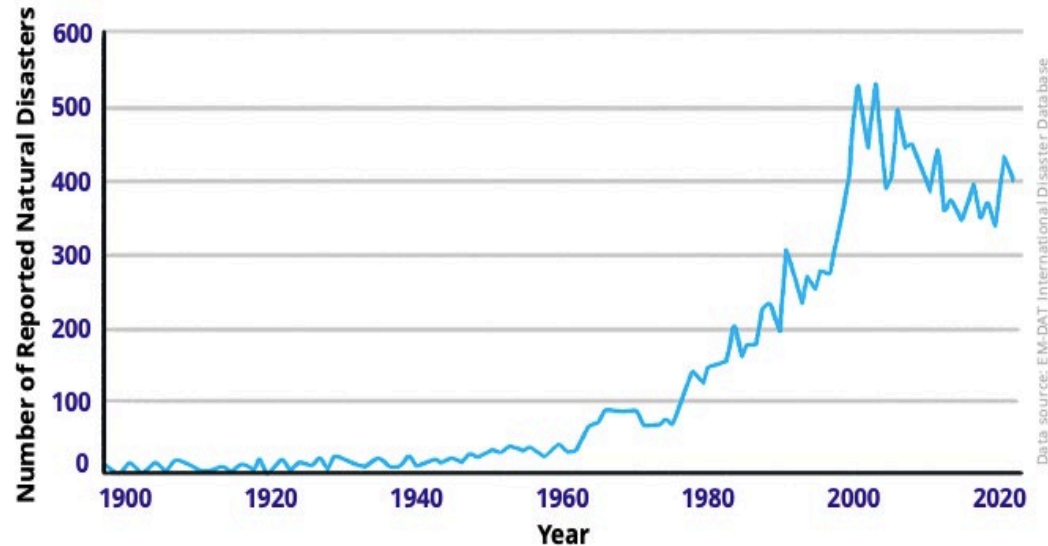
- ▶ Over millions of years, species become adapted to survive in the conditions in which they live.
- ▶ A stable climate supports this process and allows living things to thrive.
- ▶ If the climate changes too quickly, organisms don't have enough time to adapt to new conditions and may no longer be able to survive.





Why Is Climate Change a Problem?

- ▶ Climate change disrupts weather patterns and causes extreme weather events to become more common. These include hurricane activity, wildfires, droughts and floods.
- ▶ As the global temperature has increased, so has the number of reported natural disasters.





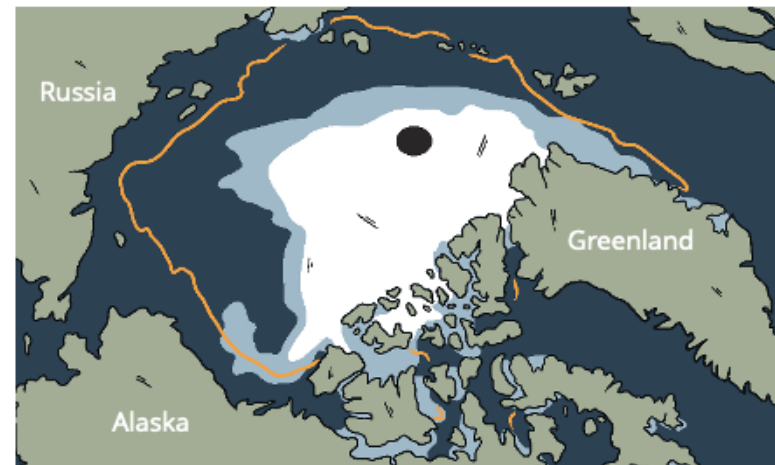
Why Is Climate Change a Problem?

- ▶ Rising temperatures are causing sea levels to increase.
- ▶ The rising water can cover coastal areas, destroying habitats and displacing human populations from low-lying areas.
- ▶ Rising sea levels are driven by two main processes:
 1. **Ice Melt:** When the atmosphere and ocean get warmer, ice sheets and glaciers melt, resulting in the addition of fresh water to the ocean.
 2. **Thermal Expansion:** As ocean water gets warmer, it expands, causing sea levels to rise.



Why Is Climate Change a Problem?

- ▶ The bright surface of the ice reflects 80% of the sunlight that hits it back into space. This keeps the polar regions cool and moderates the global climate.
- ▶ When the area of sea ice is reduced, less sunlight is reflected back into space. This causes more ocean warming and reduces the sea ice even further.
- ▶ This feedback drives faster climate change.
- ▶ The orange line on the picture marks the average minimum sea ice coverage from 1981 to 2010. The white ice shows the minimum sea ice coverage in 2020.
- ▶ The difference between the two exceeds one million miles.





Why Is Climate Change a Problem?

- ▶ No matter how fast we act, the global temperature is set to continue rising as a result of greenhouse gases that are already in the atmosphere. The problems that we are already experiencing are going to worsen.
- ▶ Acting quickly to keep the temperature rise to minimum is extremely important for humans and wildlife.



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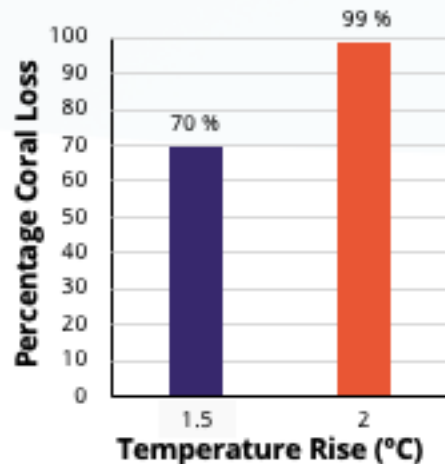


Melting ice, Antarctica by © Wim van [Passel](#) / WWF
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Coral Bleaching



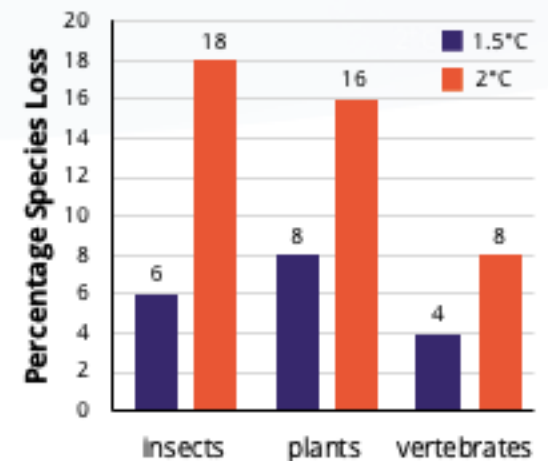
Bleached coral, Maldives by © naturepl.com / Peter Scoones / WWF licensed under CC BY



Species Loss



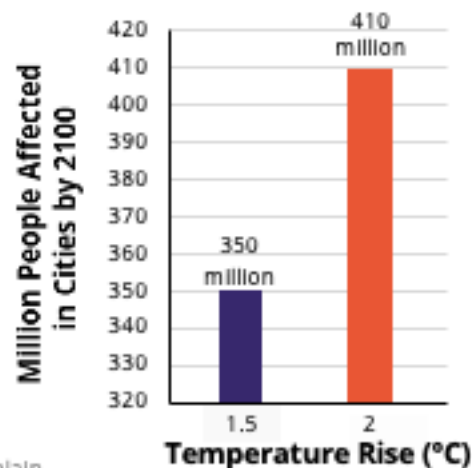
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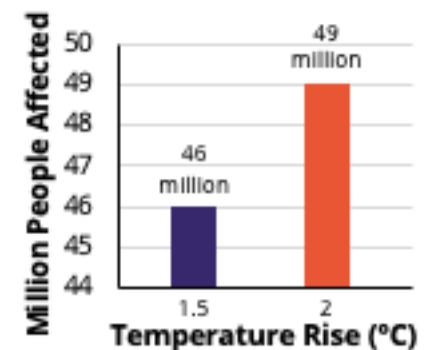
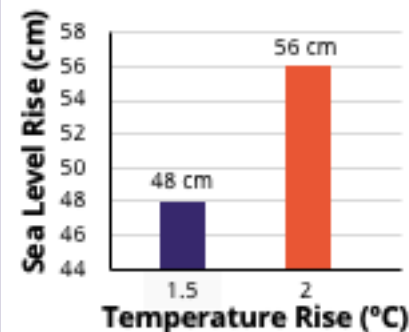
Drought



Dried up fishing pans in Lluwa plain National Park by © Jasper Doest / WWF licensed under CC BY



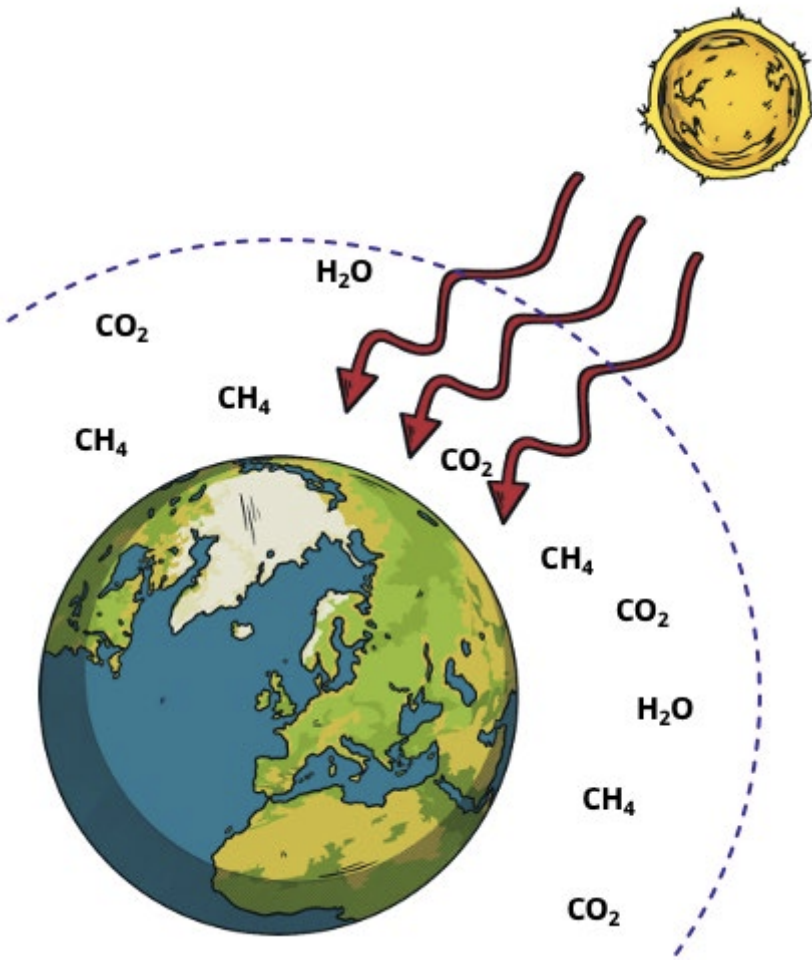
Rise in Sea Level



Climate change adaption Wadden sea by © Claudi Nir / WWF licensed under CC BY

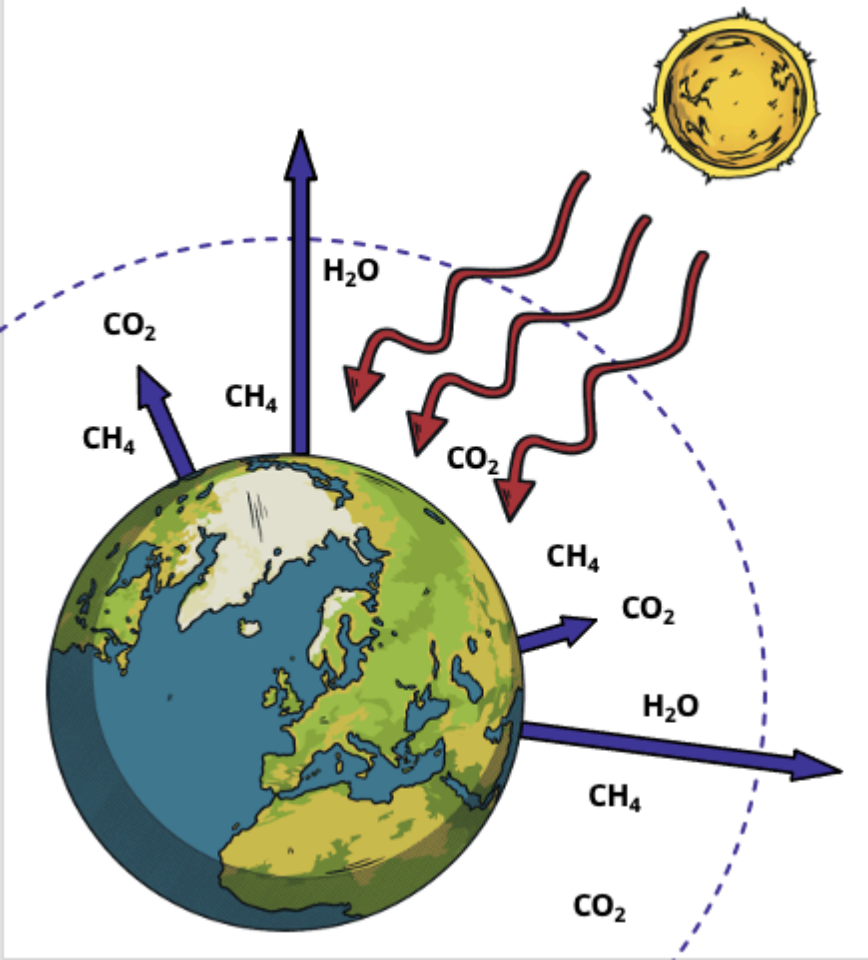


What Causes Climate Change?



- ▶ Carbon dioxide (CO₂), methane (CH₄) and water vapour (H₂O) are greenhouse gases that are found in the atmosphere.
- ▶ Energy travels from the Sun to the Earth as short wave radiation. It does not interact strongly with the greenhouse gas molecules so it reaches the Earth's surface.

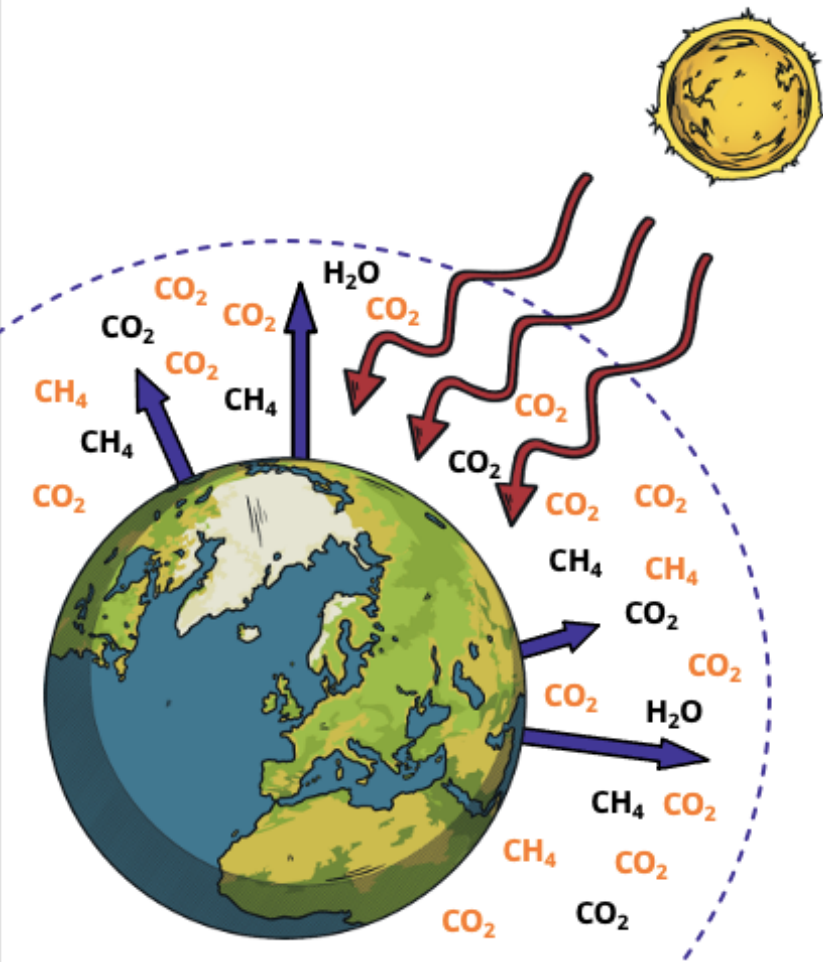
What Causes Climate Change?



- ▶ The Earth's surface emits long wavelength radiation. This does interact with the greenhouse gas molecules.
- ▶ The greenhouse gas molecules absorb some of the energy, trapping it in the atmosphere.
- ▶ This process keeps the Earth warm and is essential for life.



What Causes Climate Change?



- ▶ The higher the proportion of greenhouse gases in the atmosphere, the more radiation is absorbed.
- ▶ This causes a rise in the temperature of the Earth and is known as the greenhouse effect.
- ▶ This increase in temperature drives climate change.

What Causes Climate Change?

Climate change can be caused gradually by natural processes or suddenly by large events, such as a massive meteorite strike or volcanic activity. However, the rapid climate change we are experiencing now is due to three main human activities:

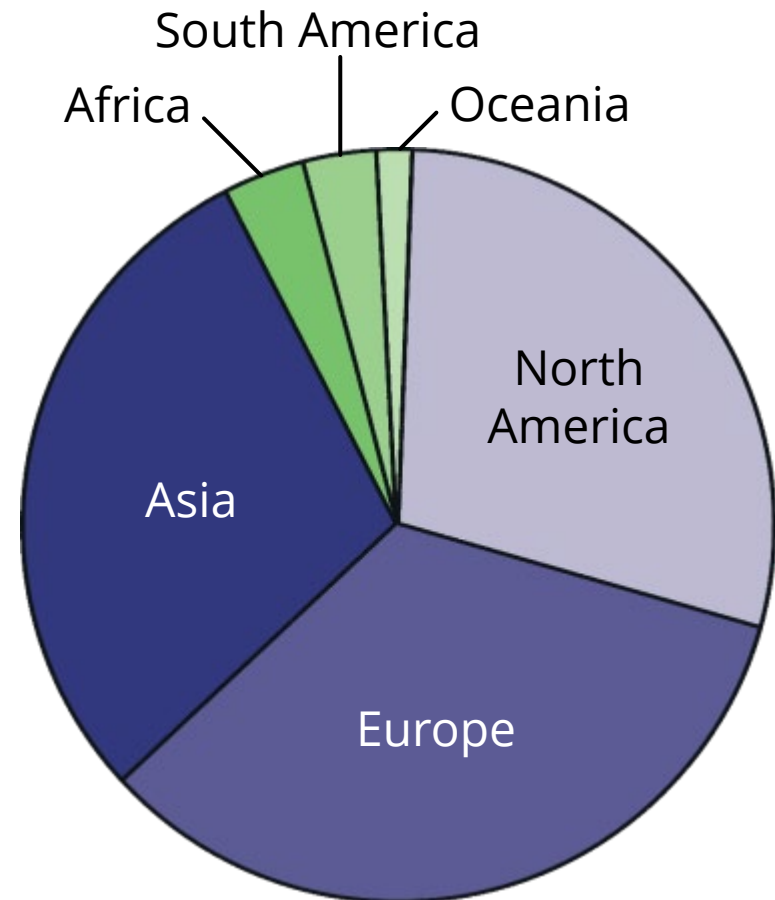
- **Burning fossil fuels** for heating and cooking, generating electricity and powering vehicles releases carbon dioxide into the atmosphere.
- **Deforestation** (destruction of forests) releases carbon dioxide and reduces the number of trees able to capture carbon dioxide from the atmosphere.
- **Reduction of biodiversity** creates an unstable ecosystem. Nature loss leads to ecosystems that are less able to capture carbon from the atmosphere and less resilient to rising temperatures.





Who Causes Climate Change? Is it Caused by Population Increase?

- ▶ The 50 least developed countries are thought to have contributed 1% of the greenhouse gases that have caused global warming. The USA, the EU and China alone have contributed around 60%.
- ▶ U.S. is 4% of world population, but consumes 1/3 world's natural resources
- ▶ U.S. produces 25% of world's greenhouse gases





Who Does Climate Change Affect?

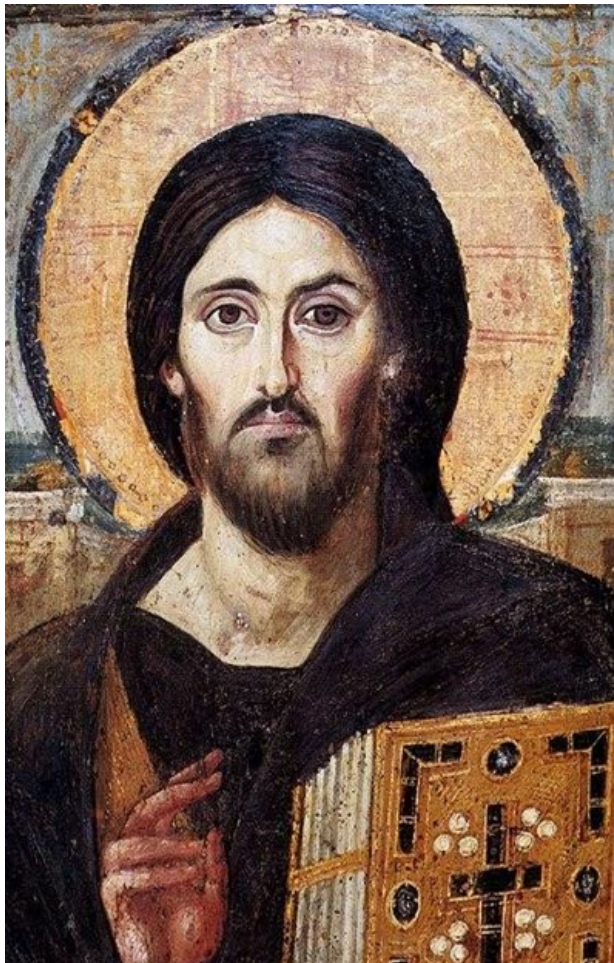
- ▶ In the long term, everyone will feel the effects of climate change. However, some people are currently more affected than others.
- ▶ In most cases, the wealth of prosperous countries has come from activities which contribute to greenhouse gas emissions. This wealth allows these countries to protect themselves from the effects of climate change.
- ▶ Poorer countries are less able to adapt to climate change and therefore suffer the most from its effects. They are also less able to develop because they need to focus on addressing the challenges caused by climate change.
- ▶ The countries who have contributed the least to the climate crisis are the ones who are affected the most.
- ▶ Climate change is a moral and spiritual issue that is causing unprecedented harm to God's creation and people. Climate change is having and will continue to have profound effects— from injury and illness to displacement and destruction—on people across the globe. The most vulnerable among us are being harmed first and worst. ~ Kara Ball, Lets Talk Faith and Climate.



Climate Justice

- ▶ The impacts of climate change affect disadvantaged groups of people the most. The effect of climate change on these groups needs to be recognised and addressed.
- ▶ Climate justice means looking at the climate crisis from the perspective of social justice. Solutions need to not only curb climate change; they need to protect and empower the most vulnerable groups of people too.
- ▶ We have the **responsibility** to consider the most vulnerable when planning climate action. Remember, these groups of people contribute to climate change the least. This means putting the people and communities that are most vulnerable to the impact of climate change at the heart of development.
- ▶ Climate solutions will not work if we do not address social justice issues. For example, if we do not address poverty, then unsustainable lifestyles will continue to damage ecosystems and we will fail to curb climate change.

Climate Justice is Social Justice



Those least responsible are first and hardest hit by climate change:

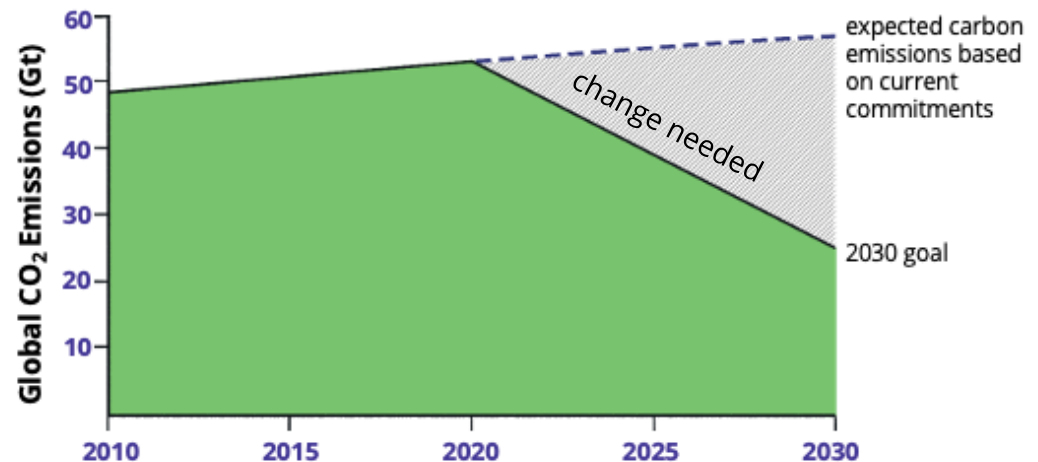
- ← 40 million global climate refugees
- ← For every 1°C increase in global average temperature, a 10% reduction in world's grain crops
- ← World Bank: climate-related disasters push 26 million into poverty every year
- ← “If you care about social justice, you need to care about the environment. If you care about the environment, you need to care about social justice.”



The Paris Agreement

- ▶ The Paris Agreement instructed governments to renew their commitment to lowering their emissions every five years, each time becoming more ambitious.
- ▶ Global carbon dioxide emissions continued to rise after The Paris Agreement, and are now 62% higher than they were in 1990.

Global net CO₂ emissions need to fall by 45% from 2010 levels by 2030 to limit global warming to 1.5°C.





Climate Change is Happening Faster than Predicted

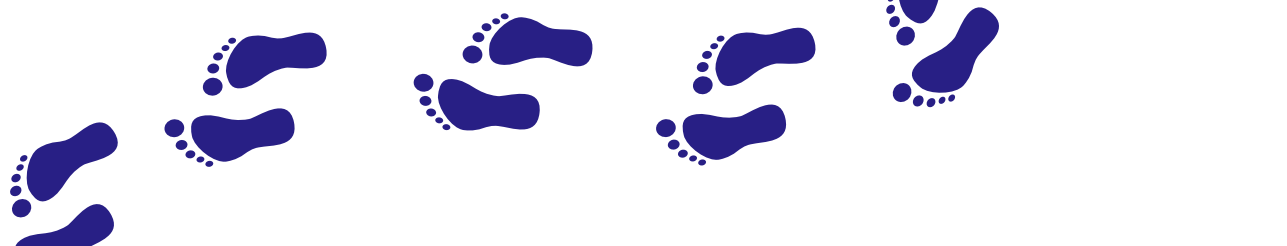
- ONE** ▶ Already there. The planet has warmed 1°C since the Industrial Revolution.
- TWO** ▶ Goal of Paris Agreement. Extinction of the world's reefs, sea-level rise of several meters, abandonment of the Persian Gulf. "Long-term disaster."
- THREE** ▶ "Short-term disaster." Forests in the Arctic. Loss of most coastal cities. Current realistic minimum.
- FOUR** ▶ Europe in permanent drought. Deserts cover China, India, Bangladesh. American Southwest uninhabitable

Our actions in the next 10-15 years matter



Who Can Fix It?

- ▶ **Governments** can make laws and policies that reduce the amount of greenhouse gas emissions.
- ▶ **Businesses** can change their processes to run more sustainably.
- ▶ **Faith Communities:** Reduce our own carbon footprint & support individuals in making the necessary changes and sacrifices. Speak prophetically to institutions.
- ▶ **Individuals** can all make choices in our own lives that reduce our carbon footprint (the impact our actions and purchases have on climate change).
- ▶ **Individuals** can also use our voices to let businesses, faith institutions and governments know that we want them to act quickly to reduce their impact on climate change.





Katherine Hayhoe

- ▶ "We can't give in to despair," she says. "We have to go out and look for the hope we need to inspire us to act -- and that hope begins with a conversation, today."
- ▶ Katherine Hayhoe is a Canadian atmospheric scientist. She is a Paul Whitfield Horn Distinguished Professor and an Endowed Chair in Public Policy and Public Law in the Texas Tech University Department of Political Science.^[11] In 2021, Hayhoe joined the Nature Conservancy as Chief Scientist.
- ▶ [Tedtalk](#)



We Have Solutions

Our Actions Can Make a Difference





Our Charge

We have a moral responsibility to be good stewards of God's creation. God so loved us that He created for us a pure, clean home here on Earth, vibrant with healthy nature to provide for our needs. He also gave us the free will to choose how we care for that Earth. Let's follow the Golden Rule and do unto others and our Earth as we would have done unto ourselves and our children. For too long, the priorities of a greedy few have forced our climate out of balance, degrading God's creation, damaging our land, water, and air and harming us all—especially the least among us. We must care more fully for creation and walk more gently upon His Earth. ~Kate Ball, Director of Blessed Tomorrow