

# Frequently Asked Questions



## Frequently Asked Questions about Climate Change



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# Frequently Asked Questions



Gender and Child Cell (GCC)  
National Disaster Management Authority



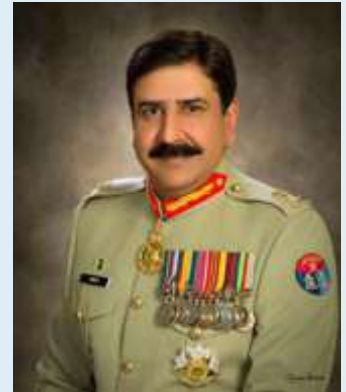
## Chairman's Message

Climate Change is a global concern, but developing countries like Pakistan are among the worst affected by its impact. German Watch has ranked Pakistan on the 7th position in the countries most affected in the Long Term Climate Risk Index (CRI). It is a well-known fact that children are especially vulnerable to the impacts of disasters and climate change, due to lack of effective coping mechanisms. An alarming 19,000 children died during the devastating 2005 earthquake in Pakistan and nearly 8.6 million children were affected during the floods of 2010.

The understanding that children and young people can evolve from vulnerable individuals to empowered citizens lies at the heart of child-inclusive climate change adaptation (CCA) initiatives by GCC- NDMA. Hence, the development of this interactive CCA Toolkit with a focus on key priority areas of solid waste reduction, water management, energy efficiency and natural resource management is immensely significant. The purpose of this Toolkit is to foster the adaptive capacity of children, by giving them simple guidelines to play their roles as effective agents of change within their communities.

The dissemination of this Toolkit in schools will help in empowering children, by raising awareness regarding the disastrous effects of climate change and their role in guarding their future. It is our responsibility to leave a better world to our children than the world we inherited.

Lt. Gen. Omar Mahmood Hayat, H1 (M)  
Chairman, NDMA





## Acknowledgments

Children's Booklet on Climate Change, FAQs and Activity Book is an illustrative Toolkit, developed by Gender & Child Cell (GCC), NDMA, with a vision to strengthen the capacity of children, mainstreaming Climate Change Adaptation and Disaster Risk Reduction through interactive tools.

In this regard, GCC-NDMA would like to express sincere gratitude to Chairman NDMA, Lt. Gen. Omar Mahmood Hayat, HI (M) for his visionary support and guidance in the formulation of this Toolkit.

A profound appreciation to Ms Raheela Saad, Member A&F, for her continuous support, sincere dedication and sound professional commitment at each stage, that contributed in this endeavor.

We are especially grateful for the overall guidance & concerted technical input of Ms. Tania Humayun, Advisor/Programme Manager-Gender & Child Cell (GCC), whose active participation, expertise and tireless efforts led to the successful completion of the Toolkit.

The NDMA further recognizes the invaluable contribution and dedicated efforts of Ms. Maryam Taj Din, Assistant Director-GCC and Ms. Amina Agha, Programme Officer-GCC for their significant contributions in the research and review of this document, and Mr. Muhammad Arif, Admin/Finance Officer, for providing assistance in undertaking this initiative.

We would also like to acknowledge the technical support provided by LEAD Pakistan's team consisted of Basharat Ahmed Saeed, Hina Lotia, Abbas Mushtaq, Sofia Ahmad and Rabia Arif. Special thanks to the illustrator, Mr. Numair Fuad Abbas and the translator, Ms. Ayesha Attique for their work on the project.

In the end, we would like to extend our heartiest gratitude to Ms Masooma Qazilbash, Programme Specialist (DRR)-UNICEF, who rendered her full support for this project; and UNICEF Pakistan, for overall financial support and cooperation to the GCC-NDMA, for all our initiatives.







**Sara:  
The 5th Grade  
High Achiever**

**Ali:  
The Inquisitive  
Young Brother**

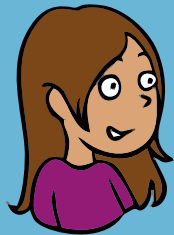
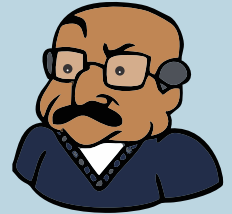
**Javid:  
The Cynical Uncle**

Say hello to Ali and Sara who are spending the weekend at their Uncle Javid's house. Sara has just finished a booklet and activity book on climate change she received at school. She is now free to spend some time with her uncle and younger brother who are sitting in the living room.



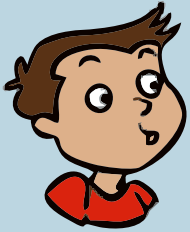
I just got done with my Climate Change Booklet and Climate Action Leadership Activity Book.

I don't get what the big deal with Climate Change is. The climate of the planet has changed in the past as well because of natural processes. If the climate is changing again because of natural reasons why are we blaming human beings?



The climate of the planet has changed many times in the distant past and that was because of natural causes. But the climate change we are seeing now is happening too quickly to be caused by natural causes.

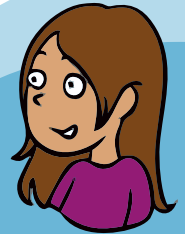
Experts and scientists who study the climate agree that the climate change we are seeing today is caused by people's activities.



I've heard of Global Warming before. Is Climate Change the same thing as Global Warming?

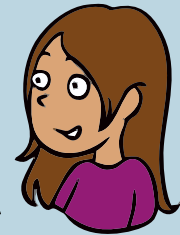
The two terms are related but they are not the same. Global warming is the increase in average temperature near the Earth's surface. It is a very important component of climate change. But Climate Change includes other changes that are being seen.

Some of these changes are in rain patterns, snow patterns, season timings, and sea levels. Climate change also includes winters that are more cold than before, or more severe.

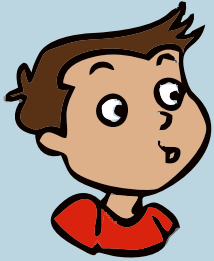




So how hot has Pakistan become because of climate change?



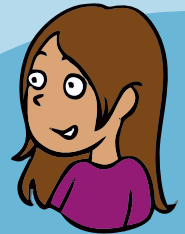
About 0.5 degrees since its independence in 1947.

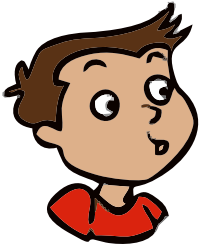


But that's next to nothing! What difference could 0.5 degrees make?

A lot! Temperature is a very important part of how nature and the environment work. Even the smallest change in temperature can affect how fast and big plants grow, where insects live, how and where diseases spread and if animals can survive or not.

So, the 0.5 degrees affects forests, oceans, rivers, crops, wildlife and ofcourse human beings!

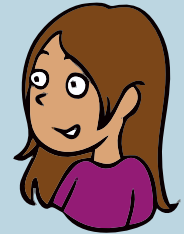


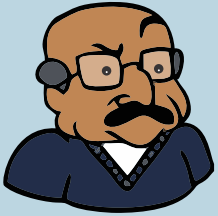


So just how bad will this warming get in the future?

There are scientists who are working hard every day to bring us more reliable information about what the future will look like. Most research suggests that if we don't make drastic changes to our lifestyle, the planet might face temperature increase of about 5 degree C by the end of this century.

The countries of the world got together in 2015 in Paris to sign the Paris Climate Accord, where they committed to keep warming below 2 degrees C. But this can only happen if everyone starts playing their part now!

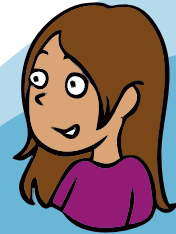


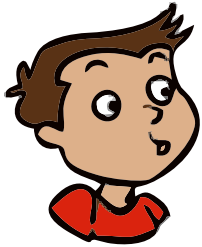


Well governments keep talking about these things and making commitments. A few years ago everyone was talking about pollution which you can see in the air and in the water. How can I believe something I can't even see?

You can actually see the effects of climate change. The earth has become warmer and timing and duration of seasons are changing. Even in Pakistan, we keep complaining about how the late the winter starts compared to a few years ago. Sea levels across the world have risen by about 4-8 inches in the last 100 years.

In Pakistan one of the biggest indicators of climate change is the increase in the number of floods and heat waves across the country. These are some of the ways in which we know that climate change is happening and is a real problem.

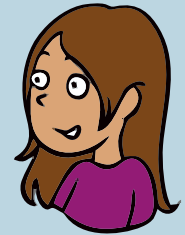




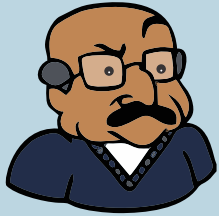
If Global Warming is happening, why is it still so cold in the winters?

That's because you are talking about weather, not climate. Weather is the state of the atmosphere. If its raining, if its hot or cold on a particular day, it is the weather that is rainy, hot, or cold. Climate refers to average conditions based on weather seen over many years.

So, even if some winter days are very cold, the fact that climate change is causing more days that are hot and also producing record high temperatures in the summer, means that the planet is warming up. The cause of this warming is human activity.

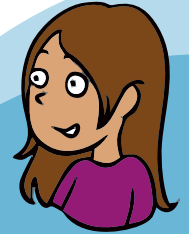


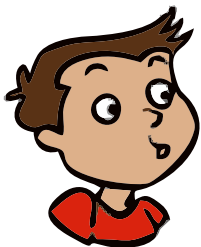




You keep saying human activity. But what does human activity mean?

Human activity here means anything that humans do that leads to Greenhouse Gases being released into the atmosphere. The most important GHG is Carbon Dioxide (Co<sub>2</sub>). This is released by burning of fossil fuels which include coal, oil, and gas. As these gases build up in the atmosphere they trap extra heat. This is called the greenhouse effect.

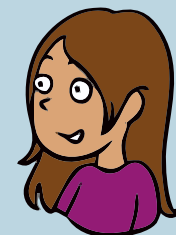


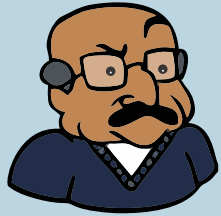


Greenhouse? You mean like the greenhouse we have where we keep our plants?

Yes! The earth is exactly like that. Heat energy from the sun reaches earth. Some of it is absorbed. The earth then gives off the remaining heat in another form but not all of this heat energy makes it to outer space. Some of it is absorbed by the GHGs. Without this trapped heat, the earth's temperature would be about -18 Degree C, far too cold for life on Earth to exist as it does today.

But just like most other things are good in moderation, GHGs are only good for us in a certain amount. Excess GHGs trap more heat than is necessary and cause Global Warming. Without enough GHGs the earth would be too cold and with too much GHGs the earth would be too hot.

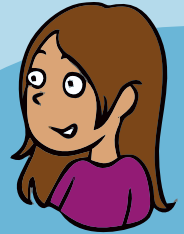


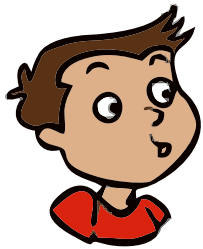


I heard on the news that USA and China are the biggest producers of GHGs in the world. Then why is this a problem in Pakistan?

It is true that currently China and USA are responsible for a large amount carbon emissions that take place. But once climate change starts taking place it affects everyone. Some countries are affected more than others and this has nothing to do with how much air pollution they produce.

But at the same time every little contribution makes a difference. So it is important that all countries, and all people play their part in reducing emissions and at the same time taking steps to reduce the impacts of climate change.

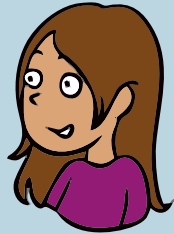


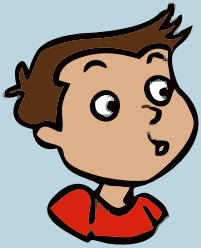


Yes but if other countries are causing it, what can we as Pakistanis do?

The problem of climate change is global but the actions needed to counter it start from the local level. We can prepare ourselves for the adverse effects of climate change by making our local systems strong. These include our water, food, energy and environmental systems. By wasting less food, less water, and less energy we can reduce the impact of climate change on those things.

By decreasing pollution of water and air we can reduce the stress on environment, animals, plants, and humans. Climate change also makes disasters like floods and droughts more likely and more severe. We can prepare and practice what needs to be done in the case of a disaster. Most importantly, we can urge our government and organizations in Pakistan to be responsible towards the environment, and to live up to their promises. We should act to protect our ecosystem and its biodiversity. Some of things we should do are mentioned in my Climate Action Leadership Activity Book.



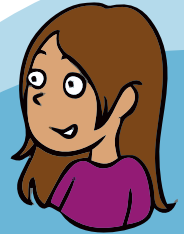


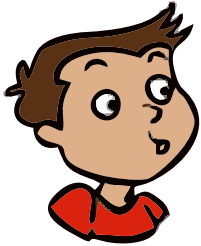
What is an ecosystem and what is biodiversity? How are we harming them?

An ecosystem is made up of all the plants, animals and other living organisms in a given area, interacting with their environment, which includes the weather, the climate, the water, and the air. Both the living and non-living things are together known as an ecosystem.

Biodiversity is the variety of animal and plant species in an ecosystem.

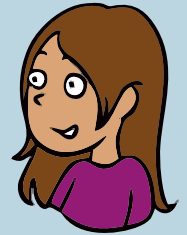
Climate change is affecting ecosystems and through that is harming biodiversity. Many actions we take harm biodiversity and destroy ecosystems. For e.g. when we throw away garbage in forests, lakes, and streams. Chemicals and Non-biodegradable waste are especially dangerous.

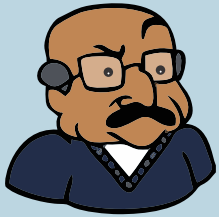




What is non-biodegradable waste?

Non-biodegradable waste includes plastics, glass and all other materials that cannot be broken down or decomposed into smaller products by living things called microorganisms. So the plastic bags, glass bottles, and metal cans you throw away cannot be broken down by nature. As a result they are not consumed by plants, animals, and humans, and only damage the ecosystem.

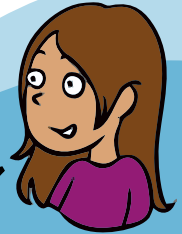


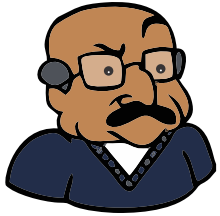


Okay, we can make an effort to not throw away non-biodegradable materials and instead recycle them or reduce our use of them in the first place. But, you mentioned water, energy and food as well. We can't live without these things. So how can we stop using them?

We don't have to stop using water, food, and energy. But, we can use them more efficiently. Most things we use require water and energy in their production. The amount of water used to produce something is called its water footprint.

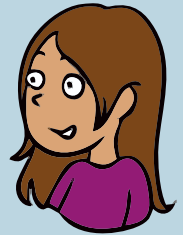
Similarly, the amount of CO<sub>2</sub> released by undertaking certain activities or making certain products is called its carbon footprint. Even food has a water and a carbon footprint. E.g., meat, especially beef takes a lot more water and energy to produce than vegetables. So we can reduce our water and carbon footprint by reducing how much meat we eat and replacing it with vegetables. We can also reuse some of the water we use. If you want to know what your carbon and water footprint are, you can use my Climate Action Leadership Activity Book.



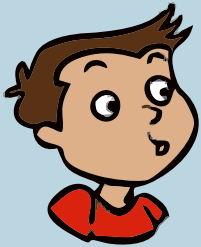


Okay, all of this sounds fine but I am not going reuse water. Imagine how impure it will be. Certainly not fit for drinking.

Definitely not for drinking! But greywater can used for other things that don't require drinking quality water, like washing cars, gardening, etc.

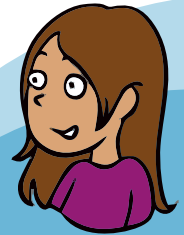


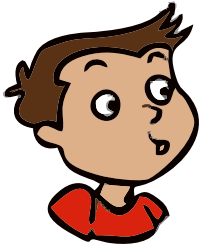




What is greywater?

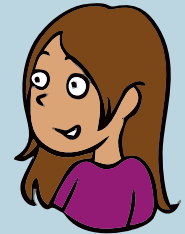
Greywater is wastewater generated by household chores such as washing dishes, laundry, bathing, or washing our hands in the sink. There is no harm in washing our cars or roads with this water. There are also many filtration techniques that can be used to remove solid impurities from greywater. But you must never try to reuse black water, which is water that has been mixed with sewage.

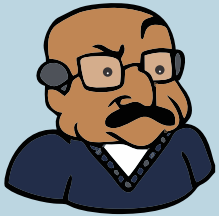




The only thing I knew before this is that we should plant trees. I guess that's not as important as these other things.

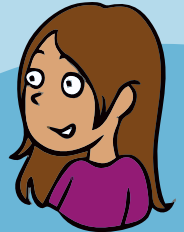
No! Planting trees is very important because trees act as carbon sinks. This means they absorb carbon dioxide from the atmosphere, for photosynthesis, which is how they produce food for themselves. But it is important to plant the right trees at the right place. Some species are not native to an ecosystem, and can be harmful to local plants, animals, birds, and insects. So please continue planting trees but make sure you ask your school to coordinate with the government so that only native trees are planted which benefit the ecosystem and don't harm it.





This is all very interesting. So who should we get in touch with if we want to know what our government is doing to protect us from climate change?

We have a Ministry of Climate Change and they have a website (<http://www.mocc.gov.pk/>). But at school we were told that this is not just an issue for the ministry. Everyone has a responsibility to protect the environment and prevent climate change. So we should get in touch with our local representatives to find out how they are contributing to the fight against climate change to urge them to do more.





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