

## **Understanding Climate Change**

### **What is Climate Change?**

It is a change in global climate patterns apparent from the mid to late 20th century onwards, attributed largely to the increased levels of atmospheric carbon dioxide produced by the use of fossil fuels. We release carbon dioxide into the atmosphere through activities such as burning fossil fuels (coal, oil and fuel) and cutting down trees. As a result, today's atmosphere contains 42 per cent more carbon dioxide than it did before the industrial era. Climate change is the greatest threat facing our planet today; a warming planet alters weather patterns, water supplies, seasonal growth for plants and a sustainable way of life for us and the world's wildlife. Though the effects of climate change can be felt, it's not too late to take action. There's still time for us all to be part of the solution. Today, the Institute of Environmental Studies is hosting the second National Consultative Workshop on the creation of the National Climate Change Response Strategy with another conference set to be held this month where the strategy will be presented before the National Taskforce on Climate Change for Adoption. It is against this background that the EMA has seen it fit to shed light on the issue.

### **How Does Climate Change Occur?**

A continuous flow of energy from the sun heats the Earth. Naturally occurring gases in the atmosphere, known as greenhouse gases – this includes carbon dioxide - trap this heat like a blanket, keeping the Earth at an average of 15 degrees Celsius – warm enough to sustain life. The overuse of fossil fuels is increasing carbon dioxide in the atmosphere, trapping more and more heat and warming the Earth. As a result, we're seeing more dramatic weather patterns across the globe resulting in devastating natural disasters -such as floods, storms, cyclones heat/cold waves, drought and wild fires- and shrinking the world's ice shelves and glaciers due to warming sea water.

### **A look at Zimbabwe**

Records demonstrate that Zimbabwe is already beginning to experience the effects of climate change, notably rainfall variability and extreme events. These conditions, combined with warming trends, are expected to render land increasingly marginal for agriculture, which poses a major threat to the economy and the livelihoods of the poor due to the country's heavy dependence on rain-fed agriculture and climate sensitive resources. It is expected that farmers, who represent approximately 62 per cent of the total population, will bear disproportionate impacts due to their limited adaptive capacity. Consequently, climate change poses a major threat to sustainable development, climate-induced water stress threatens to decrease the quantity and quality of drinking water in rural and urban areas, reduce the run-off necessary to sustain the country's hydro-electric power supply, and contribute to declining agricultural productivity.

### **Why is Climate Change Happening?**

There's more than a 90% probability that human activities over the last 250 years have warmed the planet. That's according to the 2007 Assessment Report by the United Nations' Intergovernmental Panel on Climate Change. The World Wildlife Fund (WWF) Planet Report concludes that humanity's overconsumption of food, material goods, fossil fuels, and non-renewable resources is putting a huge toll on the planet, exceeding its capacity to sustain us. Forests absorb and remove carbon dioxide from the atmosphere. Areas undergoing excessive deforestation experience higher carbon emissions. Agriculture is the second largest greenhouse gas emitter after fossil fuels. Methane produced by livestock, manure management, the burning of savannah, and the conversion of forests to pasture land are all major sources of greenhouse gas emissions. WWF details the environmental impacts of agriculture on climate change, water supplies, habitat loss and more.

### **How can we combat climate Change?**

Although the journey to a sustainable future may seem difficult to imagine, it is far from impossible. We can all play our part individually or collectively and have a big impact towards a greener future in the individual choices we make each day so as to reduce our carbon footprint and help improve our quality of life. WWF's Energy Report provides a realistic scenario of what the world could be like in 2050, running wholly on renewable energy.

### **How can we reduce our carbon footprint?**

**Transportation**-It accounts for almost half of harmful air pollution, more than a third of greenhouse gas emissions, one quarter of common air contamination and almost one-fifth of water toxicity comes from our daily use of cars, trucks, buses, boats and planes. Cars are the worst offenders — they contribute the most carbon dioxide emissions and pollute our water and air through exhaust and road runoff. To make a difference make sure that the next car you buy is fuel efficient and low polluting. Consider walking, cycling, and carpooling to get to your regular destinations. You can reduce the impacts of air travel by considering going on vacation close to home. A convenient place to live reduces the amount you drive, for example living closer to your workplace lowers your greenhouse gas emissions and other pollutants.

**Energy**- Going carbon neutral is an easy way to take responsibility for the greenhouse gas emissions we create. This can be achieved by using other forms of energy such as wind, solar or using energy efficient appliances. New refrigerators, for example, use 40 per cent less energy than models made 10 years ago, energy efficiency means lower bills and less pollution.

**Food-** Feeding ourselves has led to all kinds of environmental destruction — air and water pollution, loss of soil and reduced biodiversity. It's time to clean up our act. We can have a huge effect on climate change by simply changing a few of our food habits. Here's how.

- Eat wisely, choose foods that are local, organic and low on the food chain whenever possible. Make the most of seasonal foods.
- Take care of your trash, composting all organic waste and recycling paper, cardboard, cans and bottles helps reduce the greenhouse gas emissions associated with landfills.

**Take Action-**As individuals, we can green our homes, schools and offices and have a huge impact. Get out and try to lighten your footprint.

### **Zimbabwe's response to climate change**

In response many organisations such as the Environmental Management Agency have adopted mitigation, adaptation and development strategies such as the Small Grains Projects introduced to areas hard hit by drought such as Matabeleland North and South Parts of Mashonaland East and Manicaland as well as the Crocodile Rearing Project in Chiredzi. However, there is a growing need for accurate and useful climate data to inform adaptation strategies that can anticipate future climate. Effective climate governance is also needed in order to guide coordinated action.

Zimbabwe has prepared its Second National Communication for submission to the United Nations Framework Convention on Climate Change (UNFCCC), and the Ministry of Environment Water and Climate has begun to develop a national 'Climate Change Response Strategy' through a consultative process involving other government ministries, civil society organisations, academic institutions, and the private sector.

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