

WATER SHORTAGE

Despite being 20% of the world's land area, Africa has only 9% of the global freshwater resources. In dry areas, people queue for hours to access their daily water requirements. More than half of Africa receives less than 500mm of rainfall per year, yet Africa also has the third wettest place on the planet.

Why does it rain where it rains?

Rain can only fall from air that is carrying water. In areas with an equatorial climate, like parts of Cameroon, The Democratic Republic of Congo and Gabon, it is humid and rains a lot. The rain comes from currents of air that have traveled over the sea, picking up moisture that forms clouds. An equatorial climate typically receives rain all year round but the inter-tropical convergence zone (ITCZ) intervenes. The ITCZ is where these moist winds meet dry, hot winds moving south from the Sahara. The convergence causes violent storms and heavy rain. The ITCZ moves north and south across the equator seasonally, according to where the sun is hottest. This movement causes dry and wet seasons. Each year as the ITCZ moves south, countries like Zambia, Tanzania and Ghana have a rainy season. For the rest of the year, countries in this zone are mainly dry, because the air they receive has been traveling overland and has already lost most of its water.

In the semi-arid drylands, found in countries such as Botswana, Sudan, Senegal and Ethiopia, the rainy season is shorter with even less rainfall. In the driest parts of Africa, arid zones like the Sahara Desert, it hardly rains at all. The highlands of Kenya and Ethiopia receive lots of rain, because clouds form as the air rises over the mountains.

What about droughts?

The global climate is a huge interlinked system. Small changes in temperature and air pressure in one area cause changes to air currents and rainfall elsewhere. Where there is less than 500mm of rain in a year, crops cannot grow without irrigation. In semi-arid areas, even a small reduction in rainfall can lead to failed harvests. People can plan for variable rainfall, and prepare reserves of food, but when there is a drought – when rainfall is lower than average for more than one year – food reserves may run out. Many countries suffered severe droughts from 1968-73 and from 1980-82. Between 1999-2012 Eastern Africa had 6 years with poor rains; 2011 was the driest year since 1951. Millions of people in Sudan, Eritrea, Ethiopia, Somalia and Kenya are suffering as a result. Drought is also linked to famine in Western African countries like Niger, Mali and Burkina Faso, and food shortages in Southern African countries such as Zambia, Malawi, Zimbabwe and Mozambique.

Droughts may happen more often because of climate change caused by human activity. This is explained in the **Energy and Climate Change booklet**.



ACTION SHEET - 10: Health problems from a lack of Water

