

# Climate change impact, reason for urgent energy transition



**B**ony cattle, parched lands where only drought-resistant trees show life and dry gullies depicting what could have been river courses is what one sees as they approach Hwange town in Matabeleland North province.

The sweltering summer sun is unforgiving during the day and at night if you do not have the luxury of an air-conditioner or fan for cooling, you incessantly hope it rains so you can catch a decent sleep under wet conditions.

Traditionally hot, Hwange is a hub of coal extraction for the country's thermal power and tourism as it is home to the biggest national park since time immemorial. But, of late they are having a little too much of everything as extreme weather patterns creep in.

It has been over three decades since Aliyeli Lungu (57) last saw elephants visit Number 5, a neighbourhood to which he moved in 1988. Yet recently a herd of five jumbos ran amok in his yard and had their way with agricultural produce and fruits in the backyard.

"I heard noises and when I peeped through the window I saw they were five including a small one. Then I knew it was dangerous because in such a situation, when there is a calf, you do not attempt anything because they kill," recalled Lungu recently.

The deputy headmaster at a local primary school had nothing to celebrate about the rain showers on the night as fear of the unknown and ultimate loss of his vegetable produce irked him.

"There is a rife sense of fear nowadays because we have been getting stories that people have been killed from nearby areas. So you do not attempt to be brave because you may end up a goner," he says.

This year alone, three elephants have been shot dead in the town's urban areas by wildlife rangers as they continue to frequently intrude into human settlements searching for food and water.

The wildlife menace is seen mainly as a result of incessant droughts, caused by climate change, in recent years, but in between water scarcity and increase in animal population, a human catalyst lurks.

Stalked by a serious energy deficit, the Southern African country has been facing dire electricity challenges, which resulted in serious load shedding — sometimes up to 18 hours — from late 2019 to earlier this year.

This crisis sparked by government's appetite for more energy sources with vast coal deposits emerging as the low hanging fruits after Kariba Hydropower Station, which accounted for half of the country's electricity output, failed to produce power and at some point shutdown owing to droughts last year.

Global reports point at coal-fired power plants emitting over 10 gigatons of carbon dioxide annually, almost one-fifth of total emissions, making them the sin-

gle largest source of greenhouse gases causing climate change.

In Hwange, the effects of rampant expansion in coal extraction activities, currently the leading energy source in the country, and over-reliance on thermal power have brought a host of problems.

"As a result of the mushrooming of mining companies in Hwange, natural habitats have been disturbed to the extent that elephants are now migrating from their habitats into human settlements," says Greater Hwange Residents Trust coordinator Fidelis Chima.

In September, Chima and other residents were forced to take government and a Chinese coal mining company that had started coal exploration inside Hwange National Park to court. This resulted in the government banning mining inside all game parks including Hwange.

The uproar and subsequent victory, however, was a tip of the iceberg and troubles still persist.

"Mining should be sustainable and not encroach into other sectors, you would not expect other sectors to also affect human beings, that is not acceptable but coal activities are forcing animals to encroach into human settlements causing wildlife-human conflict, something which can be avoidable," said Chima.

Local leaders say as a result of noise from mining activities, clearing of vegetation and contaminated water — when available — around the game park, animals like elephants are moving towards people settlements resulting in property loss, injuries and death.

Chima suggests that a clean energy transition or "going green" now may solve the chaos.

"Considering that the world is going green, we need to move away from coal mining to renewable energy (and) we can take advantage of this sunlight which is in abundance," he said.

However, government appears determined to expand extraction of fossil fuels as a quick remedy to the crisis despite the various hard-hitting ecological costs.

In a state of the nation address last week, President Emmerson Mnangagwa promised a much better supply of energy albeit mainly hinged on highly emitting coal-powered stations.

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Inside Hwange Colliery Company mine and (inset) Aliyeli Lungu stands next to what is left of his bean crop. Pics: Kennedy Nyavaya

da. The current stability in power supplies owing to improved hydropower generation at Kariba Dam and increased energy output at the thermal power plants has had a positive impact on productivity across all sectors of the economy," said Mnangagwa, adding that expansion at Hwange power plants 7 and 8 would be "expedited following delays as a result of Covid-19 pandemic".

"The ongoing coal mining projects in Hwange district will ultimately translate into an increased national generation capacity of over 6 000 megawatts (MW) by 2025 and this will see Zimbabwe becoming a net exporter of energy works."

This is inconsistent with the renewable energy policy his government launched earlier this year with the vision to "provide energy access to all in a sustainable manner by increasing the contribution of renewables in the country's energy mix".

Estimates within the document show that the country, with an installed capacity of 2 300MW, has more than enough clean energy potential through sources including solar, hydro, biomass, geother-

mal and wind. All that lacks now is investment and political will.

Instead there has been a penchant to expand and even establish new coal plants with billions in funding particularly coming into the sector from Chinese firms.

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According to Hivos, a Dutch development agency, regional project manager for green and inclusive energy, Mike Makhetho, Zimbabwe requires an estimated US\$8 billion to build solar fields.

"Borrowing from other countries' experiences, an average of US\$8 billion spread across different provinces can help in building these solar fields, which can harvest the solar and ease energy needs," Makhetho told this publication earlier this year, adding that the country would actually get surplus to export from such an

investment.

While the majority of countries across the world are at pains to solve the climate crisis that has seen a spike in global warm and increase in disasters, a reduction in greenhouse gas emissions would be a good show of solidarity from Zimbabwe — a signatory to the Paris Agreement on GHG emission reduction.

Without a conclusive sustainable solution to the energy puzzle and continued dependency on fossil fuels, climate changes will certainly get worse and the livelihood of locals like Lungu will continue to be compromised.

"People are really worried because things are tough these days, my bean crop was going to take me for some time, now it is gone, I need to start afresh because vegetables are our mainstay these days, so many are really worried," said Lungu.

● This story is the second installment of a series titled *How a botched energy transition is working against climate change-prone Zimbabwe*, a project being supported by Africa 21.



Elephant footprints.... Elephants are also contributing to the damage of flora and fauna in Hwange and surrounding areas