



# TOSHIBA CARBON ZERO SCHEME

## UN Sustainable Development Goals

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- > The UN has 17 measurable Sustainable Development Goals (SDGs), several of which are supported by the Toshiba CarbonZero scheme. This report focuses on **SDG 15: Life on Land**, explaining the impact of the Toshiba Carbon Zero Scheme and its link to this goal.
- > SDG 15 recognises the extent to which human life depends on the earth for sustenance and livelihoods and recognises how climate change and deforestation are increasing the incidence of drought and hastening the desertification of once arable land. SDG 15 promotes activities to conserve and restore terrestrial ecosystems in order to both support livelihoods and conserve our ecological heritage.
- > The Toshiba CarbonZero Scheme has been supporting the Kenya Cook Stove Project since it first began. The efficient nature of the stove halves the amount of firewood needed, saving time and money on collecting firewood.

### FACTS

- > Current global rates of land degradation are unprecedented, with arable land disappearing at a rate over 30 times the pre-industrial rate. With a growing global population, this exerts immense pressure on increasingly scarce land to yield sufficient food, with this strain leading to short-term measures such as heavy use of chemical fertilisers, which further degrades arable land.
- > Desertification and the loss of forests is having devastating impacts on biodiversity, with 8% of the world's 8300 known animal breeds already extinct and a further 22% considered endangered.
- > Extensive programmes to protect forests and plant trees have helped Kenya to buck global trends and increase its forest cover in recent years. Forest cover now accounts for around 6% of the country's land area, an increase of over 4% since 2013.

### Kenyan Cook Stove Case Study

49-year old Mary Anindo lives in a rural village in West Kisumu district in Kenya. Married with 4 children, she has seen dramatic changes in the climate and surrounding environment in her life. She remembers how, like all families in the area, her family used vast quantities of firewood before they received their CarbonZero stove in 2013. Relying on using a 3-stone fire which had extremely low efficiency, the family would use approximately 12 kilograms of dry firewood on average per day. Equivalent in volume to a 3 year old tree sapling, this vast level of wood consumption at the household level put huge strain on forest resources. Mary and her neighbours noticed how forest cover had declined around the village over the years, and found that they would have to walk longer and longer distances to gather firewood from the thinning forest.

The gradual destruction of the forest was part of a wider trend of environmental decline that strained livelihoods in the community. The absence of tree cover opened the soil to erosion, allowing it to gradually dry up and reduce in fertility. The absence of trees also combined with the long-term impacts of climate change to reduce the amount of rainfall received in the area, heightening the challenge of weaning crops from the meagre soils.

Mary recounts how this has changed since her family and others in the community received their CZ stoves. Their consumption of firewood has decreased to less than half its previous level, greatly decreasing the pressure to cut trees and gather firewood. CarbonZero Kenya has also provided training



and information to community members to cultivate their own trees, leading to a dramatic increase in people planting trees on or near their homesteads, bringing positive impacts for soil quality and beautification for the neighbourhood.

Mary says: *“Thanks Toshiba and CO2balance for introducing this technology in our community. We understand that for the country to be saved from forest destruction, Kenyans must adopt energy saving technologies to stem the tide of climate change. We must encourage people to grow more trees because the current conservation efforts are not enough to replenish what is getting lost every day. As a country, we must use all means available to create awareness and entice Kenyans to join hands in planting trees to save this country from the adverse effects of climate change.”*

### Toshiba's contribution to the UN Sustainable Development Goals

This case study shows how the project activities in Kenya contribute to SDG 15 in the following ways:

- The project reduces households' consumption of firewood by more than half, thereby reducing the destruction of forests and enabling tree cover to recover, thus preserving habitats for local species and contributing to climate change mitigation.
- Training and awareness raising in tree planting has also allowed community members to help forests to recover above and beyond their reduced firewood consumption, thus creating public awareness and engagement in the impact of forests for life on land.

For more information about the Toshiba Carbon Zero Scheme please visit our website:  
[www.toshibatec.eu/about/sustainability/carbon-zero/](http://www.toshibatec.eu/about/sustainability/carbon-zero/)

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