Greetings!

**Why you should reconsider use of woodfuel**

According to Food and Agriculture Organization (FAO), most African Countries including Kenya still depend heavily on wood to meet basic energy needs especially in rural areas. Woodfuel use ranges from 61% to 86% of primary energy consumption, with a major part of this being consumed by households.

While the statistics above paint a picture of overreliance on this energy resource, from an environmental and human health perspective woodfuel use remains a critical issue. This is due to the negative impacts associated with its use. It is important that we understand these negative impacts and implement measures to address them, so as to protect the future of our planet. Therefore, this week’s article will discuss these negative impacts in greater detail.

**Climate change**

Probably all of us have at one time experienced or seen people cooking over the traditional ‘three-stone jikos’ or even other forms of inefficient jikos that could be available in our households, especially in rural areas. In most cases the type of energy source used in these jikos is woodfuel in the form of charcoal or firewood. However, did you know that woodfuel releases harmful greenhouse gas emissions in the form of carbon that contributes to climate change? When we use firewood or charcoal, black carbon commonly known as soot is released into the atmosphere causing global warming. This is due to its ability to trap heat radiated from the earth’s surface that would normally escape into space. These then lead to climate change effects, some of which we have become too familiar with and been experiencing in the recent years such
as extreme floods and droughts. See the picture below of the recent flashfloods in West Pokot and Elgeyo Marakwet regions.


**Forest degradation**

Forests have been an important source of energy throughout human history. Firewood, charcoal and wood pellets from timber processing which are commonly used in cooking and heating have been derived from these precious natural resources. Although in some instances, wood used for fuel is deadwood collected from the forest, there is still increased cutting of trees in our forests at an alarming rate! There is global consensus that cutting of trees at a large scale has led to deforestation. This usually occurs when the rate of extraction outstrip the rate at which trees within the forest are replaced or planted and grow to maturity. Cutting down of trees for fuel wood has also threatened the existence of some wildlife species due to habitat loss, and led to increased soil erosion. See illustration below of trees cut in the Maasai Mau Forest for charcoal production.
Respiratory diseases

Beyond impacts on climate and biodiversity, reliance on woodfuel also has negative impacts on human health due to carbon exposure in the form of smoke. This is usually exacerbated when cooking is done indoors and there is inadequate ventilation. According to the World Health Organization, indoor air pollution causes several non-communicable diseases. These include: stroke, ischaemic heart disease, chronic obstructive pulmonary disease, pneumonia and lung cancer. It is important to note that women and children are more exposed to indoor air pollution than men, due to the fact that women prepare food in the kitchen while at the same time taking care of their children. Therefore women and children are more likely to suffer from these diseases. The WHO statistics on death among children associated with household air pollution paint a grim picture of the situation. Close to a half of deaths due to pneumonia among children under 5 years of age are caused by particulate matter (soot), inhaled from indoor air pollution caused by not only inefficient stoves but also use of woodfuel.

Despite these impacts, the good news is that we can reverse these trends by adopting use of efficient as well as ecofriendly energy resources. These include: Liquid Petroleum Gas (LPG), electricity and briquettes, which in the recent years are becoming more increasingly available. Currently, most parts of the world are ‘shut down’ due to COVID-19 but we are optimistic that this situation will end. When that time comes, we hope that you will apply the knowledge gained
through this article, with an eye to promoting sustainability in your operations. In the meantime, we continue to encourage you to stay safe, wash your hands and wear a mask while in public places.