Can a mobile app help East African farmers adapt to climate change?

By Isaiah Esipisu   22 Nov 2017

A simple mobile app has been developed to help farmers and local authorities in East Africa choose the right kind of tree to plant - key to helping countries curb their emissions and adapt to a changing climate, say the developers.

Image Source: World Agroforestry Centre

In Kenya's Nyanza region, which hugs Lake Victoria, for example, the Africa Tree Finder app identifies 80 different tree species that can potentially flourish for wood production, human consumption, animal use, environmental use and to make medicines.

The app draws on data which is continually updated from a potential natural vegetation map that shows plants that would survive unaided, according to the World Agroforestry Centre (ICRAF), which developed the app. The map covers Burundi, Ethiopia, Kenya, Malawi, Uganda, Rwanda, Tanzania and Zambia.

"In African dry areas (for example), there is a very tight margin around which trees may be impacted by climate change. However, if temperatures increase by say two degrees Celsius, there is a likelihood that some species may not survive," said Peter Minang, the global coordinator of an international partnership researching tropical forest margins at ICRAF.

Data for the app and the map were collected over the last seven years. "But even today we keep modifying the map based on new (plant) behaviours... and how they evolve and respond to changing climatic conditions," Minang said. Most of the data is based on satellite information, soil analysis, meteorological data, slope data, and indigenous knowledge among other sources.

Agroforestry a potential low-hanging fruit for achieving climate commitments

ICRAF says these technologies will be instrumental for several countries that have identified agroforestry as a key part of their national plans on how they will contribute to meeting the Paris climate agreement goal to limit global warming to well below two degrees Celsius above pre-industrial levels.

Widespread use of agroforestry makes it a potential low-hanging fruit for achieving climate commitments, cutting emissions in agriculture, and building the resilience of farmers to changes in climate, they say.

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