

# New version of vegetationmap4africa launched

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Field testing of the mobile App in Mbale, Uganda. Credit: Roeland Kindt/ICRAF

Tree enthusiasts on the move can now identify species as they go, and at the same time gain a deeper understanding of their natural environment, thanks to a new version of [vegetationmap4africa](#). The new version of the map (ver. 2.0), which has been developed by the World Agroforestry Centre (ICRAF), the University of Copenhagen and partners, was

launched today at the XIV World Forestry Congress in Durban. The map is expected to help those involved in landscape restoration to make better decisions on suitable tree and shrub species to use.

Included in the new [vegetationmap4africa](#) is a smartphone application, which "allows you to bring the map with you in the field, even where there is no access to the internet. The offline app allows you to know the [natural vegetation](#) and its useful species, wherever you are" says Paulo van Breugel from the University of Copenhagen.

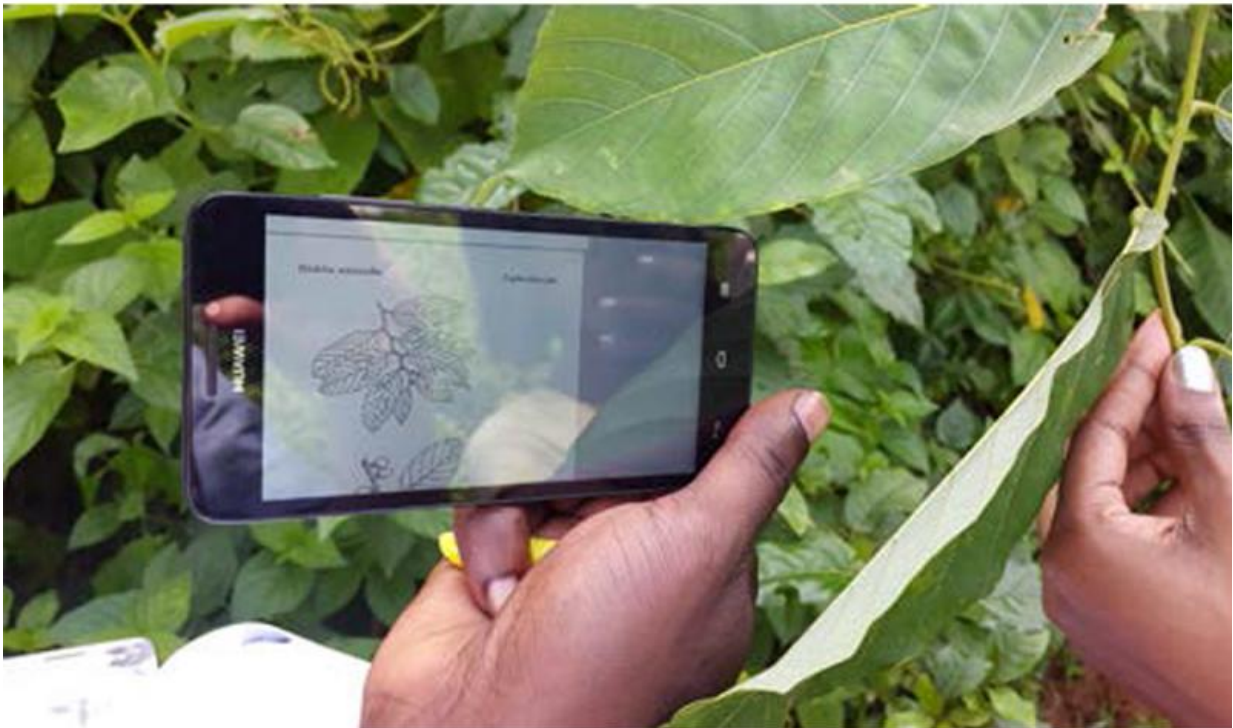
According to Roeland Kindt, World Agroforestry Centre (ICRAF) senior ecologist who co-led the development of the map and its associated tools, accessing the smartphone version of the map will greatly improve the accessibility of the map's information, which was previously only available via the web and to users with access to a computer.

"We are excited to provide a wealth of [tree species](#) information on the web and mobile space, which can be used as a decision-support tool for agroforestry—the wise use of trees in agricultural landscapes—and as a guide for restoration of vegetation, to the benefit of smallholder farmers and for managing biodiversity. The map is used not only by professional ecologists, foresters and students, but also non-specialist seeking particular bits of information about the natural environment they see in front of them," said Kindt at the new map's launch.

The [vegetationmap4africa](#) currently covers eight Eastern and Southern African countries: Burundi, Ethiopia, Kenya, Malawi, Rwanda, Tanzania, Uganda and Zambia. The website integrates tutorials to get users started.

The map shows the distribution of 'potential natural vegetation' across the landscapes of the countries. These landscapes contain a complex

patchwork of many types of forests, woodlands and bushlands, such as 'Afromontane moist transitional forest' around Kenya's Mount Kenya region; 'Wetter miombo woodland' around Zambia's Copperbelt region; 'Lake Victoria drier peripheral semi-evergreen Guineo-Congolian rainforest' around Lake Victoria in Uganda, and so forth. Each vegetation type is accompanied by a factsheet (accessible via a few clicks on the web or taps on the smart phone) that documents tree species that are known to occur within the vegetation type.



Field testing of the App in Mbale, Uganda. Credit: Roeland Kindt/ICRAF

A species selection tool integrated in the map can be used to find 'the right tree for the right place' depending on the main goods (such as fruit, fodder or timber) and services (such as shade and erosion control) desired. Tree species are grouped by type of uses, making it convenient to choose species for land restoration in the location of interest. An Excel sheet allows the user to select and rank species by use.

Each of the tree species is further linked to a wealth of online databases through the Agroforestry Species Switchboard. By checking information on a particular web-based database that is linked through the 'switchboard', users can refine the selection of suitable tree species, such as taking into account the Red-list status of selected species.

Landscape restoration is often a long-term and costly exercise, and the vegetationmap4africa's species selection functionality also allows those involved in regenerating degraded tracts of land to tell which trees and shrubs originally occurred at the location. This knowledge, combined with interaction with local stakeholders on the species that would be most suitable for a particular area and purpose, enables smart selection of species, , saving time and resources.

"But we aim at going beyond the species level. The map helps us to identify potential ecotypes within species and extend our knowledge to recommend well adapted seed sources for particular sites", says Jens-Peter Lillesø, a seed systems specialist at the University of Copenhagen.

While developing the new version of the vegetationmap4africa, an associated new app was developed at ICRAF in collaboration with the International Union for Conservation of Nature (IUCN). The specific objective of the new app was to enable users of a basic, affordable smartphone to identify the vegetation type and suitable tree species. This app, called Uganda Tree Finder, was successfully pilot-tested in Uganda's Mt. Elgon region together with Ugandan District Forestry and

Natural Resources officers and representatives of other organizations involved in restoration in the Mt. Elgon region such as IUCN Uganda, the Uganda Wildlife Authority, ECOTRUST, the National Forestry Resources Research Institute and Farm Radio International. This app will soon become available for free download from the Google Play Store once the app has been tested for the different Android versions found in various models of smartphones. Together with making the app available for free download, an accompanying website will be launched where users can upload images of tree species and landscapes that confirm (or contest) the information of the vegetation type, thus allowing for 'citizen science'.



Field testing of the App in Mbale, Uganda. Credit: Roeland Kindt/ICRAF

Its support to forest landscape restoration activities is one of the new

app's most important features. Indeed, the app's development was made possible through a partnership project: 'Filling Knowledge Gaps on the Restoration of Degraded Smallholder Landscape Mosaics,' led by IUCN and funded by the UK Department for International Development (DFID).

"The mobile application is a new innovative approach to bring restoration and ecological knowledge to farmers", says Chetan Kumar (Science and Knowledge Manager, IUCN). "We are currently monitoring if this new approach works with rural communities in Uganda, and we then hope to bring the same innovation to other countries trying to accomplish large scale restoration - to countries like Guatemala, Brazil, Rwanda and Ethiopia, who have all made strong commitments to the Bonn Challenge".

ICRAF director-general Tony Simons said the new mobile app is the culmination of decades of work by many institutions and individuals in East Africa and Europe, realized with funding from diverse development partners: DFID, the Rockefeller Foundation, Danida, BMZ, UNEP-GEF, the European Commission, IFAD, SIDA/SAREC, VVOB, Australian Centre for International Agricultural Research (ACIAR), and support from the Forests, Trees and Agroforestry (FTA) and CCAFS Research Programs of the CGIAR.

"The lack of a nuanced understanding and wise management of complex vegetation and landscapes is a perennial problem in Africa. Thus, the use of perennial species, such as trees, to portray successful examples of solutions, is a powerful approach. In other words, trees bring perennial solutions to perennial problems. The long-term funding received for this effort has been the key to this wonderful outcome," said Simons.

**More information:** The data and tools on [vegetationmap4africa.org](http://vegetationmap4africa.org) can be freely downloaded and used for educational, conservation and

research purposes. Various tutorials have been included in the website that show how the map and tools can be used.

Provided by World Agroforestry Centre (ICRAF)

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