New forest on the Tain river bank in Ghana

Interview with Dr. Lucy Amissah about nature restoration efforts in Ghana

By Rosa Diemont (Form International) - March 2022

Dr. Lucy Amissah is Senior Research Scientist at CSIR-Forestry Research Institute of Ghana (CSIR-FORIG) – a national institute for forestry research in Ghana that conducts demand-driven research, builds capacity and promotes the application of technologies for sustainable management of forest resources.

Amissah has a passion for conserving the natural environment and forest landscapes. Over the years she obtained BSc and MPhil degrees in the field of natural resource and forest management at the Kwame Nkrumah University of Science and Technology in Kumasi, Ghana, before proceeding for her



PhD in Forest Ecology and Forest Management from Wageningen University, the Netherlands.

As a scientist, Amissah is particularly interested in researching drought impacts on tropical forest tree species and their distribution, as well as the human influence on forest degradation, for example how human-caused wildfires are influencing biodiversity in Ghanaian forests. More recently, she contributed to a global research on multi-dimensional forest recovery that was published in the journal Science, that studied the capacity of forests to regrow on abandoned land and the important role these "secondary" forests play in biodiversity conservation, climate mitigation, and landscape restoration. The full article can be found here.

Other important works are ex-situ conservation of endemic plant species and the establishment of seed orchards in Ghana. In these orchards, native trees are planted that provide a reliable supply of quality seeds for restoration purposes. Special attention is given to preserving the various genotypes.

CHALLENGES OF RESTORATION

The real challenge of many reforestation projects lies with the maintenance of the areas. "These days, a lot of attention goes to tree planting and reforestation of degraded areas", says Amissah. "People think that after planting a tree the work is done. But actually the real work, maintenance, only starts after planting the tree." From Amissah's perspective, removing the threats to forests is more efficient. By removing threats such as wildfire and grazing, forests can start to regenerate and bounce back." Sometimes, the only thing you have to do is leave the forest alone and let it do the work". She believes that regeneration (naturally or assisted) deserves more attention in landscape restoration programmes.

TAIN II FOREST RESERVE

Under the Landscape Restoration Programme for Tain II Forest Reserve (TLP), Form International and Form Ghana worked together with CSIR-FORIG, particularly with Amissah, to reforest 1,075 hectares with Eastern Guinean lowland forest along the Tain river. Active planting was needed, to reintroduce species that were no longer found in the area but used to be part of the natural vegetation. FORIG played an important role in selecting these species and supplying seeds.

The reforestation initiative was set up to give forest recovery along the banks of the Tain river a kick-start towards regeneration and to connect the remnant forest patches. Ultimately, a strip of around 18 kilometres along the Tain will be restored to healthy forest which can function as wildlife corridor.





TALBOTIELLA GENTII

The reforestation team wanted to contribute actively to the protection of the endangered and endemic tree species *Talbotiella gentii* that is under severe threat of extinction. "This species is rated critically endangered and planting efforts to secure its survival are critically needed as there are only few distant populations left", Amissah says. Amissah extensively studies which conditions are required by this species for optimal seed germination. For TLP a plan was made and implemented to have a variety of genetic accessions planted as an ex-situ conservation effort (the species is not native to the Tain II forest).





"Talbotiella gentii restricted in Amissah explains, is distribution to the margins of the dry forest zone of Ghana where there has been widespread fire damage due to annual wildfires over four decades. It occurs as isolated populations, some of which show little regeneration. This lack of regeneration seems in part to be a consequence of seed abortion, which further threatens the long-term survival of the species. As the species occurs on farms and in forest remnants of low protection, it runs a great risk of extinction. It is still cut for firewood and charcoal production. To protect the species from extinction and to avoid

A healthy and well-established Talbotiella gentii individual in Tain II Forest Reserve (©Tieme Wanders) further genetic erosion, it is very good that there are additional plant gene banks in a number of well protected locations, of which one is now available in Tain II Forest Reserve."

HOPES FOR THE FUTURE OF THE FORESTS OF GHANA

When I ask Amissah about her hopes for the forests of Ghana she says: "My hope is that we intensify our efforts to use several approaches and methods in our efforts to restore forests. I also hope that Ghana meets their commitment to restore 2 million hectares of degraded forests committed under AFR100 in contribution to the Bonn challenge. To achieve this ambitious goal, we must smartly use the natural forest patches that still remain as a mosaic from which natural regeneration can be promoted". "Looking from the perspective of local communities, we must combine their interests with our restoration ambitions. By establishing community nurseries, using the Modified Taungya system (in which communities support Forestry Commission Ghana to rehabilitate Forest Reserves) and promoting trees on farms, we can improve the economic situation of people and create awareness of why forests are important to all of us.



Seeds germinating at CSIR-Forestry Research Institute of Ghana (©CSIR-FORIG)





In four years' time over 1,000 hectares of degraded land has been reforested with indigenous trees by <u>Form Ghana</u> along the Tain River in the Bono Region of Ghana, at the border of the Tain II Forest Reserve. This reforestation initiative was executed in collaboration with the forestry experts from <u>Form International</u> and was part of the Landscape Restoration Programme for Tain II Forest Reserve, funded by <u>DOB Ecology</u>.