A NEW MOBILE APP BASED ON BOTANICAL EXPERTISE FOR IDENTIFYING ASIAN MANGROVE SPECIES

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Abstract

Preserving tropical vegetation biomes stems with an accurate identification of constituent plant species. In Asia, identifying mangrove plant species is particularly required in biodiversity assessment, restoration or preservation programs, which are pivotal components of the ecosystem's preservation from unsustainable anthropogenic activities.

The necessary rigour coming from botanical expertise, however, remains both insufficiently considered and unavailable for non-botanists including scientists, local communities and stakeholders of the coastal zone management.

In this work, we will present a mobile application, working on both iOS and Android, that allows for the identification of 51 Asian mangrove species at your fingertips. We have based our approach on generic drawings covering the full range of botanical characters that guarantee the identification of mangrove species at both propagule and adult growth stages. The tool has been evaluated *in situ* by botanist and non-botanist scientists from different Asian countries.

In the first instance, we will discuss difficulties in correctly identifying Asian mangrove species, especially, those from the same family, and the technical approach we chose to finally solve them. Then, subsequently, we will demonstrate how, with this app, we will be able to map mangrove species in tropical vegetation biomes with the objective of sharing accurate survey data on existing mangrove flora all around the world, year after year.