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Assessing the *Irvingia wombolu* (Irvingiaceae) growth parameters of 10 year old trees in Cameroon

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Irvingia wombolu Vermeesen is a local fruit tree with a wide distribution across west and central Africa. It is also a multipurpose tree that provides non-timber forest products. In particular fruits, kernels can be transformed into powder for cooking, pharmaceutical and cosmetic use and its wood is also used in house construction. Fruits of this tree are gathered for kernels extraction. The kernels have both culinary and economic value locally, regional and internationally. Unfortunately, poverty and malnutrition are increasing in Cameroon in rural area. The objective of the study was to assess the growth and the development of almost 10 years old *Irvingia wombolu* trees of seed set as progeny trial. To better understand its development on farm cultivation in Cameroon, 550 trees of *I. wombolu* were assessed. The result of the study indicates that *I. wombolu* parameters varied in the same way but not at the same rate and it is exploited mainly from local communities. Height and crown diameter are growing simultaneously as collar diameter and DBH. The most important factor is the percentage of growth of the trees since last 10 years of implementation practices so that we would be able to make some prevision in fruits production and tree management to handle some constraints when cultivating the species in any land use system. Large fruits size, easy kernel extraction and weight from fruits during fruiting season are found to be main selection characteristics of farmers cultivating. Observations showed that, the species is more useful and need more strategies to develop another types of propagules and preserve it. From these results and field observations, it is important to develop suitable and sustainable methods to intensify the cultivation of the NTFP's in agro-forestry systems.

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Looking beyond ecological functions to the value of ecosystem services: Incorporating ecosystem services into infrastructure and policy decisions in the Greater Houston region

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Natural landscapes and organisms serve our wellbeing in a great variety of ways like water purification, flood protection, recreation, recharging of aquifers, protection from damage by hurricanes and tropical storms, pollution reduction, carbon sequestration and more. The Greater Houston region, which encompasses a huge and diverse assemblage of forests, prairies, bottomlands, wetlands and bays receives a tremendous amount of benefits (ecosystem services) from the ecological functions of the natural world. This policy paper explores the ways in which various entities in the Greater Houston region are working to identify and better understand the services provided by urban riparian, upland and coastal ecosystems that traverse this region. In the paper, we discuss the recent urban riparian and other ecosystem successes in enhancing and/or restoring ecosystem services to solve infrastructural needs, often at a lower cost than traditional solutions. With examples provided, we find that the outcome is often even better than the initial cost saving assessments which reflect that solving a problem using ecosystem services by preserving or restoring an entire or even partial ecosystem can produce a whole host of ecosystem services in addition to the single service needed to accomplish the function of the infrastructure. We look closely at a defining aspect of the urban core of Houston and the extended Houston Region – its myriad of connecting bayou and creek systems. Creeks and bayous play an integral role in flood protection, air and water quality and wildlife habitat for the region and are prime examples of ways that ecosystem services can be added or enhanced and more effectively benefit everyone by providing more aesthetic and environmental benefits than structural alterations. We then access the importance of integrating the value and benefits of ecosystem services into mainstream policy decision-making, providing policy makers with more tools to make mutually beneficial decisions regarding the region's most pressing economic and environmental issues and recommend ways to accomplish these goals.

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