

MIKOKO PAMOJA: A SMALL SCALE MANGROVE REDD+ PROJECT IN KENYA

J Kairo and M. Czarchur

¹ Blue Carbon Unit, Kenya Marine and Fisheries Research Institute, Kenya.

² Bangor University, Bangor, United Kingdom.

gkairo@yahoo.com and mollyczachur@gmail.com

Carbon sequestration is higher in mangrove forests than any terrestrial natural forest. When degraded, this ecosystem can release large amounts of carbon to the atmosphere and cease to perform vital services. At the mangrove REDD+ project in Kenya, known as Mikoko Pamoja, we investigated how we could protect mangroves whilst achieving community development. Based on years of research, 117 ha of mangrove forest were protected in Gazi bay in 2013. Twenty plots of 10m × 10m were monitored for forest condition, including forest cover, stem density and the pattern of natural regeneration. Mangrove fauna, particularly crabs and molluscs, were monitored in triple replicated quadrats of 1m × 1m. Community impact of Mikoko Pamoja was assessed against national standards for water and education, and by effectiveness of the first growth *Casuarina* woods established to control leakage.

Between initiation of project in 2013 and now, the overall condition of the mangrove forest has improved. The stocking density of stems increased from 3,931.81 to 5,640 ± 660 stems ha⁻¹. Natural regeneration decreased from 39,632 to 24,090 trees ha⁻¹, indicative of a less degraded forest. *Uca* and sesarmid burrows existed in a 1:0.54 ratio. During the same period, through avoided deforestation, reforestation of 117 ha, increased surveillance and educating the community, over 9,000 tCO₂ was sequestered, generating USD 36,278 to the local community. This has directly benefitted the quality and supply of water in Gazi and Makongeni villages, and the local schools have received over 700 books. Mikoko Pamoja contributes to global action for sustainable development, and is being upscaled across the WIO region.

Livelihood projects such as aquaculture, ecotourism and beekeeping have been introduced to the community in order to control carbon leakage in Mikoko Pamoja designated areas. Mikoko Pamoja has therefore been a successful example of community-led blue carbon project designed in similar principles to REDD+. Success of Mikoko Pamoja is being upscaled to other parts of Kenya (in Vanga) as well as across the Western Indian Ocean countries of Tanzania, Mozambique and Madagascar.