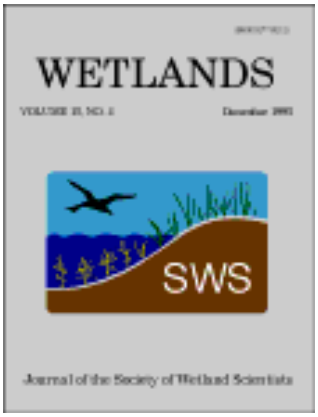

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A NOVEL APPROACH TO GROWING MANGROVES ON THE COASTAL MUD FLATS OF ERITREA WITH THE POTENTIAL FOR RELIEVING REGIONAL POVERTY AND HUNGER

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Abstract:

About 700,000 mangroves, chiefly *Avicennia marina*, were grown in the tree-less mud flats of Eritrea by a newly developed technology that provides required nitrogen, phosphorus, and iron. A method of fertilization was devised that eliminates the possibility of fertilizer runoff. Novel methods have been developed for planting seeds at the final site and protecting seedlings from uprooting by wave action and encircling wrasse. Methods were developed for preserving mangrove seeds by sun-drying, which results in a stable grain-like product. However, dried mangrove seeds and foliage are insufficient for supporting good growth of sheep, which was a desired outcome. Supplementation of mangrove material with small quantities of a stress food for sheep, consisting of fat-soluble vitamins and minerals renders the mangroves an adequate food. Together, these findings are capable of forming a profitable sea water agriculture and relieving hunger and poverty in many regions of the world.