

MITIGATING ANOXIA IN DEGRADED MANGROVE ENVIRONMENTS By Sonjai Havanond<sup>1</sup> and Gordon Maxwell<sup>2</sup> :<sup>1</sup>Mangrove and Swamp Forest Research and Development Sub-Division, Forest Research Office, Royal Forest Department, Bangkok 10900, THAILAND, <sup>2</sup>Environmental Studies, School of Science and Technology, The Open University of Hong Kong, c/o Environmental Science Suite, 1B, 15 Grampian Road, Kowloon City, HONG KONG: Excessive anoxic conditions in mangrove mud present challenges to restoration and rehabilitation programmes in both “normal” and degraded mangrove environments. Mud anoxia can be as challenging as hypersaline situations in mangrove rehabilitation schemes. Excess anoxia can be especially significant in the early phases of replantation in degraded mangrove or former mangrove areas. Such anoxic mud can markedly reduce absorptive root formation and post establishment growth in post—nursery planted mangrove seedlings. Strategies to nullify negative redox (anoxic) mud / substratum conditions are urgently needed in coastal rehabilitation schemes involving mangrove species. In this paper we examine the potential of mud lobster populations in the reduction of negative mud anoxia. The positive and negative aspects of mud lobster activity is examined in the context of coastal mangrove rehabilitation and restoration schemes, especially as they may apply to degraded coastal environments.

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