

Chapter 3

Assessment of targeted marine invertebrate species of the northwestern lagoon of Grande-Terre (Poum to Koumac), New Caledonia

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SUMMARY

- A total of 28 sites were assessed for targeted marine invertebrate species of sea cucumbers and molluscs (*Trochus niloticus* and giant clams) to a maximal depth of 12 meters. The assessment included sites in the southern portion of the survey area (Poum and Koumac) and did not include the northern portion between Yandé and Poum.
- Thirteen species of sea cucumbers were recorded and the highest diversity was observed in intermediate type reefs with 11 species. Densities of the most harvested species, *Holothuria scabra* and *Holothuria nobilis* were extremely low to nil.
- *Trochus niloticus* were most frequently observed on barrier reefs and in higher numbers than observed during the 2004 Mont Panié RAP survey. Densities were similar between intermediate and fringing reefs. Data from Province Nord shows significant levels of harvesting for this species and a stock assessment would precise the sustainability of *T. niloticus* extraction rate.
- Only three species of giant clams were recorded along the transects and one *Tridacna dervasa* was observed outside the transect. Only empty *Hippopus hippopus* shells were observed. As expected no *T. gigas* were observed. The most recorded species was *T. crocea*.
- A comprehensive stock assessment is urgently needed for bêche-de-mer. This assessment would include sites deeper than 12 meters. Similar assessments are needed for giant clams and Trochus as well as regular monitoring of the stocks and the pursuit of regular monitoring of catches for these three invertebrates.

INTRODUCTION

Targeted marine invertebrate species of sea cucumbers and molluscs (trochus and giant clams) were previously assessed for reef sites off the northeast coast or Mount Panié region (Pouébo and Hieghène) of Province Nord (Lindsay and McKenna 2006). Here, we report the findings from an assessment of the same species for reef sites off the northwest coast (Poum and Koumac) of Province Nord using the belt transect method. These invertebrate species are collected for commercial and subsistence purposes. This chapter focuses on sea cucumbers, trochus and giant clams species within the context of the 28 sites assessed in the southern portion of the survey area (Koumac). For more detailed background on these select invertebrates, the reader is referred to the previous RAP survey report (McKenna et al. 2006). To be consistent with terminology for the sea cucumber fishery, bêche-de-mer will be used when referring to the dead animal prepared for commercial purposes. Holothurians or sea cucumbers will be the terms used for the live animal. The World Fish Center's terms to describe genus and species of sea cucumbers are used.

According to Province Nord Fisheries, the harvesting of sea cucumbers began at the end of the 19th century in the Poum-Koumac area but no data are available on their stocks. The main species harvested are *Holothuria scabra* and *Holothuria nobilis* counting respectively for 20 and