— Creation of about 300 extra jobs;

— Improved social services for personnel: medical aid and pension, schools for children, housing and sports facilities.

We would gladly accept any advice or information on the above as well as encourage research parties to visit Madagascar in the future.

Estimated production in dry weight

The Department of Fisheries estimates production of all beche-de-mer at ±120 t/yr. My estimate is ± 300 t/yr, with ± 60 t wasted due to bad quality or small size (± 1-2cm).

Please send any enquiries or information to:

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Laamu Atoll Mariculture Project: mariculture of sea cucumbers — project summary

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The primary objective of our project, over an initial two-year period, is to demonstrate the feasibility of sustainable sea cucumber culture at village level in the Maldives, in order to provide a viable alternative to the rapidly declining sea cucumber fishery. Villagers who have been involved in this fishery will be encouraged to participate.

Culturing sea cucumbers will help reverse the present trend towards depletion of the natural stocks of marketable sea cucumber species and will help restore jobs and income provided by the fishery until recently. The project is sponsored by the Oceanographic Society of Maldives and endorsed by the Maldivian Ministry of Fisheries and Agriculture.

In the propagation of sea cucumbers we are considering both the sexual and asexual forms of reproduction. In November 1993, we began a screening experiment to examine which of several commercial species have potential for asexual propagation.

The species we are examining in our replicated field-pen trials include *Actinopyga mauritiana, A. miliaris, Holothuria fuscogilva, H. nobilis, Stichopus chloronotus, S. variegatus* and *Thelenota ananas*. We have induced animals in our pens to undergo binary fission and are currently measuring survivorship and individual growth/regeneration rates. Following this screening experiment we plan to determine the optimal density and the effect of food supplements on the growth and survivorship of asexually propagated animals.

In our evaluation of the sexual form of reproduction, we initiated, in December 1993, a 12-month study on the sexual cycle of three species of sea cucumber. The gonads of field-collected specimens of *A. mauritiana, H. fuscogilva* and *T. ananas* are being examined. The data collected will be used to assess the time and duration of spawning activity, fecundity and the weight at first sexual maturity. Upon determination of the spawning season for each species, trials on animal spawning and larval/juvenile rearing will be conducted in the laboratory.

Based upon the data collected from the experiments noted above we will select the 'best' species. Characteristics which will be considered in the selection of the best species will include biomass per unit area, survivorship and growth/regeneration rates in the asexual propagation trials, duration of spawning season, fecundity, larval and juvenile survivorship, marketability and price per kg.

Once the best species is selected, we will identify three Maldivian families to conduct pilot-scale operations. These operations will be part of the follow-up community-based mariculture development programme.