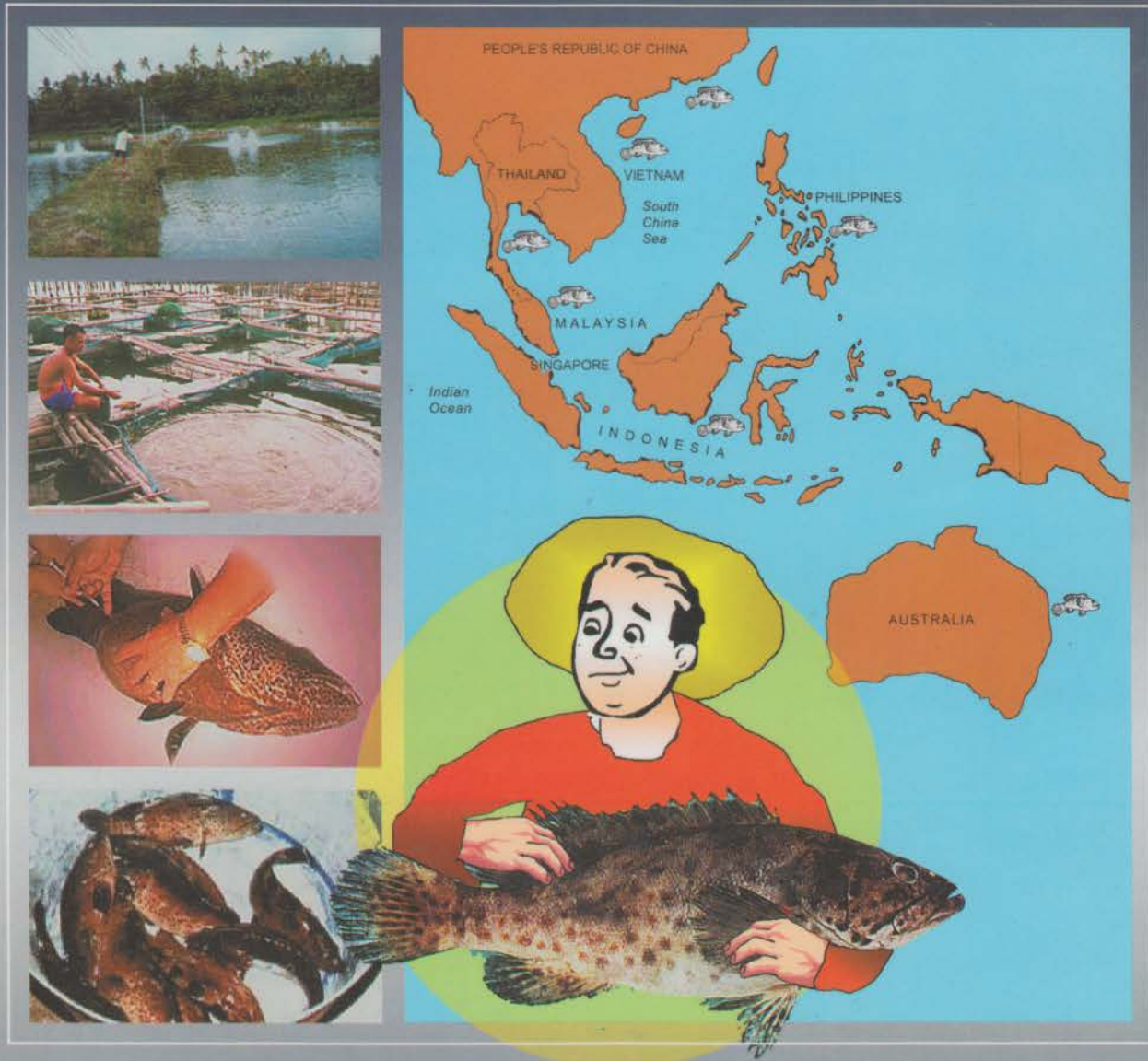


Husbandry and Health Management of Grouper



Prepared by



Aquaculture Department
Southeast Asian Fisheries Development Center
Tigbauan, Iloilo, Philippines

For



ASIA-PACIFIC ECONOMIC COOPERATION
Fisheries Working Group 01/2000

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Foreword

The Asia Pacific Economic Cooperation (APEC) was established in 1989 in response to the growing interdependence among Asia-Pacific economies. Since then, APEC has become the primary regional vehicle for promoting open trade and practical economic cooperation. The Fisheries Working Group (FWG) of APEC was created to promote: 1) the conservation and sustainable use of fisheries resources; 2) sustainable development of aquaculture and habitat preservation; 3) development of solutions to common resource management problems; 4) the enhancement of food safety and quality of fish and fish products; and 5) sector-specific work relating to trade and investment liberalization and facilitation.

The FWG of APEC has supported the development of a collaborative grouper research and development network. During the APEC grouper workshop conducted in collaboration with Network of Aquaculture Centers in Asia-Pacific (NACA), and held in Hatyai, Thailand in April 1999, a working group was tasked to: (1) develop a strategy to increase collaboration between countries and institutions involved in aquaculture research and development; and (2) develop an action plan to extend research and development outcomes to the industry. The working group – more formally known as the Fisheries Working Group 1: Production Technology – Research, Extension and Industry Development – identified the immediate need to develop a practical guide on husbandry and health management of grouper for fish farmers.

The contract to develop and publish the practical guide was awarded to the Aquaculture Department of Southeast Asian Fisheries Development Center (SEAFDEC AQD) in Iloilo, Philippines, through its Research Division Head Dr Clarissa L. Marte. The manual, originally written in English, is described and illustrated in regional languages for easy understanding by fish farmers throughout the region. The Philippine Bureau of Fisheries and Aquatic Resources, through Ms Cecilia G. Reyes, acts as the Project Overseer.

The Project Team from SEAFDEC AQD (Erlinda R. Cruz-Lacierda, Celia R. Lavilla, Joebert D. Toledo, Nelson V. Golez) and AJ Aqua Intercon Pty. Ltd., Australia (Nepheronia J. Ogburn) worked in collaboration with experts from the following agencies: Department of Primary Industries, Australia; Gondol Fisheries Station and Research Institute for Coastal Fisheries, Department of Fisheries, Indonesia; LTS Consultancy and Fisheries Research Center, Department of Fisheries, Malaysia; Guandong Daya Wan Fisheries Development Center, People's Republic of China; Bureau of Fisheries and Aquatic Resources, Philippines; Taiwan Fisheries Research Institute, Chinese Taipei; and National Institute of Coastal Aquaculture and Aquatic Animal Health Research Institute, Department of Fisheries, Thailand.

This practical guide is to aid farmers in grouper culture and is divided into seven sections. The first section presents the most important cultured grouper species in the Asia-Pacific region. The illustrations of the external and internal anatomy of the fish will guide farmers, especially in the location of organs affected by specific disease agents. Section 2 gives the basic considerations in selecting a good site for grouper culture, while Section 3 describes the grouper culture systems practiced in the region. The layout, size, design and construction, and procedures involved in the preparation of the facility are given in detail. Section 4 describes and illustrates various gears used in the collection of grouper fry and fingerlings. It also outlines the procedures in handling and

transport of collected seed to minimize mortality. Section 5 discusses the operations and management protocols in nursery and grow-out phases of grouper culture. Information on stocking density, feed and feeding management, water management, grading, maintenance of facility, and culture duration are presented. Section 6 describes the procedures in harvesting and transport of marketable-sized grouper for live trade.

The health management aspect in grouper culture is presented as the last section. It provides information on the causes and effects of diseases, how diseases are transmitted, how to recognize early signs of a disease, and how to prevent further spread of diseases in the facility. A guide on how to submit samples for disease diagnosis is also illustrated. The target organ(s), causative agent, gross signs, effects on the host, and methods of prevention and treatment, if any, for each disease are included. Following the dictum “an ounce of prevention is better than a pound of cure,” very little presentation is made here about the usage of chemicals or therapeutic agents. In cases where treatment is indicated, it is best to do this under the guidance of a fish health specialist to avoid unnecessary loss of stock.

It is hoped that this practical guide will help farmers improve production and reduce fish mortality, and thus utilize more efficiently the existing grouper seed resources.

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