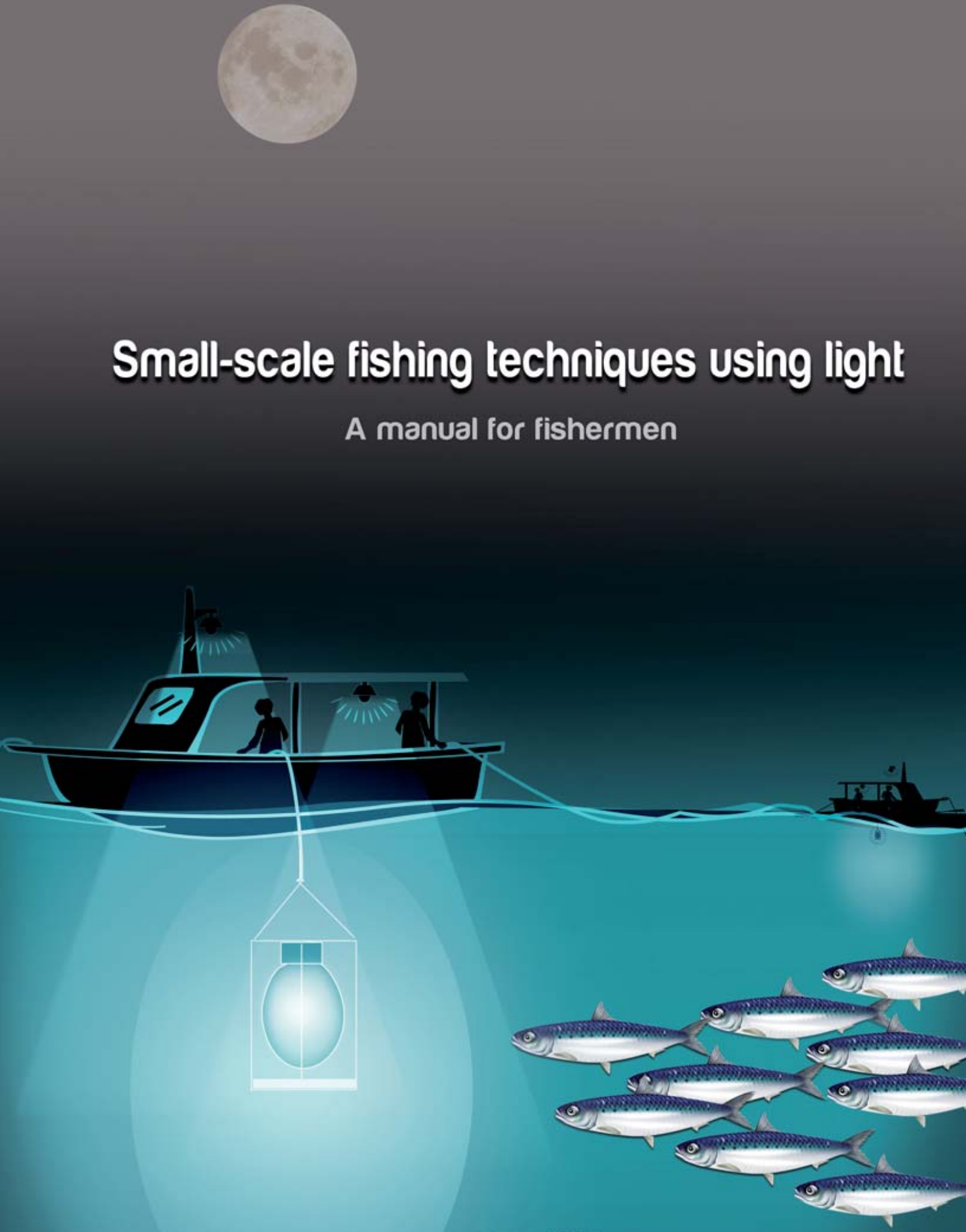
Small-scale fishing techniques using light

A manual for fishermen



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Units and conversions

m = metre mm = millimetre

1 mm = 0.04 inch	1 inch = 25.38 mm
1 cm = 0.39 inch	1 inch = 2.54 cm
1 m = 3.28 ft	1 ft = 0.31 m
1 m = 0.55 fathoms	1 fathom = 1.83 m

Nominal equivalents for converting between metric and standard US measures

5 mm = 3/16 inch	16 mm = 5/8 inch
6 mm = 1/4 inch	19 mm = 3/4 inch
8 mm = 5/16	22 mm = 7/8 inch
10 mm = 3/8 inch	25 mm = 1 inch
12 mm = 1/2 inch	50 mm = 2 inches
14 mm = 9/16 inch	100 mm = 4 inches

Abbreviations and acronyms

A	amperes (amps)
AC	alternating current
candela	candle power
cm	centimetres
DC	direct current
DSC	deep scattering layer
FAD	fish aggregating device
ft	feet
g	gram
in	inches
kg	kilogram
lb	pound
LED	light emitting diode
mm	millimetres
PVC	polyvinyl chloride
SPC	Secretariat of the Pacific Community
V	voltage (volts)
W	wattage (watts)

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Disclaimer

Any similarities to trade products or reference to trade names does not represent endorsement by the authors or sponsoring agencies for this manual. Reference to any particular gender in this manual is generic unless otherwise specifically stated or expressed by the context.

Introduction

The Secretariat of the Pacific Community (SPC) provides technical assistance to member countries and territories through practical field support, hands-on training and advisory service to both the private and government fisheries sectors. The Nearshore Fisheries Development and Training Section of SPC is partially tasked with promoting fisheries development methods and strategies that encourage the enhancement of economically sustainable fishing practices that encompass the concept of the ecosystem approach to fisheries.

This manual presents some of the small-craft night baiting and fishing techniques commonly used in the Pacific Islands region, and provides Pacific Island fishermen with information that may help develop their small-craft commercial fishing operations. Some of the techniques are improvements in canoe fishing methods and use basic gear, while other techniques include modern fishing equipment used on advanced small-scale fishing craft. Still other methods are adaptations of medium- to large-scale industrial fishing operations to small fishing craft operations.

The night baiting and night fishing methods covered in this manual encourage small-craft commercial fishermen to steer away from bottom fishing operations and move toward fishing for midwater pelagic fish, either inshore or offshore. Fishing methods focus on using light to aggregate phytoplankton and baitfish that in turn attract large pelagic fish.

This manual describes the use of bouke-ami stick-held dip nets, basnig lift nets and gill nets for catching baitfish and small pelagic fish. It is believed that if these net fishing methods are properly managed in coastal fishing communities, the accumulated bait, especially scads and sardinella, can be caught in sufficient volume to subsidise bait used in small-scale commercial tuna longline fishing operations.

The bouke-ami stick-held dip net, basnig lift net, gill net and line fishing methods referred to in this manual were used by the author during SPC projects within the Pacific Islands region. These techniques have resulted in differing levels of fishing success, depending on the skills of the fishermen working with him at the time (i.e. mainly students of fisheries colleges and experienced local fishermen who were selected to participate in fishing skills workshops).

This manual advocates vessel operations and fish harvesting activities that use ecologically compatible fishing methods and post-harvest practices. The ecosystem approach to fisheries is part of the Nearshore Fisheries Development and Training Section's fisheries development strategy, and this approach is promoted regionally to ensure long lasting fisheries resources and workable fisheries management policies.