



Secretariat of the Pacific Community

Horizontal Longline Fishing Methods and Techniques

A Manual for Fishermen

by

Steve Beverly, Lindsay Chapman and William Sokimi



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Original text: English

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Secretariat of the Pacific Community Cataloguing-in-publication data

Beverly, Steve

Horizontal longline fishing methods and techniques: a manual for fishermen
/ by Steve Beverly, Lindsay Chapman and William Sokimi

1. Longlining (Fisheries) – Oceania – Handbooks, manuals, etc.
2. Tuna fisheries – Oceania.
1. Title 2. Secretariat of the Pacific Community 3. Chapman, Lindsay
4. Sokimi, William

639.2099

AACR2

ISBN 982-203-937-9

Preparation of this manual was funded by the Australian Government and the New Zealand Government

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Prepared for publication at
Secretariat of the Pacific Community, Noumea, New Caledonia
and printed by
Multipress, Noumea, New Caledonia

ACKNOWLEDGEMENTS

The Secretariat acknowledges contributions from the following people: from SPC — Mr Juan-Jose Areso, Mr Keith Bigelow, Ms Deirdre Brogan, Mr Aymeric Desurmont, Mr Sifa Fukofuka, Mr Jean-Paul Gaudechoux, Dr John Hampton, Ms Lyn Lambeth, Mr Tim Lawson, Dr Patrick Lehodey, Ms Marie-Ange Roberts, Mr Peter Sharples, Mr Wade Whitelaw and Mr Peter Williams; from Hawaii — Mr Scotty Barrows, Mr Paul Bartram, Mr Jeff Broad, Mr Ray Clarke, Mr Jim Cook, Mr David Itano, Mr Mike Madden, Mr Sean Martin, Mr Mike McCoy, Mr John Myking, Mr Joseph O'Malley, Mr Smokey Oshiro and Mr Allan 'Samson' Willingham; from Fiji Islands — Mr Ian Chute, Mr Grahame Southwick and Mr Dave Lucas; from PNG — Mr Rusty Strickland; from Tonga — Mr Bill Holden; from New Caledonia — Mr Vincent Puluiueva; from Tahiti — Mr Gilles Leboucher and Mr Coco Chung Shing; from Pohnpei — Mr Gerry Russo; and from Australia — Mr Ian Cartwright.

The authors acknowledge the contributions of Ms Youngmi Choi for the production of many of the diagrams used in this manual, and for the formatting and laying out of the manual, Ms Patricia Martin for the design of the cover, and Ms Maureen Wright for editing the text.

UNITS AND CONVERSIONS

For the most part, metric units are used in this manual. Fathoms and nautical miles are often referred to, as many fishermen prefer fathoms to metres and nautical miles to kilometres. Conversion between metric and Imperial or US units is as follows:

1 mm = 0.039 in	1 km = 0.62 nm	1 oz = 28.3 g
1 cm = 0.393 in	1 nm = 1.85 km	1 kg = 2.2 lb
1 m = 3.281 ft	1 l = 0.22 Imperial gallons	1 mt = 2200 lb
1 m = 0.546 fa	1 l = 0.26 US gallons	1 short ton = 2000 lb
1 in = 25.38 mm	1 kt = 1.8 km/h	1 PSI = 6.895 kPa
1 in = 2.54 cm	1 kt = 31 m/min	1 PSI = 0.070 kg/cm ²
1 ft = 0.305 m	1 kW = 1.34 HP	1 bar = 14.5 PSI
1 fa = 6 ft	1 HP = 0.74 kW	1 GPM = 4 l/m
1 fa = 1.83 m	1 g = 0.03 oz	

Circumference of a circle

The formula for finding the circumference of a circle is: Circumference = Diameter x π .
 $\pi = 3.14$ for practical purposes.

Speed, distance, and time

The formulas for speed, distance, and time are: Speed = Distance/Time or Distance = Speed x Time or Time = Distance/Speed.

Temperature

To convert °F to °C subtract 32, multiply by 5 and divide by 9
To convert °C to °F multiply by 9, divide by 5, and add 32

DISCLAIMER

For convenience, when referring to specific tasks and who does them in this manual, the male gender is used. Any reference to members of the crew or their jobs, however, may be interpreted as meaning both male and female. Thus, 'fisherman' means anyone, man or woman, who fishes; and the pronoun 'he' means 'he or she'. The use of the generic term 'fisher' has been avoided and the use of the awkward pronoun 'he/she' has been avoided. Reference or mention of specific commercial products or brand names should not be interpreted as an endorsement by the SPC.

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ABBREVIATIONS AND ACRONYMS

π	pi
ADCP	acoustic doppler current profiler
ALC	automatic location communicator
BTG	bathythermograph
BTS	burnt tuna syndrome
°C	degrees centigrade
CIF	cost, insurance, freight
cm	centimetre
CO ₂	carbon dioxide
COLREGS	International Regulations for Preventing Collisions at Sea
Cospas-Sarsat	Cosmicheskaya Sistyema Poiska Avarinich Sudov – Search and Rescue Satellite Aided Tracking, a cooperative search and rescue satellite system operated by USA and Russia
CPR	cardio-pulmonary resuscitation
CPUE	catch per unit effort
CSIRO	Commonwealth Scientific and Industrial Research Organisation (Australia)
CSW	chilled seawater
dia	diameter
DSC	digital selective calling
DSL	deep scattering layer
DWFN	distant water fishing nation
EEZ	exclusive economic zone
EPIRB	emergency position indicating radio beacon, linked to Cospas-Sarsat
ETA	estimated time of arrival
etc.	et cetera
ETD	estimated time of departure
EU	European Union
°F	degrees Fahrenheit
fa	fathom
FFA	Forum Fisheries Agency
ft	foot
FAD	fish aggregating device
FAO	Food and Agriculture Organization of the United Nations
FOB	free on board
G&G	gilled and gutted
GMDSS	Global Maritime Distress and Safety System
GMT	Greenwich mean time (also called universal time coordinated — UTC)
GPM	gallons per minute
GPS	global positioning system
g	gram
GRT	gross registered tons
GT	gross tons
HACCP	hazard analysis and critical control point system
H&G	headed and gutted
HF	high frequency (radio)
HP	horsepower
h	hour
IALA	International Association of Lighthouse Authorities
IDO	industrial diesel oil
IMO	International Maritime Organization
in	inch

Inmarsat	International Maritime Satellite Organization
Inmarsat-C	a two-way data messaging system based on digital technology that enables users to transmit and receive telex and fax messages to and from ships and land stations via satellite; does not provide voice communications; it is the system most often used in VMS systems
IRD	Institut de Recherche Pour le Développement (formerly ORSTOM)
ITU	International Telecommunications Union
JFIC	Japan Fishery Information Service Center
JV	joint venture
kg	kilogram
kHz	kilohertz
km	kilometre
kt	knot (nautical miles per hour)
kPa	kilopascal
l	litre
lat	latitude
lb	pound
LC	letter of credit
LCD	liquid crystal display
LES	land earth station
long	longitude
LPG	liquid propane gas
m	metre
mb	millibar (also hectopascal)
°M	magnetic course
mHz	megahertz
mm	millimetre
mono	monofilament
mph	miles per hour
mt	metric tonne
nm	nautical mile
NIWA	National Institute of Water and Atmospheric Research (New Zealand)
NOAA	National Oceanographic and Atmospheric Administration (USA)
NT	net tons
oz	ounce
PC	personal computer
PFD	personal flotation device
PICTs	Pacific Island countries and territories
PSI	pounds per square inch
PTO	power take-off
RCC	rescue coordination centre
RDF	radio direction finder
RPM	revolutions per minute
RSW	refrigerated seawater
R-22	one type of Freon
SAR	search and rescue
SART	search and rescue transponder
sec	second
SOLAS	Safety of Life at Sea Convention
SPC	Secretariat of the Pacific Community
SR	sagging rate
SSB	single sideband (radio)
SST	sea surface temperature
°T	true course

TDR	temperature–depth recorders
TT	telex (or telegraphic) transfer
UHT	ultra heat treated
ULT	ultra-low temperature
UNCLOS	United Nations Convention on Law of the Sea
USA	United States of America
UTC	universal time coordinated (also called Z or Zulu time or Greenwich mean time — GMT)
VHF	very high frequency (radio)
VMS	vessel monitoring system
WCPO	western and central Pacific Ocean
XBT	expendable bathythermograph