

Global International Waters Assessment

Regional assessments

Other reports in this series:

Caribbean Islands – GIWA Regional assessment 4

Barents Sea – GIWA Regional assessment 11

Caspian Sea – GIWA Regional assessment 23

Gulf of California/Colorado River Basin – GIWA Regional assessment 27

Patagonian Shelf – GIWA Regional assessment 38

Brazil Current – GIWA Regional assessment 39

Amazon Basin – GIWA Regional assessment 40b

Guinea Current – GIWA Regional assessment 42

Lake Chad Basin – GIWA Regional assessment 43

Indian Ocean Islands – GIWA Regional assessment 45b

East African Rift Valley Lakes – GIWA Regional assessment 47

Pacific Islands – GIWA Regional assessment 62

Global International Waters Assessment

Regional assessment 3a Caribbean Sea/Small Islands



GIWA report production

Series editor: Ulla Li Zweifel

Report editors: Matthew Fortnam

Editorial assistance: Johanna Egerup, Malin Karlsson

Maps & GIS: Niklas Holmgren

Design & graphics: Joakim Palmqvist

**Global International Waters Assessment
Caribbean Sea/Small Islands, GIWA Regional assessment 3a**

Published by the University of Kalmar on behalf of
United Nations Environment Programme

© 2004 United Nations Environment Programme

ISSN 1651-940X

University of Kalmar
SE-391 82 Kalmar
Sweden

United Nations Environment Programme
PO Box 30552,
Nairobi, Kenya

This publication may be reproduced in whole or in part and in any form for educational or non-profit purposes without special permission from the copyright holder, provided acknowledgement of the source is made. No use of this publication may be made for resale or for any other commercial purpose whatsoever without prior permission in writing from the United Nations Environment Programme.

CITATIONS

When citing this report, please use:

UNEP, 2004. Bernal, M.C., Londoño, L.M., Troncoso, W., Sierra-Correa, P.C. and F.A. Arias-Isaza. Caribbean Sea/Small Islands, GIWA Regional assessment 3a. University of Kalmar, Kalmar, Sweden.

DISCLAIMER

The views expressed in this publication are those of the authors and do not necessarily reflect those of UNEP. The designations employed and the presentations do not imply the expressions of any opinion whatsoever on the part of UNEP or cooperating agencies concerning the legal status of any country, territory, city or areas or its authority, or concerning the delimitation of its frontiers or boundaries.

This publication has been peer-reviewed and the information herein is believed to be reliable, but the publisher does not warrant its completeness or accuracy.

Printed and bound in Kalmar, Sweden, by Sunds Tryck Öland AB.

Contents

Executive summary	9
Acknowledgement	12
Abbreviations and acronyms	13
Regional definition	15
Boundaries of the region	15
Physical characteristics	16
Socio-economic characteristics	19
Assessment	25
Freshwater shortage	26
Pollution	30
Habitat and community modification	35
Unsustainable exploitation of fish and other living resources	39
Global change	42
Priority concerns for further analysis	45
Causal chain analysis	47
Environmental and socio-economic impacts	48
Immediate causes	49
Root causes	50
Conclusions	53
Policy options	54
Policy option 1: Strengthening of resource management institutions	55
Policy option 2: Strategic regional plan for integrated coastal and marine management	59
Conclusions	63
References	64
Annexes	69
Annex I List of contributing authors and organisations	69
Annex II Detailed scoring tables	71
Annex III Environmental characteristics	74
Annex IV List of important water-related programmes and assessments in the region	75
Annex V List of conventions and specific laws that affect water use in the region	79
<i>The Global International Waters Assessment</i>	<i>i</i>
<i>The GIWA methodology</i>	<i>vii</i>

