



IMO/FAO GUIDANCE ON MANAGING SEAFOOD SAFETY DURING AND AFTER OIL SPILLS

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INTERNATIONAL
MARITIME
ORGANIZATION

London, 2002

Documents

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First published in 2002 by the
INTERNATIONAL MARITIME ORGANIZATION
4 Albert Embankment, London SE1 7SR

Printed by the International Maritime Organization, London

2 4 6 8 10 9 7 5 3 1

ISBN 92-801-5147-9

IMO PUBLICATION
Sales number: I590E

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Preface

The *IMO/FAO Guidance on managing seafood safety during and after oil spills* provides a very useful guide to identify the various problems that will affect fisheries and aquaculture enterprises in the event of an oil spill. This document will be useful to spill responders and managers with responsibilities for protecting public health and those in the fisheries sector as well as consumers concerned about the safety and quality of seafood.

At its forty-first session, the Marine Environment Protection Committee (MEPC) tasked the OPRC Working Group to develop a guidance document for fisheries management during and after an oil spill incident. Dr. Tosh Moller, Technical Team Manager of the International Tanker Owners Pollution Federation Ltd. (ITOPF), prepared the draft guidance document and submitted it at MEPC 42. Following the review and comments from members of the OPRC Working Group and the Fisheries Department of the Food and Agriculture Organization of the United Nations (FAO), a consolidated draft version was submitted by ITOPF at MEPC 43. Further review on the guidance document was made by Australia and the United States and subsequently by FAO, which also agreed to a joint IMO/FAO publication. At MEPC 45, the revised guidance document was approved by the OPRC Working Group for a joint IMO/FAO publication. The Committee, at its forty-sixth session, approved the final draft guidance document reviewed by the OPRC Working Group for publication.

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1 Introduction

1.1 Fishing is important in all maritime nations and many oil spills cause damage to subsistence, recreational and commercial fishing activity. Aquaculture enterprises have become widely established, thereby increasing the sensitivity of many coastal areas to oil pollution impact. Increased public awareness and heightened food quality and safety standards have meant that even small oil spills can cause a large impact and generate strong political interest.

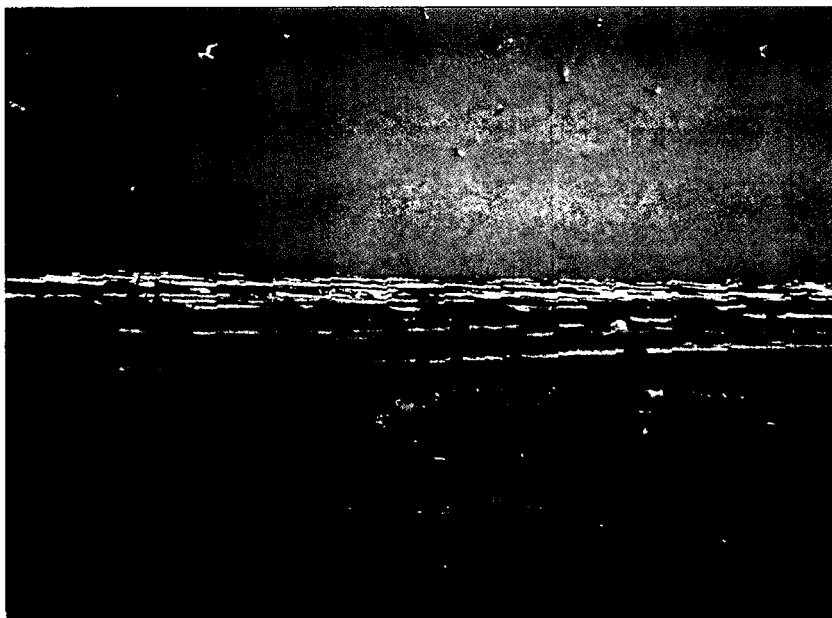
1.2 Oil pollution effects take a variety of forms. Animals and plants may be killed as a result of oil smothering and toxicity. Catches and cultivated stock may become physically contaminated or may acquire an objectionable oily taste known as 'tainting'. Fishing and cultivation gear may be oiled, leading to the risk of catches or stock becoming contaminated or fishing being halted until gear is cleaned or replaced. The handling of seafood products in bulk means that it is seldom practical to locate and remove the oiled specimens.



Storage of fishing nets and boats (Indonesia)

1.3 Fishermen and aquaculture operators are often in the front line of oil spill impact, but equipment suppliers, transporters, wholesalers and others are also involved in the process of bringing seafood produce to the market. Government authorities have a duty to protect public health and ensure that seafood products reaching the consumer are safe and palatable. A number of management strategies are available to prevent or minimize oil pollution impact on fishing and

aquaculture activity. Fishing and harvesting restrictions can be imposed to prevent contamination of fishing gear and to protect consumers and markets. Such measures also provide time for evaluating risks and for organisms and their habitat to recover from oil contamination.



Seine net fishing (Venezuela)

1.4 The purpose of this Guidance is to identify the various problems that can arise in the event of an oil spill and to describe the remedies available. The information is aimed primarily at spill responders¹ and managers with responsibilities for protecting public health, as well as those in the fisheries sector suffering economic loss and consumers concerned about the safety and quality of seafood. Interested parties are encouraged to share experience gained in managing fishery resources during and after oil spills.

¹ persons acting to clean up an oil spill

2 Oil spill impact on seafood resources

2.1 Effects on marine life

2.1.1 The impact of an oil spill on marine life depends largely on its geographical location and extension, the physical and chemical characteristics of the oil and the way these change with time, through a process known collectively as 'weathering'. The main physical processes which act on the oil during the course of a spill are evaporation, natural dispersion and, to a lesser extent, sedimentation. Specific gravity, viscosity, chemical composition and toxicity of the pollutant and the way they change with time tend to determine the degree of oil exposure for seafood organisms. The prevailing weather and sea conditions will determine the movement of spilled oil. Clean-up activities such as the use of chemicals or aggressive washing techniques can also affect the fate of oil. Thus, a variety of factors combine to define the character of a particular oil spill and the fate of sensitive resources in its path.

2.1.2 Adult free-swimming fish, squid, shrimp and wild stocks of other commercially important marine animals and plants in open waters seldom suffer direct harm from oil spill exposure. This is because only



Free-swimming marine species, which include crustaceans such as lobsters and shrimps, could suffer more from oil spill exposure when in shallow intertidal zone than in open waters.

rarely will oil concentrations in these waters reach sufficient levels to cause tainting or mortality. The greatest impact is found on shorelines and shallow waters where animals and plants may be physically coated and smothered by oil or exposed directly to toxic components in the oil. Edible seaweeds, and sea urchins, oysters, mussels and clams are examples of shoreline seafood species that are especially sensitive to smothering¹ and oil toxicity, respectively.

2.1.3 Apart from direct effects, oil may cause more subtle longer-term damage to behaviour, feeding, growth, or reproductive functions as well as survival of larval or juvenile forms. It is a complex task to isolate such sublethal pollution effects from the influence of numerous other factors.

2.1.4 Damage may also result from measures taken to combat an oil spill. Animals and plants which might normally be unaffected by floating oil can become tainted through exposure to oil droplets suspended in the water column if chemical dispersants are used unwisely. For this reason, as a general guide, dispersants should not be used close to aquaculture facilities or spawning grounds and nursery areas. Stripping oiled seaweed from rocks and indiscriminate hot water washing are further examples of aggressive techniques that can affect commercially exploited species and delay natural recovery.



Aerial view of oyster cultivation racks exposed at low tide (France)

¹ physical coating by oil