



Ministry for the
Environment
Manatū Mo Te Taiao

 **MARITIME**
NEW ZEALAND

Environmental Best Practice Guidelines for the Offshore Petroleum Industry

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1. Context

- 1) The Government's key Policy Objective for petroleum is to promote the responsible discovery and development of New Zealand's petroleum resources that contribute substantially to the New Zealand economy.
- 2) Petroleum exploration, development and production activities are predominantly onshore based. However, recently there has been substantial offshore exploration activity, both within and beyond the Territorial Sea, some of which has resulted, and/or which may result in, commercial development.
- 3) New Zealand's marine environment is comprised of diverse ecosystems and species. Many of these are endemic and some are endangered. The marine environment could be impacted by offshore exploration, development and production activities. The protection of these marine systems and species is important, both in a domestic and an international context, because they may have biological, commercial or amenity value.
- 4) Activities within New Zealand's Territorial Sea are subject to the environmental management provisions of the Resource Management Act 1991.
- 5) A number of Government agencies have statutory responsibilities for granting permission for particular activities that may occur in New Zealand's Exclusive Economic Zone and Continental Shelf beyond the Territorial Sea. It is acknowledged that the regulatory and policy frameworks dealing with the environmental impacts of activities in the Exclusive Economic Zone and Continental Shelf beyond the Territorial Sea, are neither comprehensive nor coherent.¹
- 6) The resultant uncertainty may introduce inefficiency and confusion for both companies who undertake petroleum exploration and production activities (the '**Industry**') and Government, thus undermining aspects of the Policy Objective noted in 1) above.
- 7) Until there is an Oceans Policy, Industry and Government agree to voluntary principles to manage environmental impacts beyond New Zealand's Territorial Sea. This set of voluntary principles is known as the '**Guidelines**'.
- 8) Both Industry and Government stakeholders have contributed significantly to the development of the Guidelines.

¹ *Environmental Management of Petroleum and Mineral Mining Activities beyond the 12-Mile Limit*. Lough, Carol and Gibbs, Doug. Office of the Parliamentary Commissioner for the Environment. Wellington. 1996

2. Purpose, Scope and Boundaries

2.1 Purpose

The Guidelines are voluntary principles to assist Industry to identify, assess and manage environmental impacts associated with petroleum exploration, development and production activities in New Zealand's Exclusive Economic Zone and Continental Shelf beyond the Territorial Sea.

In particular, the Guidelines seek to:

- establish a voluntary approach to identifying and managing environmental impacts
- provide Industry and Government with clarity on the current regulatory and voluntary requirements
- provide for dialogue between Industry and Government to address opportunities and issues.

2.2 Scope and Boundaries

The Guidelines encompass petroleum exploration, development and production activities undertaken in New Zealand's Exclusive Economic Zone and Continental Shelf beyond the Territorial Sea.

The Guidelines provide assistance on environmental assessment and management relating to these petroleum-related activities where the environmental requirements in the Exclusive Economic Zone and Continental Shelf beyond the Territorial Sea are not adequately covered by other legislation, policies or guidelines.

The Guidelines do not address such activities or issues:

- being undertaken within the current jurisdiction of the Territorial Sea (12 mile limit), and which are generally addressed via the Resource Management Act 1991
- related to the allocation of resources and the occupation of space.

The Guidelines are not intended to be legally enforceable. They do not restrict any power or discretion under any statute. Furthermore, nothing in the Guidelines removes the need to comply with other laws, regulations, rules, standards, guidelines or other such articles that are relevant to any activities that are undertaken by the Industry in the Exclusive Economic Zone and Continental Shelf beyond the Territorial Sea.

3. Principles

- 1) While promoting the economic development of offshore oil and gas reserves, all activities undertaken by Industry in the Exclusive Economic Zone and Continental Shelf beyond the Territorial Sea, will be carried out in an environmentally responsible, open and transparent manner.
- 2) Operators undertake to conduct all activities to the standard of a Reasonable and Prudent Operator, and undertake to ensure such standards extend to all aspects of their operations including environmental management principles and practices pertaining to the Exclusive Economic Zone and Continental Shelf beyond the Territorial Sea.
- 3) Absence of full scientific certainty should not be used as a reason to postpone cost-effective measures to prevent environmental degradation.
- 4) While undertaking petroleum exploration, development and production activities in the Exclusive Economic Zone and Continental Shelf beyond the Territorial Sea, Industry shall adopt and apply the best practicable options to minimise or prevent adverse effects on the environment. In particular, such activities shall be conducted to minimise and where practicable avoid significant adverse impacts and/or effects on :
 - the marine environment, including marine habitats and communities
 - the distribution, abundance and productivity of species, in particular endangered or threatened species or populations of such species
 - air and water quality.
- 5) Consideration should also be given to:
 - the efficient use of energy, water, materials and transport
 - appropriate waste management procedures for the prevention, minimisation, recycling, treatment and disposal of waste
 - life-cycle impacts of procurement decisions
 - appropriate procedures to avoid off-shore installations introducing exotic organisms by fouling and ballast water
 - appropriate procedures to avoid any exotic organisms being transferred around New Zealand's coastal marine environment by hull fouling on service vessels.
- 6) The Government is responsible for policies and regulations that support sustainable development. Industry shall use these Guidelines in alignment with the applicable policies and regulations (refer to Annex 2).²

² Annex 2 provides an overview of legislation, guidelines and policies that may apply to the Industry in the Exclusive Economic Zone and Continental Shelf beyond the Territorial Sea.

4. General Protocols

4.1 Consultation

In respect of the Guidelines, individual Operators should undertake consultation with:

- Biosecurity New Zealand
- Department of Conservation
- Maritime New Zealand
- Ministry of Economic Development
- Ministry for the Environment
- Ministry of Fisheries
- Ministry of Foreign Affairs and Trade
- Regional Councils that may potentially be affected
- Other parties as they see fit.

4.2 Data and Information

Environmental assessment requires environmental data and information. In some areas (eg offshore Taranaki), there is significant data and information, while other areas are not so well endowed.

Where environmental data and information is sparse, and base-line assessment is difficult, both Industry and Government agencies have a role to play in identifying, collating and making available existing environmental information relevant to the Exclusive Economic Zone and Continental Shelf beyond the Territorial Sea. The collection and reporting of such information will, over time, provide a more comprehensive baseline on which to base decisions.

Data and information is often proprietary. Where this is the case, Industry has established practices and mechanisms for trading and exchanging data and information. Operators are encouraged to make relevant environmental information and data available in accordance with those established practices.

5. Practices and Provisions

The Guidelines differentiate between exploration and development/production activities. The Guidelines recognise that, with the possible exception of biosecurity issues, exploration activities are generally short-term events that result in minimal and transient environmental impact.

Therefore, the requirements set out below refer specifically to petroleum development and production activities.

5.1 Environmental Assessment

Operators shall undertake an environmental assessment to address significant potential impacts on the marine environment. The Operator will develop strategies, procedures and practices to manage and/or mitigate those specific impacts of their activities.

The environmental assessment should take account of:

- the scope of the activity including its area, duration and intensity
- the cumulative impacts of the activity, both by itself and in combination with other activities in the marine environment
- the availability of technology and procedures to provide for environmentally safe operations
- the practicality of, and capacity to, monitor key environmental parameters and ecosystem components to assure a pro-active environmental management approach that is responsive to the results of the monitoring
- the capacity to respond promptly and effectively to incidents, particularly those with potential significant and adverse environmental effects
- ensuring that the quality of information provided for decision-making purposes, matches the scale and significance of potential adverse effects.

Annex 1 is an activity matrix that describes the activities, potential effects, and an indication of the applicable regulatory framework.

5.2 Health, Safety and Environment Case

Operators shall prepare and maintain a 'Health, Safety and Environment Case' to support its development and production activities. This is an extension of the 'Safety Case' as described in Schedule 4 of the Health and Safety in Employment (Petroleum Exploration and Extraction) Regulations 1999. International Industry best practice is to extend the scope of the Safety Case to include potential risks to/from the environment, thus delivering what Industry refers to as the 'Health, Safety and Environment Case'. Another commonly used term is 'Environmental Management Plan'.

The Health, Safety and Environment Case should accurately record all necessary environmental management and operational procedures, methodologies and contingency plans. It should identify any potential or actual environmental issues and effects the Operator's activities may have and provide the company's commitments and procedures to manage, monitor and mitigate potential and actual effects. The Health, Safety and Environment Case should also endeavour to achieve best international practices at reasonable costs.

5.3 Monitoring and Reporting

Consistent with the outcomes of the Environmental Assessment and the Health, Safety and Environment Case, Operators will undertake regular and effective self-monitoring of development and production activities. This may include, but is not limited to:

- development and maintenance of management systems to identify, control and monitor environmental risks
- monitoring environmental effects and assessing environmental performance during development and production phases
- modifying petroleum exploration or production activities if monitoring shows that they are causing or will result in adverse impacts on the marine environment.

5.4 Training and Education

Operators shall provide appropriate training and education to employees and contractors about environmental protection. This should include both how environmental protection is to be achieved and the environmental and other consequences of non-compliance with these procedures.

Glossary

Activities	Petroleum exploration and production activities undertaken in the Exclusive Economic Zone
BA	Biosecurity Act 1993
CM(P)R	Crown Minerals (Petroleum) Regulations 1999
Continental Shelf	As defined in s2(1) of the Continental Shelf Act 1964
CSA	Continental Shelf Act 1964
Exclusive Economic Zone	See s9 of the Territorial Sea, Contiguous Zone and Exclusive Economic Zone Act 1977
HASIE	Health and Safety in Employment (Petroleum and Extraction) Regulations 1999
HSNO	Hazardous Substances and New Organisms Act 1996
IHS	Import Health Standard under the Biosecurity Act 1993
IMO	International Maritime Organisation
Industry	The industry comprises companies who undertake petroleum exploration and production activities
Lessee	Licensee or person in charge of the installation
Marine environment	Within the geographic scope of the 'Guidelines', the "marine environment" means: the natural and biological resources comprising any marine ecosystem within the Exclusive Economic Zone's waters, seabed and subsoil including both the living and nonliving components of marine ecosystems, and the ecological patterns and processes that occur within marine ecosystems.
Maritime NZ	Maritime New Zealand
MARPOL	International Convention for the Prevention of Pollution from Ships 1973/78
MED	Ministry of Economic Development
MFE	Ministry for the Environment
MMPA	Marine Mammals Protection Act 1978
MTA	Maritime Transport Act 1994
Operator	In relation to any offshore installation includes any manager, lessee, licensee or person in charge of the installation

OPRC	International Convention on Oil Pollution Preparedness, Response and Cooperation 1990
PEPANZ	Petroleum Exploration and Production Association of New Zealand
Reasonable and Prudent Operator	A person acting in good faith to perform contractual obligations while exercising that degree of skill, diligence, prudence and foresight which would ordinarily and reasonably be expected from an experienced operator complying with applicable laws and demonstrating sound environmental practices in similar circumstances.
RMA	Resource Management Act 1991
SCPPA	Submarine Cables and Pipeline Protection Act 1996
Territorial Sea	As defined in s3 of the Territorial Sea, Contiguous Zone and Exclusive Economic Zone Act 1977
TSCZEEZA	Territorial Sea, Contiguous Zone and Exclusive Economic Zone Act 1977
WA	Wildlife Act 1953

ANNEX 1: Activity Matrix

The activity matrix below describes offshore exploration, development and production activities and their potential effects. It also provides an indication of the policy or regulation applicable to the activity. Note that this activity matrix is intended as a guide only and is not exhaustive.

CATEGORY / OPERATION	ACTIVITY	POTENTIAL ADVERSE EFFECTS	POLICY / REGULATED
Seismic Operations		<ul style="list-style-type: none"> • Temporary navigation restriction • Physical impact on marine life, wildlife and marine mammals • Temporary displacement of marine life, wildlife and marine mammals, or impact on communication and behaviours 	<ul style="list-style-type: none"> • MTA • Voluntary agreement • MMPA / WA
Platform Installation (Temporary)	Temporary deployment of Anchors /jack-up Rig	<ul style="list-style-type: none"> • Physical disturbance on seabed • Introduction of exotic invasive marine species • Displacement of marine life, wildlife and marine mammals • Introduction of exotic organisms via hull fouling/ballast water 	<ul style="list-style-type: none"> • IHS for ballast water
	Temporary Drill Rig	<ul style="list-style-type: none"> • Introduction of exotic organisms via hull fouling/ballast water 	<ul style="list-style-type: none"> • IHS for ballast water; BA • Voluntary codes for hull fouling
Platform Installation (Permanent)	Fixed Permanent Installation eg Jacket, CGS	<ul style="list-style-type: none"> • Physical disturbance of seabed • Acoustic disturbance of marine life, wildlife and marine mammals • Displacement of marine life, wildlife and marine mammals 	<ul style="list-style-type: none"> • MED; Maritime NZ; MTA; SCPPA; MARPOL
	Floating Permanent Installation eg FPSO, FSO, TLP etc	<ul style="list-style-type: none"> • Introduction of exotic organisms via hull fouling / ballast water 	<ul style="list-style-type: none"> • MED; Maritime NZ; MTA; SCPPA; MARPOL • IHS for ballast water • Voluntary codes for hull fouling
Drilling	Physical Impact	<ul style="list-style-type: none"> • Underwater noise • Displacement of marine life, wildlife and marine mammals • Local physical damage 	<ul style="list-style-type: none"> • MMPA
	Discharge of Drilling Cuttings	<ul style="list-style-type: none"> • Accumulation of contaminated material • Smothering of Benthos • Physical obstruction • Turbidity 	<ul style="list-style-type: none"> • Maritime NZ
	Discharge of drilling fluids	<ul style="list-style-type: none"> • Toxicity • Turbidity 	<ul style="list-style-type: none"> • MTA

CATEGORY / OPERATION	ACTIVITY	POTENTIAL ADVERSE EFFECTS	POLICY / REGULATED
Discharge to water (Operational)	Produced water	<ul style="list-style-type: none"> Toxicity Floating oil 	<ul style="list-style-type: none"> MTA
	Cooling Water	<ul style="list-style-type: none"> Thermal Toxicity 	
	Organic waste	<ul style="list-style-type: none"> Pathogens Turbidity 	
Discharge to water (Accidental)	Oil Spills	<ul style="list-style-type: none"> Marine life, wild life and marine mammals Physical/shoreline/amenity Economic Toxicity 	<ul style="list-style-type: none"> MTA; RMA
	Chemical Spills	<ul style="list-style-type: none"> Marine life, wild life and marine mammals Toxicity 	<ul style="list-style-type: none"> MTA
Discharge to Air	Flaring	<ul style="list-style-type: none"> Climate change Possible attractant to sea birds 	<ul style="list-style-type: none"> MFE CM(P)R; WA
	GHG Emission (non flaring)	<ul style="list-style-type: none"> Climate Change 	<ul style="list-style-type: none"> MFE
	Plant & Machinery emissions		<ul style="list-style-type: none"> None
	Tank Venting	<ul style="list-style-type: none"> Climate Change 	<ul style="list-style-type: none"> MFE
	Exclusive occupation of platform footprint	<ul style="list-style-type: none"> Access restrictions 	<ul style="list-style-type: none"> None
Presence of Structure	Exclusion zones		<ul style="list-style-type: none"> CSA; MTA; TSEEZA
	Restricted Areas/Protection Zones		<ul style="list-style-type: none"> SCPPA; MTA
	Security		<ul style="list-style-type: none"> Police; Military
Operation and Maintenance		<ul style="list-style-type: none"> Noise Light Handling of hazardous materials 	<ul style="list-style-type: none"> MMPA; WA; MTA; HSNO; HASIE
	Food waste		
Waste Management	Garbage		<ul style="list-style-type: none"> MTA
	Commercial Waste		
	Helicopters		
Ancillary Operations	Support Vessels	<ul style="list-style-type: none"> Introduction of exotic organisms via hull fouling/ballast water 	<ul style="list-style-type: none"> Civil Aviation MARPOL; IMO; OPRC; MTA; BA IHS for ballast water Voluntary codes for hull fouling
	Ancillary structures and Platform Abandonment		<ul style="list-style-type: none"> MTA

ANNEX 2:

Applicable Legislation, Guidelines and Policy

Legislation and Guidelines

1. Marine Protection Rules and Advisory Circulars under the Maritime Transport Act 1994 plus Maritime Rules relating to associated supporting maritime activities³
2. Guidelines for Minimising Acoustic Disturbance to Marine Mammals from Seismic Survey Operations
3. The New Zealand Import Health Standard for Ballast Water from all Countries under the Biosecurity Act 1993
4. Biosecurity Act 1993
5. Safety Zones (Exclusion Zones)
(IMO; Maritime Transport Act 1994; Continental Shelf Act 1964; Territorial Sea, Contiguous Zone, and Exclusive Economic Zone Act 1977)
6. Installation and Protection of Subsea Pipelines under the Submarine Cables and Pipelines Protection Act 1996
7. Marine Mammals Protection Act 1978
8. Wildlife Act 1953
9. Health and Safety in Employment (Petroleum Exploration and Extraction) Regulations 1999

Policies

1. The New Zealand Biodiversity Strategy 2000
2. The Sustainable Development Programme of Action 2003
3. The New Zealand National Policy on the Sea Disposal of Wastes
4. Climate change policy (see www.climatechange.govt.nz)

³ Specifically Marine Protection Rules Parts 124 (Offshore Installations) and 170 (Prevention of Pollution by Garbage from Ships & Offshore Installations), both to be subsumed by 200 (Offshore Installation Discharges), plus 102 (Certificates of Insurance & Amendment), 132 (Dispersants & Demulsifiers) and 180 (Dumping of Waste or Other Matter). Various other rules apply to normal operations of ancillary vessels.

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