



## Understanding Non-compliance in the Marine Environment

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*A range of criminal activity takes place in marine environments. Combating this crime is a challenge for state, national and international regulators. The illicit activity can include illegal fishing, unauthorised hunting of protected species, causing damage to coral reefs, polluting, people smuggling, drug trafficking, and the commission of personal crimes (including violence). The Great Barrier Reef Marine Park (GBRMP) is renowned as the world's largest living organism. Like other marine environments, it is at risk from each of these activities, although environmental crimes potentially have the greatest impact. This paper explores the type of criminal activity that occurs in marine environments, with a focus on the Great Barrier Reef, possible causes of that crime, and appropriate regulatory responses to it.*

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In the 17th century, jurist Hugo Grotius articulated the concept of a Common Heritage, of which the marine environment forms a part. This idea was subsequently affirmed and codified by the United Nations in the *Convention on the Law of the Sea* (1982). Failure to observe marine conservation standards defies the obligations of Common Heritage and threatens marine biodiversity. Understanding how we can ensure compliance with the laws that have been put in place to protect our marine environment is an important exercise.

The Great Barrier Reef Marine Park is World Heritage-listed. It covers an area of 345,400 km<sup>2</sup> and is protected by a range of state, Commonwealth and international laws, conventions and agreements. The Great Barrier Reef Marine Park Authority (GBRMPA) is divided into four Critical Interest Groups. Each group has the challenge of reducing non-compliant, potentially criminal behaviour in the areas of:

- Conservation, Biodiversity and World Heritage;
- Water Quality and Coastal Development;
- Fisheries; and
- Tourism and Recreation.

The purpose of this paper is to explore the types of criminal activity that occur in marine environments, with particular reference to the Great Barrier Reef; to understand why criminal activity occurs there; and to consider ways of addressing this criminal non-compliance.

### **Types of criminal activity detected in the marine environment**

There are several types of criminal activity of concern to the GBRMPA. These are discussed below, according to the Authority's relevant Interest Groups.

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## Conservation, Biodiversity and World Heritage Group

This Interest Group focuses on a range of non-compliant/illegal activities involving conservation, biodiversity and World Heritage issues.

### *Illegal hunting or removal of threatened species*

The GBRMPA allows commercial, recreational and tourist charter fishers in zoned areas. Traditional fishing by Aboriginal and Torres Strait Islanders is allowed by permit, in zones that are otherwise closed. Of specific concern to this Group is the illegal hunting or removal of threatened species such as the dugong, turtles and cetaceans.

### *Smuggling of protected species*

Although most illegal smuggling of protected species in Australia involves birds and reptiles, marine species are occasionally smuggled. The usual targets are aquarium fish or live coral.

### *Interfering with historic sites*

Shipwrecks and their contents are protected by the *Historic Shipwrecks Act 1976*. The Act allows for public recreation in and around shipwrecks, however a permit is required before disturbing the 'physical fabric'. There are also public safety issues like the danger of disturbing unexploded munitions.

### *Damaging the reef*

This can include either deliberate acts of vandalism or negligence. For example, on 29 July 2002 a coal-carrying bulk carrier, the *Doric Chariot*, was grounded near Piper Reef, approximately 600km north of Cairns. This grounding caused damage to approximately 1500m<sup>2</sup> of coral. The Master, Second Mate and the ship's owners were charged under section 38MC of the *Great Barrier Reef Marine Park Act 1975*. The maximum penalty under this statute is \$1.1 million (GBRMPA 2002a).

## Water Quality and Coastal Development Group

This Group focuses on a range of non-compliant/criminal behaviour relating to water quality and coastal development.

### *Pollution from land-based run-off*

Chemicals used on land adjacent to protected areas can affect the quality of water in the park through run-off. In May 2003, for example, Club Med Lindeman Island was fined \$6,000, plus court costs, in relation to a discharge of untreated sewage water into the Great Barrier Reef between 30 November and 8 December 2000 (AFP 2003).

### *Pollution from ships*

Pollution, either from illegally discharged waste or through accidental damage, is caused by vessels passing through the park. Each year there are a number of oil spills, groundings and sinkings. The most significant in recent years was a 40km-long oil spill off Holbourne Island.

### *Entering prohibited parts of park*

Because entry to the park is closely regulated, people who enter certain zones without authority may be prosecuted. In January 2002, the Australian Federal Police (AFP) charged the Master of a 70,000 tonne Greek-registered vessel with piloting his ship through a prohibited zone. This was the first instance of a person being prosecuted under the *Great Barrier Reef Marine Park Act 2001*. The Master pleaded guilty and was convicted and fined \$10,000 (AFP 2002).

## Fisheries Group

This Group focuses on non-compliant/illegal activities related to harvesting fish (for example, breaching regulations about the type of fish, quantity or size that can be caught). In 2002–03, 90 offences were detected in the GBRMP involving commercial line fishing (an increase of 31 on the previous year). In 2002–03, 53 cases of unlawful fishing were prosecuted (GBRMPA 2003).

Other Australian fishing grounds are also under threat from illegal activities. In May 2002, five people were convicted in Tasmania, and one imprisoned, following an AFP-led fraud investigation. The defendants had failed to declare 907 tonnes of the quota-protected Orange Roughy fish stock, valued at A\$2.36 million (McClymont 2002).

Another case centred on the 2001–02 investigation into illegal fishing by two foreign-owned longline fishing vessels of the protected Patagonian Toothfish in Australia's fishing zone around Heard and McDonald Islands in the Southern Ocean. Substantial fines were imposed and the vessels and their catch were forfeited to the Crown (CDPP 2002).

Marine pollution by trawlers operating in shallow inshore waters can also be detrimental to fish stocks and the environment when bycatch is discarded. Bycatch is fish that are not wanted either because of their low commercial value or because they are under-sized (AFMA 2001). In 2001 a large slick of dead fish was recorded two kilometres off Mission Beach in Queensland. The dead fish included dollarfish, trevally, grunter, silver jewfish, stripies and fingermark bream (GBRMPA 2002a).

## Tourism and Recreation Group

This Interest Group focuses on a variety of non-compliant/illegal activities relating to tourism and recreation.

### *Illegal activities by tourists*

Damaging tourist activities can include: entering prohibited areas; not respecting the cultural values of Aboriginal and Torres Strait Islanders regarding the reef; disturbing turtles and seabirds, particularly when nesting; damaging coral; or taking fish without a permit.

### *Illegal activities against tourists*

Tourists in the park can be victims of personal crime, including violent offences (for example, sexual assault) and property offences (such as theft or fraud). Recreational activities may raise issues of health and safety.

In October 1998, a dive-boat skipper, Geoffrey Nairn, was charged with manslaughter under the *Workplace Health and Safety Act 1995* after two American tourists, Thomas and Eileen Lonergan, were not collected by the dive boat that took them scuba diving near St Crispin Reef, north-east of Cairns on 25 January 1998. The accused was acquitted of

manslaughter. His employer, Rye Holdings Pty Ltd, was prosecuted and fined \$27,000 for breaching section 28(2) of the *Workplace Health and Safety Act 1995* (Division of Workplace Health and Safety 2002).

**Incidental criminal activities**

There are other criminal activities that occur in the GBRMP.

*Maritime safety incidents*

Charges can be laid under the *Navigation Act 1912* against a vessel's crew for a range of offences including failure to keep a proper lookout, failure to determine the risk of a collision, and failure to keep out of the way of other vessels.

*People smuggling*

Although most people smuggling has taken place off the Western Australia coastline, vessels involved in people smuggling could enter the GBRMP. Captains of people smuggling vessels have been prosecuted in recent years. In one case, the captain was sentenced under section 232A of the *Migration Act 1958* to six years' imprisonment with a non-parole period of three years (*R v Adrianis Loe*, Supreme Court of the Northern Territory, 10 April 2001, per Thomas J; appeal to the Court of Criminal Appeal dismissed).

*Drug trafficking and importation*

Joint operations conducted by the AFP and Customs have resulted in the conviction, under section 233B(1)(d) of the *Customs Act 1901*, of offenders

attempting to smuggle illicit drugs into Australia by boat. One recent case, Operation Linnet, involved 339kg of heroin with a street value of A\$620 million that was shipped to Australia on a former fishing trawler. The trawler had been specially modified to suit smuggling operations (CDPP 2002).

*Crimes of violence*

Ordinary crimes of violence are perpetrated in marine environments, requiring the intervention of local or federal police. In February 2001, a Cairns District Court dismissed armed robbery charges against Benjamin Ali Nona, a Torres Strait Islander, who had used a traditional crayfish spear to challenge commercial line fishermen operating on Mer Island, a traditional fishing area. The jury accepted that Mr Nona had believed that, as an Indigenous person, the fish being taken by the commercial fishermen belonged to him. He was therefore not criminally liable under section 22 of the *Queensland Criminal Code* (Aboriginal Justice Advisory Council 2001).

*Crimes against park agencies*

Finally, the opportunity exists for agencies administering the park to be victimised. In March 2002, a Darwin Supreme Court judge ordered the sale of the fishing vessel of a man convicted of defrauding the Commonwealth. Over a two-year period, the man had claimed \$100,000 in diesel fuel rebates he was not entitled to on the basis that he was involved in fishing operations (AFP 2002).

**Understanding why criminal activity occurs**

There are three pre-conditions generally required before criminal activity will occur. These are:

1. a supply of suitably motivated individuals (including those who are able to rationalise their illegal activities as being legitimate);
2. available targets and opportunities for acting illegally; and
3. the absence of capable guardians who might prevent crimes from being committed.

In the marine environment, all three conditions may coincide.

**1. Motivations and rationalisations**

Factors that may motivate people to commit crime in the GBRMP are as follows.

*Large financial rewards*

The direct economic value of commercial fisheries in the GBRMP is about \$200 million per year. Large sums of money can be made from illegal trade in valuable commercial fisheries. For example, the recent investigation into illegal catches of Orange Roughy valued the fish at \$2.36 million. The Patagonian Toothfish is another highly prized resource, particularly in Japan and the United States (TRAFFIC Oceania 2001). It retails for approximately \$18 per kilogram in processed form. Large profits can also be derived from drug and people smuggling.

*Increased profit*

Some business operators simply weigh the costs of compliance, which can be considerable, with the likely costs of prosecution and punishment. Even where substantial fines are imposed, these may be insufficient to outweigh the costs saved by breaching regulations. Where there is evidence of deliberate non-compliance, exemplary punishments may be appropriate.

**Table 1: Number of charges dealt with by the Commonwealth Director of Public Prosecutions**

Legislation	1999-00		2000-01		2001-02		2002-03	
	Sum	Ind	Sum	Ind	Sum	Ind	Sum	Ind
Environment			6		3	1	11	
Fisheries	233		271		283	10	446	2
GBRMP Act	84		66		62		90	
Navigation	1	2	6		6		9	
Torres Strait fisheries	7		15		10		7	10
Wildlife protection	6	6	14	1	19	1	2	
Total	331	8	378	1	383	12	565	12

Sum – Charges dealt with summarily  
Source: CDPP (2003)

Ind – Charges dealt with on indictment

*Rationalising illegal activity*

Illegal acts are more likely if individuals can rationalise them as being acceptable. Rationalisations are more likely in close-knit criminal environments (such as exist in the reef-line fishery) where participants may mutually reinforce their illegal activities. The attractions of violating the law thus outweigh any negative consequences (Sutherland 1947: 6).

*Failure to accept the legitimacy of regulations*

Individuals may be motivated to breach regulations if they are thought to be unfair or unnecessary, or go too far in limiting profits. Farmers subject to land care controls, or commercial fishers who are prohibited from fishing in certain zones, may believe that the regulations imposed are unnecessary or too onerous, and simply ignore them.

*Lack of knowledge of regulations*

Another motivation to offend may come from individuals who simply do not know or understand the regulations. Their failure to comply is unintentional. Offenders may rationalise their conduct by saying that they did not know what they were doing was unlawful. This may still be punishable if the offence is one of strict liability. It is important for regulators to have understandable rules that are easy to access.

*Lack of understanding of the impact of illegal activities*

Individuals may not fully appreciate the impact of their activities and thus conclude that they are harmless. For example, people who take fish in breach of regulations may be unaware of the dwindling nature of the resource. As Hardin (1968) observes, unregulated activity of this kind can eventually lead to the annihilation of a finite resource.

*Inability to pay costs of compliance*

Finally, it could be argued that regulations need not be adhered to because compliance would be too expensive or result in profit losses. If an individual faces bankruptcy as a result of complying with regulations, then there may be the feeling that there is nothing to lose by breaking the rules.

**Table 2: Situational crime prevention in the marine environment**

Situational measure	Marine application
<p><b>Increasing the effort</b></p> <ul style="list-style-type: none"> <li>• Target hardening</li> <li>• Access control</li> <li>• Deflecting offenders</li> <li>• Controlling facilitators</li> </ul>	<ul style="list-style-type: none"> <li>• Fencing off key areas</li> <li>• ID badges for users</li> <li>• Partial park closure; no-anchor markers</li> <li>• Vessel and employee registration</li> </ul>
<p><b>Increasing the risks</b></p> <ul style="list-style-type: none"> <li>• Entry/exit screening</li> <li>• Formal surveillance</li> <li>• Surveillance by employees</li> <li>• Natural surveillance</li> </ul>	<ul style="list-style-type: none"> <li>• Harbour and jetty vessel checks</li> <li>• CCTV; satellite photos; Vessel Monitoring System (VMS)</li> <li>• Boat and aircraft patrolling</li> <li>• Reporting by public users</li> </ul>
<p><b>Reducing the rewards</b></p> <ul style="list-style-type: none"> <li>• Target removal</li> <li>• Identifying property</li> <li>• Removing inducements</li> <li>• Rule setting</li> </ul>	<ul style="list-style-type: none"> <li>• Preventing access to park; relocating species</li> <li>• Licensing of vessels; fish tagging</li> <li>• Interfering with markets/distribution channels</li> <li>• Issuing permits and licensing</li> </ul>

**2. Opportunities for criminal activity**

Because it is highly regulated, the marine environment offers many opportunities to break the law.

*Availability of natural resources*

One example is the availability of natural resources, such as fish and minerals, throughout the GBRMP. These unique resources may constitute an attractive target for criminals.

*Availability of illegal drugs for importation*

Illegal drugs provide another opportunity for criminal activity. Importing illicit drugs by sea is sometimes easier than trying to circumvent airport controls.

*Availability of unauthorised immigrants*

There is a supply of people who want to come to Australia. As it is seen as a desirable location, Australia inevitably becomes a target for people smugglers.

*Introduction of new regulations*

The introduction of new regulations means that additional types of conduct become proscribed. This may lead to an increase in non-compliance or law-breaking.

**3. No capable guardians**

Crime will occur in environments where regulations are difficult to enforce and where the risk of prosecution and punishment is seen as remote. History

provides clear instances of this (for example, the looting that occurs when police go on strike, or where police activity ceases during wartime). In the marine environment, various factors make enforcement difficult to achieve.

*Extensive area to be policed*

The geographical size of marine parks (the GBRMP, for example, covers an area of 345,400km<sup>2</sup>) means that it is impossible to maintain an enforcement presence at all times in every location. This means policing must be targeted and based on reliable intelligence.

*Under-funding of regulators*

If inadequate resources are provided to regulators, it may be impossible to maintain an adequate presence throughout the environment. The cost of covert at-sea or remote area surveillance can be very high. Enforcement personnel often have to match their own technological resources against equally well-equipped offenders.

*Satisfying policing and prosecution thresholds*

Clearly, not every instance of non-compliance can be prosecuted and a balance needs to be struck between having sufficient numbers of prosecutions to achieve a deterrent effect, and complying with prosecution policies in selecting cases to pursue. Furthermore, punishment for non-compliance, through

fines or imprisonment, must be weighted to reflect the seriousness of defying marine conservation and management norms and as an expectation of exemplary behaviour.

#### *Failing to publicise enforcement outcomes*

This can limit compliance with the law. If cases that are prosecuted are not adequately publicised, then any general deterrent effect will be reduced and offenders may think that enforcement is a remote possibility.

#### *Conflict between agencies*

Conflict between the agencies involved in enforcement can result in gaps emerging in the regulatory environment, or contradictory advice or procedures being adopted. Figure 1 shows the many agencies involved in regulating activities in the GBRMP. These agencies may sometimes have conflicting aims and objectives. This might result in individual cases being dealt with inadequately.

### Addressing criminal non-compliance in the marine environment

A range of regulatory responses is available to deal with illegal activity in marine environments. Criminal prosecution and punishment are generally used as a measure of last resort (Gunningham & Grabosky 1998).

#### *Deterrence-based regulation*

A deterrence-based strategy relies on punitive responses to regulatory violations. Each year, however, only a small number of cases are prosecuted. This is despite enforcement officers undertaking extensive compliance activities (see Table 1).

#### *Compliance-based regulation*

Compliance strategies seek to achieve adherence with the law through negotiation rather than coercion. This requires an acceptance of rules which are voluntarily complied with. Grabosky and Braithwaite (1986) argue that regulators are most likely to secure compliance if they are 'benign big guns'. In other words, they

**Figure 1: Agencies regulating the Great Barrier Reef Marine Park**

#### Queensland Government agencies

- Queensland Environmental Protection Agency
- Queensland Department of Primary Industries
- Queensland Department of Natural Resources
- Queensland Transport
- Queensland Police Service
- Queensland Department of the Premier and Cabinet

#### Consultation and community involvement

- Great Barrier Reef Consultative Committee
- Cooperative Research Centre for the Great Barrier Reef World Heritage Area
- Reef Advisory Committees
- Local Marine Advisory Committees
- The Authority's Advisory Committees
- Zonal Advisory Committees & Management Advisory Committees
- Fisheries groups/associations
- Tourism groups/associations
- Aboriginal and Torres Strait Islander groups
- Conservation and environmental groups
- The Australian community
- Councils and local government

#### Australian Government agencies

- Department of the Environment & Heritage
- Australian Maritime Safety Authority
- Aboriginal & Torres Strait Islander Commission
- Australian Customs Service
- Coastwatch
- Australian Heritage Commission
- Australian Fish Management Authority
- Department of Defence
- Department of Agriculture, Fisheries & Forestry



- Department of Industry, Tourism & Resources
- Attorney-General's Department
- Australian Federal Police
- Australian Geological Survey Organisation
- Australian Greenhouse Office
- Australian Institute of Marine Science
- CSIRO
- Director of Public Prosecutions
- National Oceans Office

Source: GBRMPA 2003

'walk softly while carrying a very big stick'. During 2002–03, for example, the GBRMPA approved 745 permits to conduct activities in the marine park, 30 of which concerned major projects. The maximum penalties for failing to comply with a GBRMP permit are \$22,000 for individuals and \$110,000 for bodies corporate. Vessels and other equipment (including catch) may also be seized and forfeited with a court order.

#### *The role of crime prevention*

Seeking compliance with the law through criminal justice responses is only one way of combating illegal activity. Regulators need to undertake appropriate crime prevention activities.

Situational crime prevention (as defined by Clarke 1995: 109) falls into three main areas (Table 2). Examples relevant to the marine environment are provided.

The risk of adopting a crime prevention

approach is that displacement will occur. This means the crime does not go away, but moves to a different area. The result is no net reduction in crime. Theorists have identified a number of ways that criminal activity might be displaced as a result of implementing situational crime prevention measures (for example, Hesseling 1994). However, research has tended to show that displacement rarely takes place and, when it does, it usually does not overwhelm other gains achieved by blocking crime opportunities.

The possibility of crime displacement in the marine environment needs to be considered. For example, if it becomes too costly or difficult to steal Orange Roughy fish stocks, then offenders may target other species, or simply move to other activities and places, for example, stealing abalone in Victoria (see Tailby & Gant 2002). Organised groups who find crime in a marine environment too onerous

may move to other activities such as people smuggling or drug importation. Further research is needed to assess these possibilities.

## Conclusions

Achieving compliance with the law in marine environments like the GBRMP is challenging, due to the wide range of offences that may be committed, and the many regulatory agencies involved. Some suggestions for the future are as follows.

### *Improving sources of information and statistics on compliance*

There is a need for more research to assess the extent of non-compliance and to determine what is being lost in terms of financial and natural resources. Evaluation is also required of any environmental damage directly related to marine crime. With improved information it would be possible to direct resources to areas of greatest need. It is impossible to monitor the entire environment to the same extent.

### *Improving public and business education*

Improved education of business operators, local tourists and overseas visitors would help to guard against offences being committed out of ignorance. This is particularly important in view of the extensive number of agencies involved and the many rules that exist to regulate behaviour in the GBRMP. Continuing education should be a part of employment requirements for any individual working in a GBRMP-related agency.

### *Coordinating regulatory efforts*

Regulatory agencies need to know what each is doing and to share information and intelligence wherever possible.

Coordination is also necessary between public- and private-sector bodies. The availability of online databases and shared secure networks makes this an achievable goal.

### *Avoiding counterproductive consequences*

Care is needed to ensure that any measures that are taken do not make matters worse. Potential displacement effects need to be guarded against and consideration given to the ways crime reduction measures might backfire.

### *Changing attitudes to compliance*

Finally, an effective education program is required to change public attitudes about the importance of complying with regulations. This can be achieved through media advertising, publicity campaigns and the use of rewards for good citizenship. In Australia, for example, Crime and Violence Prevention Awards recognise innovative programs designed to reduce crime. Perhaps prizes could be awarded for conduct that protects the marine environment and reduces marine crime.

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