

# **CORRECTION OF ERRORS IN COORDINATES OF FISHING AREAS – FINAL ADVICE**

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## **Executive Summary**

- 1 Errors in coordinates used in regulations to describe areas have hindered efforts to increase voluntary compliance by needlessly complicating the restrictions in place. The errors have also undermined the Ministry of Fisheries' ability to enforce some regulations effectively. Changes in technology have further aggravated the situation since older coordinates do not coincide with new points established using Global Positioning Systems (GPS) technology.
- 2 Two errors have been identified for immediate correction because they present a significant compliance concern. The correction of these errors can be considered as technical and minor and does not change the intent of the law but rather clarifies the existing regulations.

## **Proposal**

- 3 The Ministry of Fisheries (MFish) proposes to:
  - a) Correct two sets of coordinates that have been identified as problematic.

## **Background**

- 4 MFish has identified several errors contained in current regulations in references to coordinates or descriptions of areas.
- 5 In the late 1990's, navigational charts were updated using new data to bring them into line with GPS. The fisheries regulations promulgated before this transition were not updated to reflect this improvement in technology and accuracy. The resulting situation was one where discrepancies occurred between navigational charts and GPS, and those areas defined in many fisheries regulations and Gazette notices.
- 6 In addition to this, many more area descriptions are inaccurate due to errors in the initial determination of the coordinates or differing interpretations of the geographical landmarks given. MFish is currently working through a process that will identify and progressively correct these errors over time.

## **Rationale for Management Options**

- 7 The two errors identified have been brought to your attention because they have proved problematic from a compliance standpoint. These inaccuracies have created confusion with fishers attempting to identify boundaries and fulfil their regulatory obligations.

- 8 The current situation has created a compliance concern because the inaccuracies have made it possible for commercial fishers to deliberately exploit “gaps” created by the inconsistent coordinates. MFish’s ability to properly enforce the desired closures has been compromised by the ambiguity of certain coordinates and has created a technical defence that enables commercial fishers to circumvent the regulations. The Godley Head error described below hindered an investigation into a trawler which was videotaped fishing inside the closed area by about 0.25 nm (about 450 metres). The trawler was only inside the closed area by approximately 100 metres when using GPS coordinates.

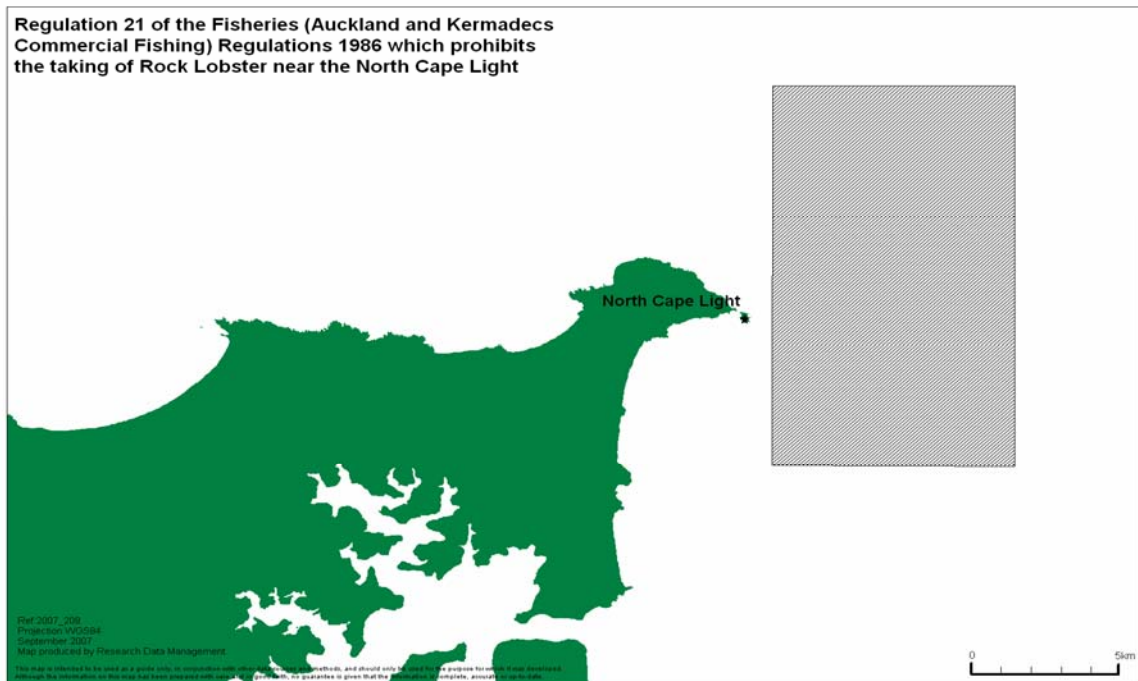
### ***Specific Amendments***

- 9 The following coordinate errors have been put forward for you to consider correcting immediately due to their particular compliance implications.

#### *North Cape Light*

- 10 Regulation 21 of the Fisheries (Auckland and Kermadec Areas Commercial Fishing) Regulations 1986 contains an incorrect coordinate for the location of the North Cape light (at 34°25.2'S and 173°03.6'E), which has left a gap of approximately 0.4nm (about 750 metres) in the area boundary. The regulation was enacted to protect the rock lobster population in the area and the error undermines that goal.
- 11 The North Cape Light is described in the Land Information New Zealand (LINZ) NZ Light List and is given the following coordinates: 34°24.90'S and 173°03.00'E. This set of coordinates is a much better indicator of the true location of the lighthouse in question.
- 12 The proposed restriction should read:

*“No [commercial fisher] shall take any rock lobster from those waters lying to the north-east of the North Island bounded by a line commencing at the North Cape light (at 34°24.90'S and 173°03.00'E) and proceeding northerly along the 173°03.00' East meridian of longitude to its intersection with the 34°20.00' South parallel of latitude; then easterly along that parallel of latitude to its intersection with the 173°09.00' East meridian of longitude; then southerly along that meridian of longitude to its intersection with the 34°28.00' South parallel of latitude to its intersection with the 173°03.00' East meridian of longitude; then northerly along that meridian of longitude to the point of commencement at the North Cape light.*”

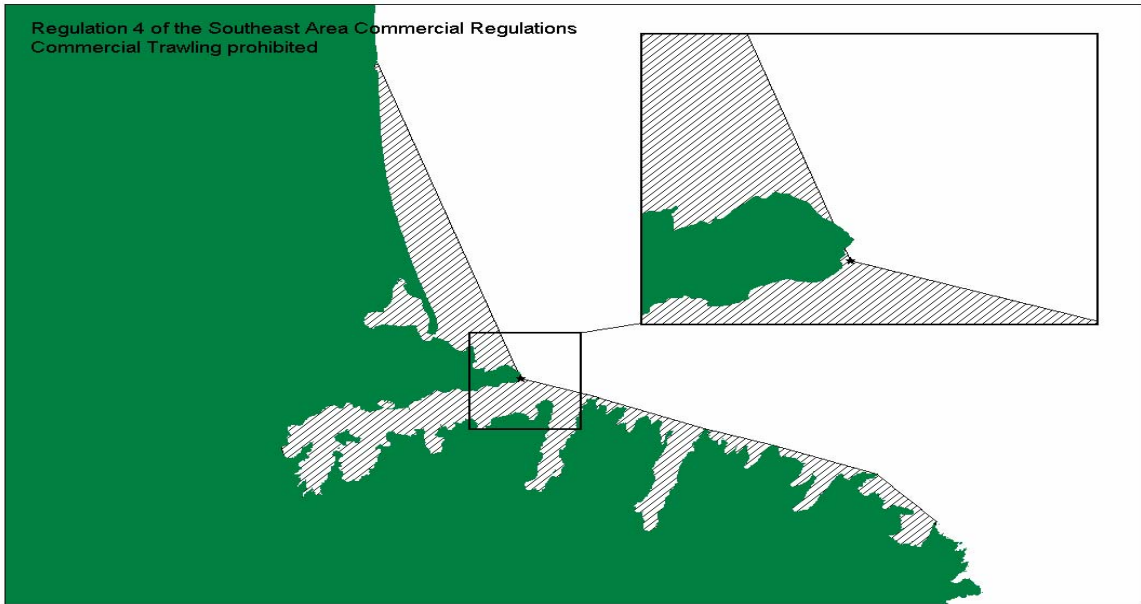


**Figure 1:** The shaded area depicts the area near North Cape Light where commercial rock lobster fishing is prohibited. The western boundary needs to encompass the North Cape Light in order to achieve the intention of protecting rock lobster in that area.

Godley Head/Beacon Rock

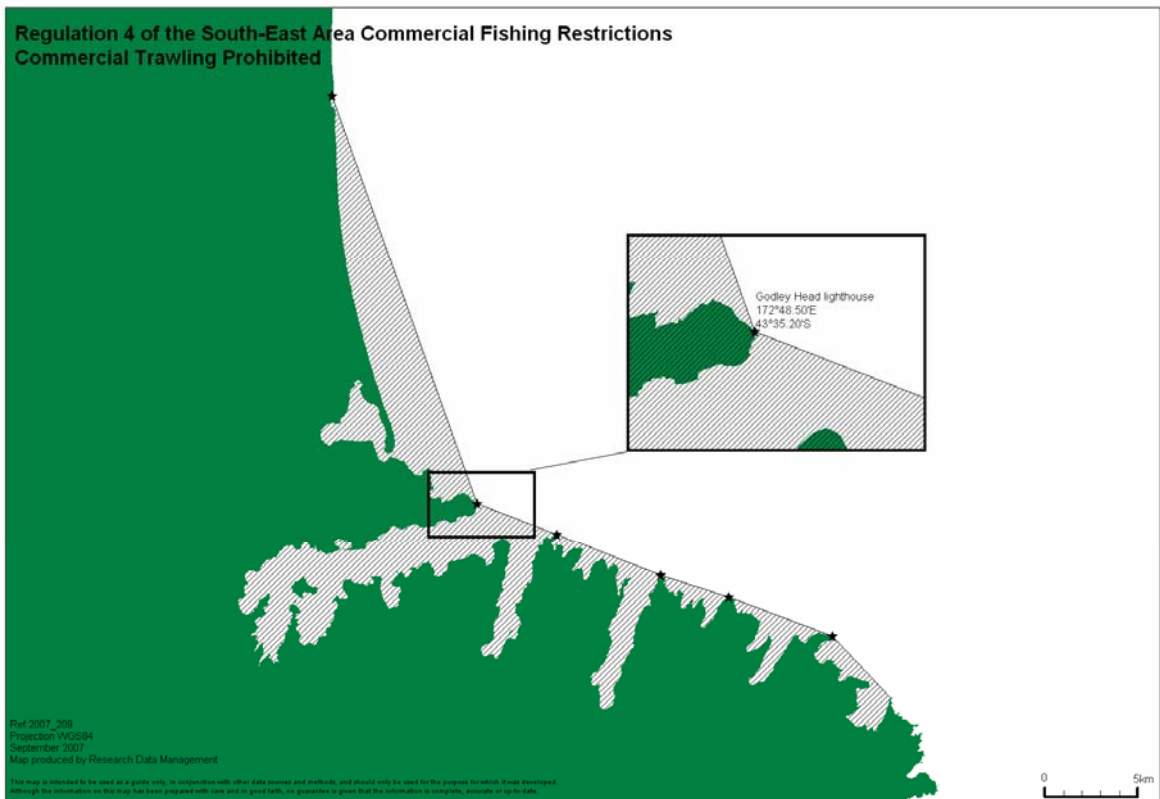
- 13 The datum used to calculate coordinates in regulation 4 of the Fisheries (South-East Area Commercial Fishing) Regulations 1986 resulted in a shift of the Godley Head/Beacon Rock closed area of about 0.1 nm. The illustration below shows how the coordinates given for the Godley Head lighthouse put it south of its actual location and no longer on land. This is a sustainability risk since the measure was put in place to protect a nursery area for small sharks by prohibiting trawling.
- 14 The lighthouse at Godley Head is also described in the LINZ NZ Light List and given the following coordinates: 43°35.20'S and 172°48.50'E. Once again, the coordinates provided by LINZ more accurately reflect the emplacement of the lighthouse and should be used in the updated definition. Other descriptions used in the regulation have also been revised through plotting or by using the LINZ Place Names database where available.
- 15 The proposed definition should read:

*Pegasus Bay: The waters of Pegasus Bay lying inside straight lines drawn from the north bank of the mouth of the Waimakariri River (at 43°23.20'S and 172°42.60'E) then to; Godley Head lighthouse (at 43°35.20'S and 172°48.50'E) then to; Beacon Rock (at 43°36.11'S and 172°51.71'E) then to; Wakaroa Point (at 43°37.32'S and 172°55.93'E) then to; Otohauo Head (at 43°37.95'S and 172°58.68'E) then to; Long Lookout Point (at 43°39.10'S and 173°02.90'E) then to; East Head at Okains Bay (at 43°40.94'S and 173°05.27'E)*



**Figure 2:** The shaded area depicts the area of Pegasus Bay where trawling is prohibited. The inset shows the incorrect location of the Godley Head lighthouse.

16 The following map depicts the closure with the recommended coordinate changes:



**Figure 3:** Diagram indicating revised area of Pegasus Bay where trawling is prohibited after correcting the coordinates of the Godley Head lighthouse.

## **Preliminary Consultation**

17 No preliminary consultation has occurred with fisheries stakeholders as the changes are considered minor and technical in nature. Stakeholders will be notified once new descriptions are assigned to these existing closures to avoid any confusion.

## **Summary of Options**

18 *Option 1* – Retain the *status quo* with the existing area descriptions.

19 *Option 2* – Amend regulations to immediately correct the two closed/restricted area definitions.

## **Assessment of Management Options**

### *Option 1*

20 The *status quo* fails to address the compliance and sustainability concerns in an effective manner.

### *Option 2*

21 Correction of these closed/restricted area definitions will effectively deal with the current shortcomings of the descriptions. The primary benefits of this option are that it would reduce the confusion that currently surrounds certain area descriptions and enhance the ability of fishers to voluntarily comply with the regulations. Additionally, this option will ensure that the intent of the regulations is achieved. The corrections would eliminate the discrepancies that currently hinder enforcement and provide a technical loophole.

## **Compliance Implications**

22 Implications for compliance are significant since the inaccuracies found in the boundaries seriously hinder MFish's goal of maximising voluntary compliance. It also provides offenders with a loophole that allows them to circumvent the regulations. More robust definitions will assist prosecutors by providing them with certainty when establishing that an offence has been committed.

## **Preliminary Recommendation**

23 MFish recommends:

- Amending regulations to immediately correct the following two technical references to fishing areas/descriptions in fisheries regulations:
  - a) The incorrect coordinate for the location of the North Cape light mentioned in Regulation 21 of the Fisheries (Auckland and Kermadec Areas Commercial Fishing) Regulations 1986

- b) The incorrect coordinates in regulation 4 of the Fisheries (South-East Area Commercial Fishing) Regulations 1986.

## Appendix 1

### ***Statutory Considerations***

- 24 **Section 5 (a) and (b):** There is a wide range of international obligations relating to fishing (including sustainability and utilisation of fish stocks and maintaining biodiversity). MFish considers that any of the recommendations are consistent with issues arising under international obligations and the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.
- 25 **Section 8:** The purpose of the Act is to provide for the utilisation of fisheries resources while ensuring sustainability. Part of ensuring sustainability involves avoiding, remedying or mitigating any adverse effects of fishing on the aquatic life. The closed/restricted areas described in this paper were put in place to control the impacts of fishing on vulnerable areas. The recommended changes are put forward to ensure that compliance with these restrictions is achieved.
- 26 **Section 9(c):** The recommended changes will afford greater protection to the habitats of particular significance identified within these closed/restricted areas by providing added certainty and well-defined boundaries.
- 27 **Section 10:** MFish considers that the recommendations made are based on the best available information and that the changes would better reflect current mapping technology.
- 28 **Section 297(1)(a)(ii)-**Under section 297(1)(a)(ii)- the Governor-General may, by Order in Council, make regulations regulating, authorising, or prohibiting the taking or possession of fish, aquatic life, or seaweed from any area.