

# **South Africa's proposed new Marine Protected Area around the Prince Edward Islands: An analysis of legal obligations, options and opportunities**

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Research dissertation presented for the approval of Senate in fulfilment of part of the requirements for the *MPhil Marine and Environmental Law* in approved courses and a minor dissertation. The other part of the requirement for this qualification was the completion of a programme of courses.

I hereby declare that I have read and understood the regulations governing the submission of *MPhil Marine and Environmental Law* dissertations, including those relating to length and plagiarism, as contained in the rules of this University, and that this dissertation conforms to those regulations.

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# 1 Introduction

## 1.1 Background

In June 2004, the South African Minister of Environmental Affairs and Tourism, Minister van Schalkwyk, announced South Africa's intention to declare one of the largest MPAs in the world around its sub-Antarctic Prince Edward Islands. It was clear from the announcement that the objective of the proposed MPA was for both fisheries management purposes as well as conservation of marine ecosystems and biodiversity in the area. As a first step the Minister announced that the current "no-fishing" zone would be extended from 8 to 12 nautical miles. This was done a few months later by means of an amendment to fishing regulations for licensed South African vessels fishing for Patagonian toothfish *Dissostichus eleginoides*.

This announcement followed South Africa's recent declaration of four new MPAs along its continental coastline, bringing the proportion of its coastline under MPA protection to 18%. These developments are consistent with international efforts<sup>1</sup> to increase the proportion of marine habitats under formal protection, and follow a greater appreciation over the last decade for the role that MPAs can play in both fisheries management and conservation of marine ecosystems<sup>2</sup>.

Separate to the Minister's announcement, two other initiatives are underway that could afford increased legal protection and status of the maritime zones surrounding the Prince Edward Islands. Firstly, at the 15<sup>th</sup> meeting of the Prince Edward Islands Management Committee in January 2004, the Committee endorsed a proposal to investigate expanding the Special Nature Reserve Status to include the territorial sea around the islands. Currently the terrestrial components of the islands are managed as a Special Nature Reserve in terms of South Africa's National Environmental Management: Protected Areas Act 57 of 2003. The boundaries of the Special Nature Reserve are currently set at the low water mark. Secondly, it is also South Africa's intention to submit the Prince Edward Islands as a World Heritage Site under the 1972 World Heritage Convention<sup>3</sup>. It has been proposed that this nomination include the 12 nautical mile Territorial Sea surrounding the islands. This will have the effect of linking the two islands into a single geographic entity.

In response to the announcement of the Minister's intention to declare a large MPA in the South African Economic Exclusive Zone (EEZ) surrounding the Prince Edward Islands, the World Wide Fund for Nature (WWF) South Africa teamed up with the Department of Environmental Affairs and Tourism to commission a marine

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<sup>1</sup> See 2002 World Summit on Sustainable Development Plan of Implementation, 2003 World Parks Congress Recommendations.

<sup>2</sup> Roberts, C.M., Bohnsack, J.A., Gell, F.R., Hawkins, J.P. and Goodridge, R. (2002) Marine reserves and fisheries management. *Science* 295, 1233-1235.

<sup>3</sup> Full Title: 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage

conservation plan<sup>4</sup> for the area that would inform the proposed delineation of the MPA. This plan collated all available spatial biodiversity pattern, ecosystem process and threat data (using both 'real' spatial data as well as a process of expert mapping) into a central spatial database. The proposed delineation of the MPA was then derived based on measurable conservation targets (e.g. desired proportions of habitats to be protected, ecologically important spawning grounds, feeding areas etc).

One of the important conclusions of this report was the realization that whilst the delineation of a MPA within the South African EEZ would greatly enhance the conservation status of the area, certain important ecosystem process were located adjacent to the South African EEZ (i.e. on the high seas). In order to afford complete protection and secure the ecosystem integrity of the area, the ideal network of MPAs would include protected areas with the EEZ as well as in these adjacent areas.

## **1.2 Threats to the marine environment surrounding the Prince Edward Islands**

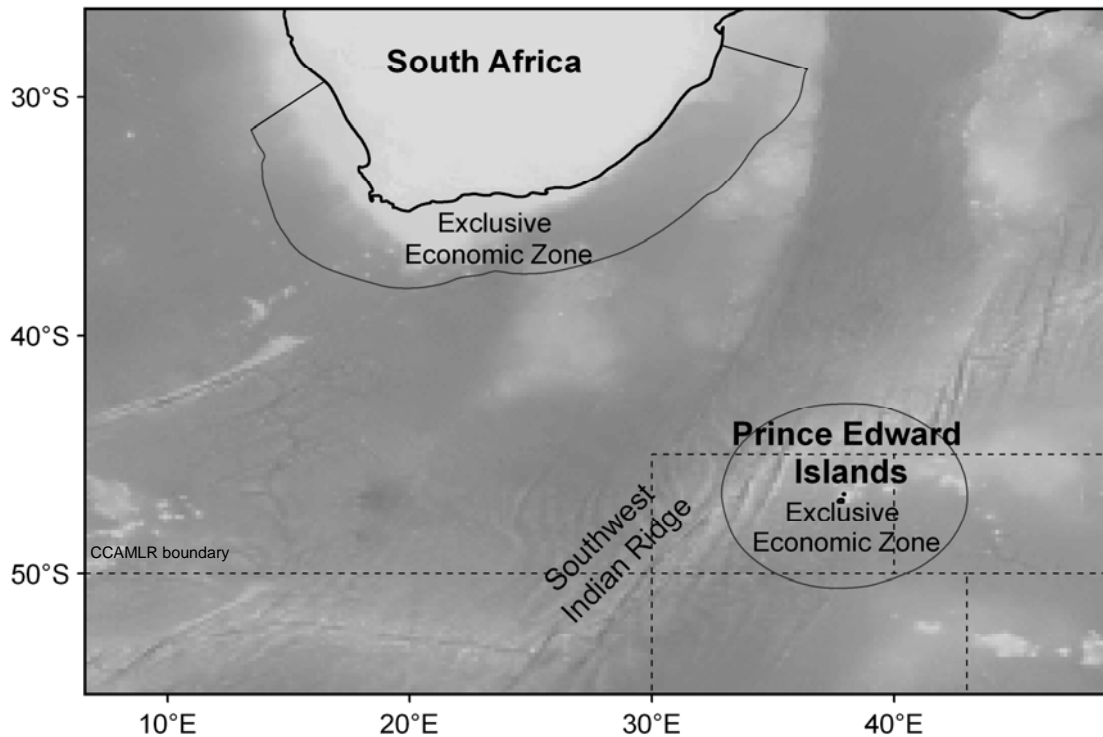
Prior to 1996, few human threats occurred within the South African Exclusive Economic Zone (EEZ) surrounding the Prince Edward Islands (situated in the Southern Ocean: 46° 45' S and 37° 45' E; See Figure 1). Threats to the marine biodiversity of this area either occurred outside the EEZ surrounding the islands (e.g. bycatch of seabirds in fishing operations to the north of the islands) or on the islands themselves (e.g. introduced feral cats predated on seabirds breeding on the islands). This was all to change when commercially viable stocks of Patagonian Toothfish were discovered around the Prince Edward Islands and a longline fishery was initiated in 1996. Unfortunately, South Africa was poorly prepared to manage such a fishery in the Southern Ocean and the same year saw an influx of large numbers of Illegal, Unreported and Unregulated (IUU) fishing vessels to the area. In a matter of three years these illegal fishing activities had decimated the toothfish stocks in the area and killed significant proportions of the populations of seabirds breeding on the islands through incidental mortality during fishing operations<sup>5</sup>. This activity went largely unchecked due to South Africa's lack of blue water fisheries patrol capacity. Increased compliance efforts in the neighbouring EEZs of France (Crozet and Kerguelen Islands) and Australia (Heard and McDonald Islands) only served to worsen South Africa's predicament by simply shifting IUU fishing activity into the unprotected Prince Edward Islands' EEZ. Since the year 2000, IUU activity in the area has decreased, probably due to the low commercial viability of the stocks in this area. A small legal fishery survives in the area despite the depleted state of the stock. This

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<sup>4</sup> Lombard *et al.* (2006) Conserving pattern and process in the Southern Ocean: Designing a Marine Protected Area for the Prince Edward Islands. WWF South Africa report, Stellenbosch, South Africa. [www.wwf.org.za/marine](http://www.wwf.org.za/marine)

<sup>5</sup> Nel DC, Ryan PG, Watkins B. 2002. Population trends of albatrosses and petrels at sub-Antarctic Marion Island. *Polar Biology*, 25, 81–89.

fishery has been maintained mainly due to its surveillance role in the area, despite recommendations that the fishery should be closed based on stock levels.



**Figure 1.** The position of the Prince Edward Islands and its EEZ in the Southern Ocean, in relation to CCAMLR statistical areas (dashed lines). From Lombard *et al.* 2006

Although to date longline fishing for Toothfish has been the main threat to the marine ecosystem and biodiversity in this area, we should be very aware that the Southern Ocean and Antarctica, perceived as “the last frontier” a decade ago, is currently the scene of a rapid increase in human activity and related impacts. To date these activities have been mainly related to fishing and tourism activities; however it is difficult to predict what form future threats may take. We can, however, be certain of one thing; human pressures in this area are likely to increase dramatically over the next decade.

Bottom trawling for Toothfish occurs around the neighbouring Heard & McDonald Islands (sovereign territory of Australia). This fishing practice, which has impacts on benthic biota and habitats could potentially be used in areas around the Prince Edward Islands in the future. Other marine resources that have been harvested elsewhere in the Southern Ocean and occur within the South African EEZ include crustaceans (most notably krill *Euphausia surperba* elsewhere, but other species occurring in the South African EEZ could also potentially be harvested), notothenid and myctophid fish and squid (specifically *Martiala hyadesi*). These species are important forage food for many of the top predators that breed at the islands (seabirds, seals and cetaceans) and harvesting activities could have associated impacts on these predators.

During the 1990s, an Environmental Impact Assessment (EIA) was conducted to investigate the potential of land-based tourism on the island. Although this EIA recommended against land-based tourism activities (mainly due to the restrictive Special Nature Reserve status of the islands), the close inshore area of the islands has been used for boat-based nature tourism subsequently. The MV SA Agulhas was chartered in 2002 to take bird watchers to view seabirds in the Southern Ocean. It spent several days within the Prince Edward Islands' EEZ, approaching the islands to within 100 metres of the coastline. Other potential future marine threats could include the introduction of exotic species, marine mining, bioprospecting, climate change and general shipping related risks.

In short a comprehensive legal regime is needed to protect this area from a wide range of current and potential future threats, and to allow recovery and restoration from past impacts.

### 1.3 Jurisdiction

The Prince Edward Islands were annexed in 1947, and are the sovereign territory of South Africa as declared in the Prince Edward Islands Act 43 of 1948. An interesting aspect of the Prince Edward Islands Act is that it limits the application of future South African Laws to only those Acts which have "specifically expressed so to apply" to the Prince Edward Islands. The Maritime Zones Act 15 of 1994 specifically expresses its application to the Prince Edward Islands<sup>6</sup> and asserts South Africa's right under the United Nations Law of the Sea Convention (LOSC)<sup>7</sup> to a Territorial Sea (12 nautical miles from coast) and an Exclusive Economic Zone (EEZ) extending 200 nautical miles to sea from the island's coastal baselines<sup>8</sup>. Since no straight baselines have been stipulated for the coast of these islands, the low water mark is taken as the coastal baseline and no internal waters exist around the islands<sup>9</sup>. Interestingly, the Maritime Zones Act stipulates geographical co-ordinates for a Continental Shelf around the Prince Edward Islands. However, the co-ordinates were not delineated according to the principles stipulated in Article 76 of the LOSC and have not been submitted to the Commission on the Limits of the Continental Shelf<sup>10</sup>. As such this claim lacks international validity and South Africa is at present surveying the area for the purposes of preparing an internationally valid claim to the Commission on the Limits of the Continental Shelf under the LOSC provisions.

Although South Africa enjoys sovereign rights to the natural resources in its EEZ around the PEIs, this area also falls within the geographic area of competence of the 1980 Convention for the Conservation of Antarctic Living Resources (CCAMLR) of

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<sup>6</sup> Section 14

<sup>7</sup> United Nations Convention on the Law of the Sea, Montego Bay, 10 December 1982. In force 16 November 1994.

<sup>8</sup> LOSC Article 57

<sup>9</sup> Maritime Zones Act 15 of 1994, section 2(1)

<sup>10</sup> LOSC Article 76 (8)

which South Africa is a member. The LOSC stipulates that in the case where fish stocks occur within the EEZ and in the area beyond and adjacent to it, coastal States need to co-operate with other nations fishing for these resources on the high seas, either directly or through the competent regional organizations<sup>11</sup>. The UN Fish Stocks Agreement, of which South Africa is also a member, is more explicit and asserts that coastal States and States fishing for straddling stocks and highly migratory species in the adjacent areas have a “duty to co-operate for the purpose of achieving compatible measures in respect of such stocks<sup>12</sup>.” The relevant and competent regional fisheries organisation is identified as the preferred mechanism of such co-operation. In summary then, in terms of international law, although South Africa enjoys ultimate sovereignty over the EEZ surrounding the Prince Edward Islands, it has a duty to co-operate with CCAMLR and should ensure that its conservation and management measures are ‘compatible’ with those of CCAMLR.

The CCAMLR regime is primarily an extension of the Antarctic Treaty System and was negotiated with the objective of protection, scientific study and rational use of Antarctic marine living resources<sup>13</sup>. This was largely in response to the perceived threat of large scale krill harvesting on the dependent ecosystems of the Southern Ocean in the 1970s. The Antarctic Treaty System is underpinned by the Antarctic Treaty, which came into force in 1961. The Antarctic Treaty has itself adopted environmental protocols (most importantly the Madrid Protocol) that have pertinence to the conservation of living marine resources and protection of important marine habitats. This has led to some degree of uncertainty in terms of overlapping jurisdiction between the Antarctic Treaty and CCAMLR. A very relevant example is the unclear jurisdiction between Antarctic Treaty Parties and CCAMLR Parties in the identification of MPAs in the Antarctic Treaty area. Annex V of the Madrid Protocol to the Antarctic Treaty makes provision for the identification of marine Antarctic Specially Protected Areas (ASPAs), whilst the conservation of marine ecosystems and biodiversity falls squarely within CCAMLR’s jurisdiction<sup>14</sup>. This has resulted in the current clumsy and time consuming process of identifying these areas. Clearly, a way needs to be found to streamline this process.

South Africa is a member of both the Antarctic Treaty and CCAMLR. However, potential jurisdictional uncertainty is avoided in the case of the Prince Edward Islands due to their geographical position. The Antarctic Treaty applies to all areas South of 60°S, whilst the CCAMLR area of competence is based on the Antarctic Convergence (a more meaningful marine biophysical boundary). The boundaries of

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<sup>11</sup> LOSC Article 63

<sup>12</sup> 1995 United Nations Fish Stocks Agreement Article 7 (2); Full Title: 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of The Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.

<sup>13</sup> Howard M (1989) The Convention on the Conservation of Antarctic Living Marine Resources: A five year review. *International and Comparative Law Quarterly*, 38, 104-149

<sup>14</sup> CCAMLR-WS-MPA-05/9 (2005) Improving the process of declaring Marine Protected Areas by CCAMLR and Antarctic Treaty Parties. Delegation of Australia, CCAMLR MPA Workshop 29 August – 1 September 2005, Washington.

CCAMLR thus differ from those of the Antarctic Treaty by including areas north of 60°S but south of prescribed latitudes and longitudes that approximate the average position of the Antarctic Convergence. The Prince Edward Islands (at 47°S) are situated north of the Antarctic Treaty boundary but within the CCAMLR area of competence (see Figure 1), and thus avoid any potential overlap in jurisdiction between these two conventions.

#### **1.4 MPA definition**

For the purposes of this paper we will consider an MPA to conform to the definition adopted by the Convention on Biological Diversity at its 7<sup>th</sup> meeting of parties in 2004 (Decision VII/5), which defines an MPA as:

*“any defined area within or adjacent to the marine environment, together with its overlaying waters and associated flora, fauna and historical and cultures features, which has been reserved by legislation or other effective means, including custom, with the effect that its marine and/or coastal biodiversity enjoys a higher level of protection than its surroundings”.*

#### **1.5 Aims of this dissertation**

This dissertation examines the international, regional and national legal context for the declaration of a large multi-zoned MPA around the Prince Edward Islands. In particular I examine South Africa’s obligations in terms of international and regional treaty law as well as its commitments to global policy statements. Legal options and opportunities for providing the most comprehensive, and yet practical, legal protection for such a MPA are examined. Recommendations are made based on this analysis.



## 2 International obligations and commitments to the establishment of networks of Marine Protected Areas (MPA)

### 2.1 Global Legal Instruments

#### 2.1.1 *United Nations Convention on the Law of the Sea (UNCLOS) (1982)*

South Africa's principal international obligation and responsibility in terms of the management of the marine resources of the EEZ surrounding the Prince Edward Islands is drawn from the LOSC. Under the LOSC all States have a general obligation to "protect and preserve the marine environment"<sup>15</sup>. Within their EEZ Coastal States are conferred "sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources" of this area<sup>16</sup> and have jurisdiction with regard to the "protection and preservation of the marine environment"<sup>17</sup>. However, these rights come with responsibilities and coastal States are under a specific obligation and duty to 'ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation.' Furthermore, coastal States should co-operate with the competent international organization (in this case CCAMLR) to this end. The present state of the toothfish stocks in this area, clearly bears testimony to the fact that South Africa has been unable to fulfill these conservation and management obligations in the past. Article 61 (3) & (4) goes on to obligate States to restore populations of over-exploited species and associated and dependent species to maximum sustainable levels. MPAs were not widely used during the 1970s when the Convention was being negotiated and consequently UNCLOS does not make explicit mention of this management tool. However Article 62 (4c) does mention *fishing area regulations*, as a specific tool that States may use to manage fisheries in their EEZs.

Part XII of the LOSC also specifically requires coastal States to take measures "to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life"<sup>18</sup>. States may also define areas within their EEZs where special shipping measures need to be applied to prevent the risk of pollution events<sup>19</sup> (see later discussions). It is therefore held the development of a network of MPAs for the purposes of "protecting and preserving" marine habitats and biodiversity as well as for fisheries management reasons (in particular for restoring depleted populations), is entirely consistent with the LOSC and in fact could be seen as going a long way towards fulfilling South Africa's obligations under this almost universally accepted Convention.

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<sup>15</sup> LOSC Art 192 and Art 194

<sup>16</sup> LOSC Art 56 (1) (a)

<sup>17</sup> LOSC Art 56 (1) (b) (iii)

<sup>18</sup> LOSC Art 194 (5)

<sup>19</sup> LOSC Art 211 (6a)

### 2.1.2 Convention on Biological Diversity (CBD) (1992)

The CBD (to which South Africa is a party) explicitly requires States, as far as possible and is appropriate, to:

- (a) *Establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity;*
- (b) *Develop, where necessary, guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biological diversity*<sup>20</sup>.

For these purposes, the CBD requires states to identify:

*...components of biological diversity important for its conservation and sustainable use having regard to the indicative list of categories set down in Annex I;*<sup>21</sup>

Annex 1 in turn outlines the following components:

- (a) *Ecosystems and habitats: containing high diversity, large numbers of endemic or threatened species, or wilderness; required by migratory species; of social, economic, cultural or scientific importance; or, which are representative, unique or associated with key evolutionary or other biological processes;*<sup>22</sup>

Furthermore, the CBD requires states to:

*Develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity...*<sup>23</sup>

From the above, one can deduce that member States of the CBD have accepted an international obligation towards developing a system of protected areas and that this involves identifying spatially defined areas that can benefit from area protection and entrenching these plans within accepted National Strategies.

In 1995, the second Conference of Parties (COP) of the CBD adopted the Jakarta Mandate<sup>24</sup> on the Conservation and Sustainable Use of Marine and Coastal Biodiversity and subsequently developed a Programme of Work on Marine and Coastal Biological Diversity in 1998<sup>25</sup>. This work programme included Marine and Coastal Protected Areas as one of its five key programme elements.

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<sup>20</sup> CBD Art 8 (a)

<sup>21</sup> CBD Art 7 (a)

<sup>22</sup> CBD Annex 1

<sup>23</sup> CBD Art 6 (a)

<sup>24</sup> Decision II/10 of the second meeting of the Conference of the Parties (Jakarta, Indonesia, 1995)

<sup>25</sup> Annex to Decision IV/5 on Conservation and Sustainable Use of Marine and Coastal Biodiversity, as adopted by the fourth meeting of the Conference of the Parties (Bratislava, Slovak Republic, 1998)

It is interesting to note the criterion of ‘a representative network of MPAs’ was originally only included in an indicative list<sup>26</sup> in the 1992 Convention text. However, the concept of representative networks of MPAs gained strong support in later years. The eighth meeting of the Convention’s Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) held in 2003 recommended that COP endorse a global goal for the Convention with regard to MPAs, which provides for the “establishment and maintenance, by 2012, of a system of MPAs that are effectively managed, ecologically based and contribute to a *permanent representative global network*.”

### **2.1.3 The 2002 World Summit on Sustainable Development (WSSD)**

The WSSD was successful in agreeing on a Plan of Implementation that included a number of global targets for the management of our oceans. The Plan of Implementation explicitly requests States to:

*Develop and facilitate the use of diverse approaches and tools, including the ecosystem approach, the elimination of destructive fishing practices, the establishment of marine protected areas consistent with international law and based on scientific information, including representative networks by 2012...*<sup>27</sup>

The Plan also calls for the application of an ecosystem approach to fisheries by 2010<sup>28</sup> and the restoration of depleted fish stocks by 2015<sup>29</sup>. A system of MPAs could contribute greatly towards both these targets.

Although not a binding agreement, the WSSD was successful in setting a global agenda and goal for MPA implementation. South Africa has publicly and repeatedly committed itself to this goal<sup>30</sup>.

Furthermore, although the WSSD Plan of Implementation does not explicitly mention the development of MPAs in areas beyond national jurisdiction (i.e. on the high seas) neither does it restrict itself to this. It is evident that by definition, for a system of MPAs to be globally *representative* it would need to include areas on the high seas.

### **2.1.4 2003 World Parks Congress**

The 2003 World Parks Congress built on the international commitment made by the WSSD Plan of Implementation, but it took it a step further by setting a very specific goal as to the amount of area that needed to be set aside in MPAs. The

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<sup>26</sup> CBD Annex 1

<sup>27</sup> WSSD recommendation 31 (c)

<sup>28</sup> WSSD recommendation 29 (d)

<sup>29</sup> WSSD recommendation 30 (a)

<sup>30</sup> Department of Environmental Affairs and Tourism (2004) Extract from remarks made by Marthinus van Schalkwyk, Minister of Environmental Affairs and Tourism. Kalk Bay Harbour. [www.environment.gov.za](http://www.environment.gov.za)

recommendations of the World Parks Congress thus called on States to establish by 2012:

*...a global system of effectively managed, representative networks of marine and coastal protected areas, consistent with international law and based on scientific information, that:*

*a. Greatly increases the marine and coastal area managed in MPAs by 2012; these networks should be extensive and include strictly protected areas that **amount to at least 20–30%** of each habitat, and contribute to a global target for healthy and productive oceans;<sup>31</sup>*

The World Parks Congress also went further in explicitly calling for this global system of representative networks of MPAs to include areas beyond national jurisdiction (i.e. on the high seas).<sup>32</sup> To date there has been little progress in declaring effective MPAs in areas beyond national jurisdiction, although this has been the subject of much recent debate in various international fora<sup>33</sup>.

### **2.1.5 South Africa's performance in meeting these international obligations and commitments**

South Africa has made good progress over the past few years in meeting some of its international obligations under the CBD. In terms of developing national strategies and plans<sup>34</sup>; South Africa recently concluded its National Biodiversity Strategic Action Plan (NBSAP)<sup>35</sup>, which incorporated a National Spatial Biodiversity Assessment for the marine areas under South African jurisdiction<sup>36</sup>. Interestingly, this marine report was flawed in that it did not consider the EEZ surrounding the Prince Edward Islands. The marine conservation plan recently developed for the Prince Edward Islands will largely fill this gap<sup>37</sup>.

South Africa has recently made good recent in developing a comprehensive system of marine protected areas. During 2004, South Africa proclaimed four new MPAs, increasing the proportion of coastline under formal protection to some 18% of the total. However, all of South Africa's current MPAs are situated in the close inshore region of the continental EEZ. Substantial work is therefore still needed before South Africa's current system of MPAs could be considered to be a truly 'representative network' as stipulated by the SBSTTA to the CBD, the WSSD Plan of Implementation, and the World Parks Congress recommendations. As mentioned previously, the South African government has publicly committed itself to these

<sup>31</sup> World Parks Congress recommendation V22

<sup>32</sup> World Parks Congress recommendation V23

<sup>33</sup> Gjerde K (2005) Editors note: Moving from Words to Actions. The International Journal of Marine and Coastal Law, 20, 323-344

<sup>34</sup> CBD Art 6a

<sup>35</sup> Driver et al. 2004. National Biodiversity Strategic Action Plan. South African National Biodiversity Institute

<sup>36</sup> Lombard et al. 2004. National Spatial Biodiversity Assessment: Marine Component. South African National Biodiversity Institute

<sup>37</sup> See Lombard et al. 2006 note 4 above

goals<sup>38</sup>. The marine habitats surrounding the Prince Edward Islands are not represented elsewhere in the current South African system of MPAs. As such the development of a systematic MPA surrounding the Prince Edward Islands will contribute greatly towards South Africa meeting its obligations under the CBD and its commitments with regard to the WSSD Plan of Implementation and the World parks Congress.

## **2.2 Site protection**

### **2.2.1 World Heritage Convention**

As mentioned earlier it is also South Africa's intention to nominate the Prince Edward Islands as a World Heritage Site and that the nomination is likely to include the territorial sea around the islands. This will have the effect of linking the two islands into a single geographic entity. A marine component to this proposal will help to meet the World Heritage Site criteria for selecting natural sites, which require sites to be of sufficient size and contain the necessary elements to ensure the integrity of ongoing ecological and biological processes. Given the inextricable link between the terrestrial and marine ecosystems on the Prince Edward Islands (i.e. terrestrial ecosystems are largely driven by nutrients brought ashore by seabirds and seals which feed offshore), a purely terrestrial nomination would be significantly less convincing to the World Heritage Site Committee.

The most important effect that a successful World Heritage Site nomination of the Prince Edward Islands will have is to elevate the duty to protect this site to an international level. However, the World Heritage Convention is careful ensure that this international duty does not derogate from South Africa's sovereignty over the territory<sup>39</sup>. Amongst the mechanisms available to give effect to this international duty, is the establishment of the 'World Heritage Fund' through contributions by Member States<sup>40</sup>, which can be used to assist with the protection, conservation and rehabilitation of Sites.

An important aspect of World Heritage Sites is their educational value and States undertake to "endeavor by all appropriate means, and in particular by educational and information programmes, to strengthen appreciation and respect by their peoples of the cultural and natural heritage" of these Sites. This aspiration is interesting in the context of the present national legal status of the islands. The islands are declared as a Special Nature Reserve under the National Environmental Protection Act (NEMPA) Act 57 of 2003. Special Nature Reserve status makes an area primarily available for scientific research and environmental monitoring<sup>41</sup>. As such Special Nature Reserves have very restrictive visitation conditions (see later discussion on national legislation

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<sup>38</sup> Department of Environmental Affairs and Tourism. 2004. See note 30 above

<sup>39</sup> Article 6 (1)

<sup>40</sup> Articles 15 & 16

<sup>41</sup> NEMPA s18 (2) (b)

pertaining to protected areas). These could be seen to conflict with the need to use these sites for “education and information” programmes as envisaged under the World Heritage Convention.

## 2.3 Species protection by means of MPAs

### 2.3.1 *Agreement on the Conservation of Albatrosses and Petrels (ACAP)*

The Prince Edward Islands are the breeding site for five species of Albatrosses listed in Annex 1 of the Agreement on the Conservation of Albatrosses and Petrels (ACAP). These species have the capability of traveling large distances to feed (especially when not breeding). However, while breeding all five species probably spend a significant proportion of their time feeding within the EEZ surrounding the Prince Edward Islands<sup>42,43</sup>. These are amongst the reasons why South Africa was a leading force in the development of this Agreement (the negotiations of the final text were held in Cape Town), and amongst the first countries to ratify this agreement.

Amongst the key requirements of parties to the ACAP, is the obligation to protect habitats that are important for the survival of these species<sup>44</sup>. The main text of the Agreement is supplemented by an Action Plan<sup>45</sup> that requires parties to:

*... individually or collectively seek to develop management plans for the most important foraging and migratory habitats of albatrosses and petrels<sup>46</sup>.*

and

*...take special measures individually and collectively to conserve marine areas which they consider critical to the survival and/or restoration of species of albatrosses and petrels which have unfavourable conservation status<sup>47</sup>.*

Furthermore, the Action Plan to ACAP requires parties ‘to reduce or eliminate the mortality of albatrosses and petrels resulting incidentally from fishing activities<sup>48</sup>.’

The use of Albatross foraging areas as one of the criteria for identifying and zoning a MPA within the South African EEZ and consequently reducing risk of mortality in fishing operations, is thus entirely consistent with the provisions of ACAP and could be seen as meeting the obligation to protect these areas, under this convention.

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<sup>42</sup> Nel *et al.* 2000. Foraging ecology of Grey-headed Mollymawks at Marion Island, southern Indian Ocean, in relation to longline fishing activity. *Biological Conservation*, 96, 219–231.

<sup>43</sup> Nel *et al.* 2002. Foraging interaction between Wandering Albatrosses *Diomedea exulans* breeding on Marion Island and long-line fisheries in the southern Indian Ocean. *Ibis*, 144 (online), E141–E154.

<sup>44</sup> Article 3 (1a)

<sup>45</sup> Annex 2

<sup>46</sup> Annex 2 Article 2.3.2

<sup>47</sup> Annex 2 Article 2.3.3

<sup>48</sup> Annex 2 Article 3.2.1

### 3 Regional arrangements

#### 3.1 1980 Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR)

The overall objective of the 1980 Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) is “the conservation of Antarctic Marine Living Resources”<sup>49</sup>. However Article 2 of this convention goes on to elaborate that for the purposes of this convention “the term ‘conservation’ shall include rational use”<sup>50</sup>. This Article has led to the somewhat split personality of CCAMLR, caught halfway between a traditional conservation treaty concerned primarily with biodiversity conservation and a Regional Fisheries Management Organisation (RFMO) concerned mainly in setting fisheries regulations and Total Allowable Catches (TACs). Despite this, the Convention text was ground-breaking at the time of its conclusion in its provisions that alluded for the first time towards an ‘ecosystem approach’ to fisheries management. Article 2 stipulates that any harvesting of species or associated activities need to be conducted in accordance with three basic principles.

*(a) prevention of decrease in the size of any harvested population to levels below those which ensure its stable recruitment. For this purpose its size should not be allowed to fall below a level close to that which ensures the greatest net annual increment;*

*(b) maintenance of the ecological relationships between harvested, dependent and related populations of Antarctic marine living resources and the restoration of depleted populations to the levels defined in sub-paragraph (a) above; and*

*(c) prevention of changes or minimisation of the risk of changes in the marine ecosystem which are not potentially reversible over two or three decades, ..., with the aim of making possible the sustained conservation of Antarctic marine living resources.*

Article IX (1) of the convention then requires the Commission to give effect to the principles of CCAMLR through the formulation of conservation measures. Included in the illustrative list of possible conservation measures is:

*(g) the designation of the opening and closing of areas, regions or sub-regions for purposes of scientific study or conservation, including special areas for protection and scientific study;*

Although not specifically referred to as MPAs, it is clear that an area closed to fishing for the purposes “scientific study or conservation” certainly qualifies as a MPA as defined by the Convention on Biological Diversity. The degree to which such closed

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<sup>49</sup> Article 2 (1)

<sup>50</sup> Article 2 (2)

areas afford comprehensive biodiversity protection depends on whether the area is closed to all fisheries or just certain directed fisheries and whether any associated protection has been afforded from other threats, either through CCAMLR itself or through complementary international arrangements (e.g. protection from mining and shipping related risks; see later discussions).

CCAMLR has passed several conservation measures (e.g. Conservation Measures 32-02 and 32-03) that close certain statistical reporting areas or sub-areas to certain directed fisheries for all finfish or for named species (either year-round or seasonally), to allow stock recovery, prevent by-catch, protect spawning grounds, prevent unregulated fishing, or to allow time for scientific surveys to be carried out. In fact all three CCAMLR Statistical Areas surrounding the Prince Edward islands EEZ (58.6, 58.7, 58.4.4) are closed to directed fishing for Patagonian Toothfish (Conservation Measures 32-11(2002); 32-12(1998); 32-10(2002)). However, none of these areas provide long term protection from all types of extractive activities, and some closed areas may only be in force for a limited number of seasons. The only true MPAs within the CCAMLR area in which all extractive activities are prohibited have been designated in EEZs under national jurisdiction (for example, Australia's Heard and McDonald Islands Marine Reserve).

It should be noted that Article IX (2) (i) of Convention also appears to give the Commission a general power to adopt "such other conservation measures" (i.e. beyond pure fisheries measures) "as the Commission considers necessary for the fulfillment of the objective of this Convention". The Commission has used this provision to pass general conservation measures that relate to the prohibition of discharge of oil, sewage, garbage etc in designated areas (Conservation Measures 41-09(2005) & 41-10(2005)<sup>51</sup>.

At CCAMLR-XXIII held in 2004, the Commission addressed the topic of MPAs and urged the Scientific Committee to proceed with work on this topic as a matter of urgency. The Commission reaffirmed the need to develop advice consistent with Articles II and IX of the Convention<sup>52</sup>. In this regard the Scientific Committee endorsed in principle an expert workshop to be held during 2005, to discuss how the use of MPAs could contribute to furthering the objectives of CCAMLR. This workshop was held from 29 August to 1 September 2005. At CCAMLR-XXIV held in 2005, the Commission endorsed the report of this workshop which concluded that MPAs had considerable potential for furthering CCAMLR's objectives in applications ranging from protection of ecosystem processes, habitats and biodiversity, and protection of species. The workshop further concluded that in establishing a network of MPAs, special attention needs to be given to the protection of: a) representative areas, b)

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<sup>51</sup> For more detailed discussion see Millar et al. (2004) Managing Antarctic Marine Living Resources: The CCAMLR Approach. The International Journal of Marine and Coastal Law, 19, 317-359.

<sup>52</sup> CCAMLR-XXIII (2004) Report of the 23<sup>rd</sup> meeting of the Commission. CCAMLR, Hobart, Australia. [www.ccamlr.org](http://www.ccamlr.org); Paragraph 4.13



scientific areas and c) areas vulnerable to impacts by human activities<sup>53</sup>. Furthermore the Scientific Committee noted that there was a need to develop a strategic approach to MPA design and implementation throughout the Southern Ocean, notably in relation to a system of protected areas<sup>54</sup>. The Commission called on the Scientific Committee to proceed in a bioregional and fine-scale mapping exercise that would inform the development of a representative network of MPAs<sup>55</sup>

The scientific approach taken by South Africa in attempting to delineate the MPA around its Prince Edward Islands was specifically commended in the CCAMLR MPA workshop report<sup>56</sup>.

It can therefore be concluded that the use MPAs in furthering its objectives shows considerable promise and the efforts undertaken by South Africa to delineate and declare a MPA around the Prince Edward Islands, is entirely consistent with the current thinking under CCAMLR.

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<sup>53</sup> CCAMLR-XXIV (2005) Report of the 23<sup>rd</sup> meeting of the Commission. CCAMLR, Hobart, Australia. [www.ccamlr.org](http://www.ccamlr.org); Para 4.14

<sup>54</sup> SC-CCAMLR-XXIV (2005) Report of the Scientific Committee. CCAMLR, Hobart, Australia. [www.ccamlr.org](http://www.ccamlr.org); Para 3.51 (i)

<sup>55</sup> CCAMLR-XXIV (2005) Para 4.15

<sup>56</sup> SC-CCAMLR-XXIV (2005) Para 81

## 4 National legislation

All of South Africa's current MPAs have been declared under the section 43 of the Marine Living Resources Act 18 of 1998. However, two MPAs (Greater St Lucia Wetland and the Table Mountain National Park) also form part of World Heritage Sites.

The terrestrial components of the Prince Edward Islands have been managed as a Special Nature Reserve since 3 November 1995 in terms of Section 18 of South Africa's Environment Conservation Act 73 of 1989. The boundaries of the reserve were then set at the low-water mark. South Africa's National Environmental Management: Protected Areas Act 57 of 2003 (NEMPA) allows for the continued proclamation of Special Nature Reserves, and as well as applying to territorial waters "also applies to the exclusive economic zone and continental shelf of the Republic". At the 15<sup>th</sup> meeting of the Prince Edward Islands Management Committee held in January 2003, the committee endorsed a proposal to investigate expanding the Special Nature Reserve Status to include the Territorial Sea around the islands.

Parallel to this process, it is also South Africa's intention to nominate the Prince Edward Islands as a World Heritage Site. In order to create a contiguous geographical entity and to incorporate integral ecosystem links, it has been proposed that the World Heritage Site nomination include the 12 Nautical Mile territorial seas around the islands.

These initiatives were somewhat overshadowed when the Minister declared his intention to declare "one of the worlds largest MPAs" around the Prince Edward Islands in July 2004. He was clear that the objective of such an MPA would be to provide both biodiversity conservation and fisheries management benefits in this area. Particular reference was made to combating the scourge of IUU fishing in the area and restoring the damage that this had caused in the past.

In this next section we consider the implications of these proposals and the options under South African domestic legislation.

### 4.1 Marine Living Resources Act 18 of 1998

Section 43 of the Marine Living Resources Act allows the Minister to declare MPAs for three purposes<sup>57</sup>;

*(a) for the protection of fauna and flora or a particular species of fauna or flora and the physical features on which they depend;*

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<sup>57</sup> Marine Living Resources Act 18 of 1998. Section 43 (1)

*(b) to facilitate fishery management by protecting spawning stock, allowing stock recovery, enhancing stock abundance in adjacent areas, and providing pristine communities for research; or*

*(c) to diminish any conflict that may arise from competing uses in that area.*

Within an MPAs no person may (unless exempt by the Minister for the purposes of proper management):<sup>58</sup>

*(a) fish or attempt to fish;*

*(b) take or destroy any fauna and flora other than fish;*

*(c) dredge, extract sand or gravel, discharge or deposit waste or any other polluting matter, or in any way disturb, alter or destroy the natural environment;*

*(d) construct or erect any building or other structure on or over any land or water within such a marine protected area; or*

*(e) carry on any activity which may adversely impact on the ecosystems of that area.*

MPAs promulgated under the Marine Living Resources Act therefore allow vessels (including fishing and tourism vessels) to pass through or be otherwise be present within MPAs, subject to provision (e) above. Should the presence or passage of the vessel be deemed to be an activity “which may adversely impact on the ecosystems of that area”, it could therefore be regulated. There is some precedence for this and the regulations pertaining to several newly declared MPAs have specific regulations pertaining to the usage of vessels in these areas. For instance the regulations for three new MPAs in the Border region of South Africa prohibit persons from “enter(ing) the Marine Protected Area with a vessel that has fishing gear on board”. These measures have presumably been put in place to assist with compliance and enforcement efforts. In other words, the State merely has to prove that the fishing vessel was present in such an MPA to make it guilty of an offence and does not have to prove that the vessel was indeed attempting to fish. South Africa is not alone in imposing such measures. Such ‘exclusion zones’ are also being used in Australia<sup>59</sup>.

So while it is clearly possible to regulate the transit and passage of national fishing vessels within MPAs under the Marine Living Resources Act, the default position is that vessels that do not pose an adverse threat to the ecosystems of the area, will be allowed to be present within MPAs.

Section 43 (2) (c) of the Marine Living Resources Act also makes it highly unlikely that any mining activity will be allowed inside an MPA. This is strengthened further by the National Environmental Management Act: Protected Areas (NEMPA) Act 57 of

<sup>58</sup> Marine Living Resources Act 18 of 1998. Section 43 (2)

<sup>59</sup> Molenaar EJ (2000) Satellite Based Vessel Monitoring Systems for Fisheries Management: International Legal Aspects. International Journal of Marine and Coastal Law, 15, 65-109

2003, which expressly prohibits commercial prospecting or mining activities in all protected areas (including MPAs<sup>60</sup>).

#### **4.2 A Special Nature Reserve under the National Environmental Management Act: Protected Areas (NEMPA) Act 57 of 2003**

One of the options considered in the planning of the Prince Edward Islands MPA was that the Special Nature Reserve Status be extended to the 12 nautical mile territorial sea and that this becomes an “inner sanctuary” within a larger multi-zoned MPA. The other components of the larger MPA would be afforded protection through the traditional means of the Marine Living Resources Act. In this section we consider the implications of this.

Under NEMPA the Minister may only declare a Special Nature Reserve for the following purposes:<sup>61</sup>

- (a) To protect highly sensitive, outstanding ecosystems, species or geological or physical features in the area; and*
- (b) To make the area primarily available for scientific research or environmental monitoring.*

Consequently, access to Special Nature Reserves is very restricted. Only officials of the Department of Environmental Affairs and Tourism or other organs of state, monitoring the state of conservation or biodiversity, or implementing the management plan, and the police, customs and excise officials are allowed access.<sup>62</sup> The management authority may grant further exemptions, after consultation with the Minister, to the following persons:<sup>63</sup>

- (a) a scientist to perform scientific work;*
- (b) a person to perform an activity related to the conservation of the reserve or of the biodiversity in the reserve;*
- (c) a person recording a news event that occurred in the reserve or an educational or scientific programme;*
- (d) an official of the management authority to perform official duties; or*
- (e) an official of an organ of state to perform official duties.*

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<sup>60</sup> As amended by the National Environmental Management: Protected Areas Amendment Act 31 of 2004

<sup>61</sup> NEMPA Section 18 (2)

<sup>62</sup> NEMPA Section 45 (2)

<sup>63</sup> NEMPA Section 45 (3)

Clearly under this legal regime it would be difficult (if not impossible) to allow access to any non-governmental vessels and other vessels not officially commissioned or mandated by an organ of the state. For example, fishing and tourism vessels would be prohibited from marine areas declared as a Special Nature Reserve under NEMPA, unless undertaking official duty on behalf of the government.

Mining and commercial prospecting in Special Nature Reserves are unequivocally prohibited<sup>64</sup>.

It is also clear that “if a marine protected area has been included in a special nature reserve, national park or nature reserve, such area must be managed and regulated as part of the special nature reserve, national park or nature reserve in terms of this Act<sup>65</sup>.” There would thus be a need to harmonize management plans and align institutions involved in the management of the terrestrial and marine components.

### **4.3 World Heritage Act 49 of 1999**

The World Heritage Act is largely an administrative act that seeks to implement the World Heritage Convention within South Africa’s national legislation. The Act requires the appointment of a single “Authority” that will oversee the management of any World Heritage Site. This can either be an existing management authority<sup>66</sup> or a newly established legal entity<sup>67</sup>, established expressly for the purpose managing the site. The marine and terrestrial components of the Prince Edward Islands are currently managed by different branches within the same government department (Department of Environmental Affairs and Tourism). It is unclear, if such an arrangement would qualify as a single “Authority” or whether a new arrangement would need to be established.

The Act also requires the development of an integrated management plan for the heritage site<sup>68</sup>. The inclusion of marine areas within a successful nomination of the Prince Edward Islands would thus necessitate the development of an integrated management plan that would harmonize marine and terrestrial management efforts.

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<sup>64</sup> NEMPA Section 48 (1) (a)

<sup>65</sup> NEMPA Amendment Act 31 of 2004

<sup>66</sup> World heritage Act Section 8

<sup>67</sup> World heritage Act Section 9

<sup>68</sup> World Heritage Act Chapter IV (sections 21 – 28)

## 5 Regulation of shipping activities

The Prince Edward Islands are not situated on any major shipping lanes and are therefore subject to reasonably low levels of international shipping traffic. However, as mentioned in the introductory remarks, the last decade has seen a dramatic rise in shipping traffic to the Southern Ocean and Antarctica, mainly due to increased fishing and tourism activity. This increase has been reflected around the Prince Edward Islands. To date, most of the shipping traffic around the Prince Edward Islands has been by South African flagged vessels and thus clearly easier to regulate under domestic legislation, however, occasional foreign flagged vessels have also visited the islands. It would certainly not be unreasonable to expect shipping traffic (domestic and foreign flagged) to the Southern Ocean and to the Prince Edward Islands specifically, to continue to increase significantly over the next decade. For the sake of comprehensiveness therefore and to avert possible future threats to the islands, we consider in this next section the options South Africa has in terms of controlling the potential risks from international shipping activities in the South African maritime zones surrounding the Prince Edward Island.

### 5.1 International law as it relates to the passage of foreign vessels

#### 5.1.1 *The Law of the Sea Convention (LOSC)*

Part XII of the LOSC places a general obligation on States to take all measures consistent with the Convention “that are necessary to prevent, reduce and control pollution of the marine environment from any source...<sup>69</sup>”. These measures “shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life<sup>70</sup>.”

These general provisions indicate a need to impose more stringent measures in certain designated areas that may be more vulnerable to the effects pollution, potentially through the proclamation of MPAs or other area protection measures. In this next section we will examine in more detail the measures that Coastal States can take to protect such designated areas under their domestic legislation or through the competent international authority.

#### *Territorial Sea*

Foreign vessels enjoy ‘the right of innocent passage’ within the territorial sea of coastal states<sup>71</sup>. Passage is defined as being expressly ‘for the purposes of traversing the territorial sea’, and needs to be ‘continuous and expeditious’. Vessels are allowed to stop and anchor, but only ‘in so far as the same are incidental to

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<sup>69</sup> LOSC Article 194 (1)

<sup>70</sup> LOSC Article 194 (5)

<sup>71</sup> LOSC Article 17

ordinary navigation or are rendered necessary by *force majeure* or distress or for the purpose of rendering assistance to persons, ships or aircraft in danger or distress.<sup>72</sup>

Passage is in turn considered to be 'innocent' as long as it is 'not prejudicial to the peace, good order or security of the coastal state'<sup>73</sup>. The Law of the Sea Convention goes on to list a number of activities that can be considered to be 'prejudicial to the peace, good order or security of a coastal state'. This includes; 'launching, landing or taking on board of any aircraft' and 'any fishing activities'. However the list is merely indicative and ends with the open-ended qualification of 'any other activity not having a direct bearing on passage'. In other words, should a vessel engage in any activity not having a direct bearing on passage, its passage will be deemed to not be innocent and the vessel can be excluded from the territorial sea of a coastal State.

Passage of a foreign tourist vessel cruising or 'hovering' around the Prince Edward Islands or any other vessel engaged in any activity within the territorial sea of the Prince Edward Islands *not having a direct bearing its passage*, will therefore not be deemed innocent and South Africa has a right under international law to exclude such a vessel.

Despite the right of foreign vessels to innocent passage, the Part II of LOSC goes on to allow coastal States to adopt laws and regulations with regard to innocent passage of foreign vessels in their territorial seas with respect to a number of issues. Included in this list of issues are<sup>74</sup>:

*(a) the safety of navigation and the regulation of maritime traffic;....*

*(d) the conservation of the living resources of the sea;*

*(e) the prevention of infringement of the fisheries laws and regulations of the coastal State;*

*(f) the preservation of the environment of the coastal State and the prevention, reduction and control of pollution thereof;*

*(g) marine scientific research and hydrographic surveys;*

The only proviso to these regulations is that they "shall not apply to the design, construction, manning or equipment of foreign ships unless they are giving effect to generally accepted international rules or standards"<sup>75</sup>. Coastal states may therefore require foreign vessels to use designated sea lanes and traffic separation schemes for regulation of traffic<sup>76</sup>. In particular, tankers, nuclear powered vessels and other vessels carrying dangerous and noxious substances may be required to use

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<sup>72</sup> LOSC Article 18

<sup>73</sup> LOSC Article 19

<sup>74</sup> LOSC Article 21 (1)

<sup>75</sup> LOSC Article 21 (2)

<sup>76</sup> LOSC Article 22 (1)

designated sea lanes<sup>77</sup>. In the designation of such sea lanes, coastal states need to take into account the recommendations of ‘the competent international authority’ (in this case the International Maritime Organization (IMO)) and give due publicity to these regulations<sup>78</sup>.

Part XII of the LOSC which deals with the protection of the marine environment goes on to assert that:

*Coastal States may, in the exercise of their sovereignty within their territorial sea, adopt laws and regulations for the prevention, reduction and control of marine pollution from foreign vessels, including vessels exercising the right of innocent passage. Such laws and regulations shall, in accordance with Part II, section 3, not hamper innocent passage of foreign vessels.*

Part II and Part XII of the LOSC when read together, are clear that coastal States have a sovereign right to regulate shipping traffic within their territorial sea for the purposes of conserving marine living resources and preventing, reducing and controlling marine pollution. However, these regulations should not unduly hamper the right of innocent passage of foreign vessels, and coastal States should take into account the recommendations of the IMO. It is important to note that the designation of such sea lanes and other marine traffic regulation measures by a coastal State is not conditional on the consent of IMO, but the coastal State merely needs to *take into account* the recommendations of IMO.

### **EEZ**

Coastal States rights in the EEZ relate to their sovereign rights for the purpose of “exploring and exploiting, conserving and managing the natural resources” of this area<sup>79</sup>. In this respect coastal States are conferred jurisdiction as provided for in the relevant provisions of the LOSC for the “the protection and preservation of the marine environment”<sup>80</sup>.

The relevant provisions are found in Part XII of the convention. With regard to coastal States rights and duties to protect the natural resources under their jurisdiction, Article 211 is clear that “where the international rules and standards... are inadequate to meet special circumstances and coastal States have reasonable grounds for believing that a particular, clearly defined area of their respective exclusive economic zones is an area where the adoption of special mandatory measures for the prevention of pollution from vessels is required for recognized technical reasons in relation to its oceanographical and ecological conditions”<sup>81</sup> the coastal States may submit this information to the IMO for its consideration. The IMO

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<sup>77</sup> LOSC Article 22 (2)

<sup>78</sup> LOSC Article 22 (3) & (4)

<sup>79</sup> LOSC Article 56 (1) (a)

<sup>80</sup> LOSC Article 56 (1) (b) (iii)

<sup>81</sup> LOSC Article 211 (6a)



will consider this information within 12 months and “if the organization so determines, the coastal States may, for that area, adopt laws and regulations for the prevention, reduction and control of pollution from vessels implementing such international rules and standards or navigational practices as are made applicable, through the organization, for special areas.”

It is therefore clear that coastal States can, with the consent of IMO and without hampering the freedom of navigation of foreign vessels, adopt special measures to reduce the risk of ship-based pollution in specific designated areas. These measures may include routeing measures<sup>82</sup>.

It was a traditionally held view that the establishment of routeing measures for the purposes of protecting the marine environment needed to be related to the risk of pollution. In other words Article 56 of the LOSC was subject to Article 211 (5). However, a contrary argument held that if coastal States are to give effect to Part V of the Convention as well as Articles 192 and 194(5), they may need to adopt ship regulation measures for the purposes of protection and preservation of the marine environment, other than reducing the risk of pollution<sup>83</sup>. It is this position that has led to Canada recently amending a traffic separation scheme in the Bay of Fundy for the purposes of reducing ship strikes on North Atlantic right whales. The United States has also proposed three mandatory no-anchoring areas to protect the coral reefs of the Flower Garden Banks in the Gulf of Mexico<sup>84</sup>.

### *Rights of Coastal States in Territorial Sea vs EEZ*

For the purposes of informing the management of a large MPA around the Prince Edward Islands MPA, it is necessary to draw some distinctions between the coastal States rights in its territorial sea as opposed to its EEZ and the role of IMO. It is important to note that in designating international sea lanes in its territorial sea a coastal State merely needs to “take into account” the “recommendations” of IMO. In other words, such regulation of marine traffic is not contingent on IMO’s consent. In its EEZ on the other hand, a coastal State does require IMO’s specific consent to impose controls on international navigation in the form of routeing measures.

### **5.1.2 Special Areas and Particularly Sensitive Sea Areas (PSSAs) under IMO**

The International Convention for the Prevention of Pollution from Ships (1973) and its 1978 Protocol (together known as MARPOL 73/78) is the principle IMO treaty dealing with the threat of pollution from ships. MARPOL 73/78 allows for the designation of “special areas” where the adoption of special mandatory operational standards for the prevention of sea pollution are required due to its oceanographical and ecological condition and to the particular character of the maritime traffic in the area. The

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<sup>82</sup> Roberts J (2005) Protecting Sensitive Marine Environments: The Role and Application of Ships Routeing Measures. *International Journal of Marine and Coastal Law*, 20, 135-159

<sup>83</sup> Johnson LS (2004), Coastal State Regulation of International Shipping. Oceana Publications, p. 61.

<sup>84</sup> Roberts J (2005) see note 82 above

measures that need to be adopted in Special Areas are outlined in Annex I, II, IV and V and mainly relate to limitation of operational discharge and pollution from vessels.

In 1991 the IMO Assembly adopted Resolution A.720 (17), which allowed for the designation of *Particularly Sensitive Sea Areas* (PSSAs). In 2001 a further resolution was adopted that describes guidelines for the designation of Special Areas and PSSAs<sup>85</sup>. A PSSA is defined as “an area that needs special protection through action by IMO because of its significance for recognized *ecological, socio-economic, or scientific* reasons and because it may be vulnerable to damage by international shipping activities.”

The resolution goes on to outline ecological, socio-economic and scientific criteria that may be used to designate a PSSA. Amongst the ecological criteria are: uniqueness and rarity of ecosystems, critical habitat, ecological dependence on a habitat, representativeness, biological diversity, spawning or breeding grounds, naturalness, ecological integrity, and biogeographic importance. Scientific criteria include areas that have a high scientific interest, or areas that provide important baseline or monitoring studies.

The protective measures for PSSAs are those within the purview of the IMO and include:<sup>86</sup>

1. Designation of an area as a Special Area under Annexes I, II, IV or V of MARPOL 73/78, or application of special discharge restrictions to vessels operating in a PSSA.
2. Adoption of ships' routeing and reporting systems near or in the area, under the International Convention for the Safety of Life at Sea (SOLAS)<sup>87</sup> and in accordance with the General Provisions on Ships' Routeing and the Guidelines and Criteria for Ship Reporting Systems. For example, a PSSA may be designated as an 'area to be avoided' or it may be protected by other ships' routeing or reporting systems;
3. Development and adoption of other measures aimed at protecting specific sea areas against environmental damage from ships, such as compulsory pilotage schemes or vessel traffic management systems.

A coastal State may therefore designate PSSAs within its territorial sea or EEZ, through consultation and approval by IMO. Within these areas coastal States may require vessels to observe special discharge restrictions, totally avoid the area, or be subject to compulsory pilotage or reporting systems and other vessel traffic management systems.

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<sup>85</sup> IMO Assembly Resolution A.927 (22)

<sup>86</sup> IMO Assembly Resolution A.927 (22)

<sup>87</sup> SOLAS Chapter V Regulation 8

### *PSSA vs stand alone regulations*

The LOSC allows coastal States to adopt measures that regulate shipping traffic within its territorial sea and EEZ for the purposes protection and preservation of the marine environment, without any special designation as a PSSA or Special Area. In fact identification as a PSSA is nothing more than a qualification and basis on which protective measures can be taken through existing IMO measures<sup>88</sup>. What then are the advantages of coastal States pursuing a PSSA designation?

Most importantly, it provides global recognition of a designated area through identification of PSSA status on international navigational charts. This serves to keep mariners aware of the need to take extra care and to abide by the stipulated measures. PSSA status also provides coastal States with considerable political leverage to adopt protective measures (i.e. measures that may not be as readily accepted by the international community in the absence of PSSA status). The disadvantage is that PSSA designation does add the additional procedural hurdles of submitting a proposal to the Marine Environment Protection Committee (MEPC) of the IMO.

South Africa is currently preparing a PSSA proposal for the MEPC for its continental EEZ. Unfortunately, this proposal currently does not include the maritime zones around the Prince Edward Islands.

## **5.2 South African National Legislation**

The Marine Traffic Act 2 of 1981 as amended by the General Shipping Amendment Act 23 of 1997 gives effect to the rights conferred on coastal states over its territorial seas and empowers the Minister of Transport may make regulations that regulate marine traffic in the territorial and internal waters of South Africa, “including the prescribing of ship reporting procedures, sea lanes and traffic separation schemes”<sup>89</sup>. Interestingly, the Marine Traffic Act did not originally apply to the Prince Edward Islands and only did so after amendment by the General Shipping Amendment Act in 1997<sup>90</sup>.

The Marine Pollution (Prevention of Pollution from Ships) Act 2 of 1986 empowers the Minister of Transport to make regulations that give effect to the MARPOL 73/78 Convention<sup>91</sup>. However, this act and regulations made under it deal mostly with preventing, minimizing and regulating operational pollution generated by ships.

The Marine Living Resources Act 18 of 1998 empowers the Minister of Environmental Affairs and Tourism to make regulations pertaining to “the prevention

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<sup>88</sup> Peet G (1994) Particularly Sensitive Sea Areas—A Documentary History. *International Journal of Marine and Coastal Law*, 9, 469.

<sup>89</sup> Shipping General Amendment Act 23 of 1997 Section 25 (a)

<sup>90</sup> Marine Traffic Act Section 26

<sup>91</sup> Marine Traffic Act Section 3 (1)a

of marine pollution”. Furthermore, the Minister is empowered to proclaim MPAs and can prohibit “any activity which may adversely impact on the ecosystems” of a MPA<sup>92</sup>. As discussed previously this can include the regulation of the passage of fishing vessels that have fishing gear aboard. However, any regulation pertaining more widely to the passage of other vessels would presumably require close liaison with the Minister of Transport and the South African Maritime Safety Authority (SAMSA), as this would be an area of overlapping jurisdiction.

If the passage of a foreign vessel is deemed or believed to be not innocent by the Minister of Transport, the Marine Traffic Act empowers the Minister to require the master of the vessel to stop the vessel, order it to anchor, move the vessel to a place specified by the Minister, and to allow authorized personnel aboard to inspect the vessel and its cargo<sup>93</sup>. If the master of the vessel fails to perform any act ordered by the Minister, the Minister may use “such force as may be necessary” to cause the act to be performed<sup>94</sup>.

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<sup>92</sup> Marine Living Resources Act s43 (2)e

<sup>93</sup> Marine Traffic Act s9 (1)

<sup>94</sup> Marine Traffic Act s9 (2)

## 6 Site protection for ecologically important areas adjacent to the Prince Edward Islands EEZ

As mentioned in the introductory section, the marine conservation plan for the Prince Edward Islands revealed that the marine ecosystems occurring within the South African EEZ are supported by specific and spatially defined ecosystem processes (e.g. areas of high primary productivity) that are located adjacent to the South African EEZ. A truly comprehensive and representative network of MPAs in the region of the Prince Edward Islands would ideally also require protection of these areas adjacent to the South African EEZ (but within the CCAMLR jurisdiction). In this section we briefly examine the possible jurisdiction for such potential MPAs on the high seas. This is a topic which currently enjoys a great amount of deliberation<sup>95,96,97</sup> and could be the subject of several theses on its own. In this thesis, I will therefore not try to be complete but merely outline the broad framework and present arguments as they pertain to the Prince Edward Islands.

### 6.1 The South African Extended Continental Shelf Claim

South Africa is currently in the process of conducting extensive surveys around the Prince Edward Islands in order to delineate the outer limits of the continental shelf and finalize its extended continental shelf claim as conferred on coastal States under the LOSC (Article 76). How then would a successful extended continental shelf claim affect South Africa's ability to manage living marine resources and habitats adjacent to its EEZ, but on its extended continental shelf?

Coastal States that have successfully delimited the outer limits of their continental shelf can claim sovereign rights to explore and exploit the natural resources of the continental shelf<sup>98</sup>. However, these natural resources are defined as:

*“...the mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or the subsoil<sup>99</sup>.”*

<sup>95</sup> Gjerge M (2005) Editors introduction: Moving from words to Action. International Journal of Marine and Coastal Law, 20, 323- 344

<sup>96</sup> Gjerde M, Breide C (2003) Towards a Strategy for High Seas Marine Protected Areas. Proceedings of the IUCN, WCPA and WWF Workshop on High Seas Marine Protected Areas. 15-17 January 2003, Malaga, Spain

<sup>97</sup> Scovazzi (2003) Marine Protected Areas on the High Seas: Some Legal and Policy Considerations. Paper presented at the World Parks Congress, Durban South Africa

<sup>98</sup> LOSC Article 77 (1)

<sup>99</sup> LOSC Article 77 (4)

At first glance, this definition would seem to severely limit South Africa's ability to manage international activities and particularly foreign fishing vessels targeting mobile species. However, when one considers the wider ecosystem impacts of many fisheries on benthic species and habitats, an interesting interpretation of these provisions becomes apparent. To explain, a non-specific fishery, such as a trawl fishery, targeting mobile fish on South Africa's extended continental shelf would certainly be damaging and harvesting (as bycatch) a wide range 'sedentary' benthic species. South Africa could therefore claim that such a fishery was impinging on its sovereign rights to explore and exploit these benthic species. In terms of exploitation, one should also not lose sight of the modern commercial opportunities afforded through bioprospecting. In other words, South Africa could claim that even the smallest and most insignificant benthic species could potentially contain important genetic material that could afford future commercial opportunities to the country. Similarly, other fisheries such as longlining and pot fishing for Patagonian toothfish can have significant bycatches of sedentary species (e.g. crabs). Once again, although these resources are not currently being commercially exploited, South Africa could claim that significant bycatches of these sedentary species affects its right to exploit these resources in the future.

It is therefore submitted that South Africa could use its extended continental shelf claim to manage a significant amount of fishing activity in these areas, should the need arise.

## 6.2 MPAs in areas beyond national jurisdiction

The "Freedom of the High Seas"<sup>100</sup> and its apparent conflict with the need to regulate high seas fisheries and thereby afford better protection to marine biodiversity of the high seas, is currently one of the most widely debated provisions of the LOSC (see earlier references).

The LOSC confers upon all States certain freedoms in respect to the high seas (e.g. navigation, overflight, laying submarine cables, scientific research and fishing). However, it is important to note that these freedoms are not unconditional rights and are subject to certain conditions and duties. Firstly, States have a general obligation to "protect and preserve the marine environment"<sup>101</sup>. Secondly, States have a very specific duty to "take such measures for their respective nationals as may be necessary for conservation of the living resources of the high seas"<sup>102</sup>. Thirdly, and perhaps most importantly for our purposes, States have a duty to:

*"...cooperate with each other in the conservation and management of living resources in the areas of the high seas. States whose nationals exploit identical living resources, or different living resources in the same area, shall enter into negotiations with a view to*

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<sup>100</sup> LOSC Article 87

<sup>101</sup> LOSC Article 192

<sup>102</sup> LOSC Article 117

*taking the measures necessary for the conservation of the living resources concerned. They shall, as appropriate, cooperate to establish subregional or regional fisheries organizations to this end.”*<sup>103</sup>

It is therefore be clear that the right for all States to fish on the high seas is in no way a blanket right for States to act unilaterally in this regard. States have a duty to co-operate with one another and to establish or participate in regional fisheries organizations to this end (in the case of the Prince Edward Islands, CCAMLR qualifies as the relevant and competent regional fisheries organisation). Furthermore, the obligation of States to co-operate when fishing on the high seas is not devoid of legal meaning. It implies a duty to act in good faith in entering into negotiations with a view to arriving at an agreement and in taking into account the positions of other interested States<sup>104</sup>.

The duty of States to co-operate has been further developed under the 1995 United Nations Fish Stocks Agreement (UNFSA)<sup>105</sup>, which is very clear that:

*Where a ... regional fisheries management organization ... has the competence to establish conservation and management measures for particular straddling fish stocks ..., States fishing for the stocks on the high seas ... shall give effect to their duty to cooperate by becoming members of such organization ..., or by agreeing to apply the conservation and management measures established by such organization ...*<sup>106</sup>

The UNFSA goes on state that:

*Only those States which are members of such an organization ..., or which agree to apply the conservation and management measures established by such organization ..., shall have access to the fishery resources to which those measures apply*<sup>107</sup>.

The UNFSA now enjoys participation from 56 states<sup>108</sup>. Although still not yet as comprehensive as one would wish, this treaty is starting to become a truly global treaty and it is hoped that it will become even more widely ratified in the future.

The UNFSA obviously only has direct application for very specific fish stocks (i.e. highly migratory species and those that straddle international boundaries). However, more importantly we should consider how the emergence and wide ratification of the

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<sup>103</sup> LOSC Article 118

<sup>104</sup> *North Sea Continental Shelf* case (1969) ICJ Rep 3, para 85 of the Judgement

<sup>105</sup> Full Title: Agreement For The Implementation Of The Provisions Of The United Nations Convention On The Law Of The Sea Of 10 December 1982 Relating To The Conservation And Management Of Straddling Fish Stocks And Highly Migratory Fish Stocks.

<sup>106</sup> UNFSA Article 8 (3)

<sup>107</sup> UNFSA Article 8 (4)

<sup>108</sup> [http://www.un.org/Depts/los/convention\\_agreements/convention\\_overview\\_convention.htm](http://www.un.org/Depts/los/convention_agreements/convention_overview_convention.htm)

UNFSA may have affected the modern understanding and interpretation of the provisions of the more widely accepted LOSC. This principle, coined as the *Principle of Contemporaneity* by Judge Weeramantry in the *Gabcikovo-Nagymaros Dam Case*<sup>109</sup> and reinforced in the *Shrimp-Turtle cases*<sup>110</sup>, upholds the dynamic nature of international treaty law. In particular it holds that treaty law needs to be interpreted and applied in the light of customary international law and new environmental law. In this regard, it is widely held that the UNFSA has had an effect of redefining and clarifying the legal concept of the 'Freedom of the High Seas' (and its conditions) in terms of modern global threats to high seas biodiversity and the modern framework of Sustainable Development<sup>111,112</sup>. The growing acceptance of the provisions of the UNFSA in modern fisheries law is clearly visible in the effect it has had on the provisions of more modern regional fisheries organizations (e.g. the Convention on the Conservation and Management of Fishery Resources in the South-East Atlantic Ocean; and the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean)

It is therefore held that the provisions of the LOSC and the UNFSA together provide a compelling legal argument that any State wishing to conduct fishing activity in the area adjacent to the Prince Edward Islands EEZ (but with the CCAMLR area of competence), should either become a member of CCAMLR or abide by its management and conservation measures. Failing this, the State should seek to cooperate directly with South Africa if fishing for stocks that straddle the EEZ boundary. This interpretation provides South Africa with considerable legal ground for protecting important ecosystem processes occurring in areas adjacent to its EEZ.

As described earlier, CCAMLR has been very positive about the role that MPAs can play in furthering the objectives of the Convention<sup>113</sup>. The 'protection of ecosystem processes' was one of the applications of MPAs that was explicitly listed by the Commission. The Commission has also endorsed a work plan that will inform the development of a representative network of MPAs in the entire Convention area. It is therefore submitted that a proposal by South Africa to further work towards formal protection of areas important for the ecosystem processes of the region, but occurring adjacent to the South African EEZ, will be aligned with international law and recent developments under the CCAMLR regime. As such it should receive due consideration from the Scientific Committee and Commission.

A successful pursuance of the path described above would afford protection for the ecosystems of this area from mainly fishing and other harvesting activities. This could

<sup>109</sup> *ICJ Rep.* (1997), 7, at paras. 112 and 140.

<sup>110</sup> *US – Import Prohibition of Certain Shrimp and Shrimp Products*. Report of the Appellate Body (1998) WT/DS58/AB/R

<sup>111</sup> Scovazzi T (2004) Marine Protected Areas on the High Seas: Some Legal and Policy Considerations. *The International Journal of Marine and Coastal Law*, Vol 19, No 1.

<sup>112</sup> Bialek D (2003) Sink or Swim: Measures Under International Law for the Conservation of the Patagonian Toothfish in the Southern Ocean. *Ocean Development and International Law*, 34: 105-137

<sup>113</sup> Report of CCAMLR-XXIV Para 4.14



hypothetically still leave these areas vulnerable to non-living resource extractive activities, such as mining. Part XI of the LOSC and the 1994 Implementation Agreement<sup>114</sup> govern the exploitation of non-living resources in areas beyond national jurisdiction (known as “the Area”). These instruments establish the International Seabed Authority and its various decision making bodies. The primary decision making authority is the Council<sup>115</sup>. Amongst the many powers and functions of the Council is the power to “disapprove areas for exploitation by contractors or the Enterprise in cases where substantial evidence indicates the risk of serious harm to the marine environment<sup>116</sup>.” Should the threat of deep sea marine mining ever arise in these areas, it would be incumbent upon South Africa and other sympathetic States to provide “substantial evidence” to the International Seabed Authority as to threats that this may pose to the marine environment and local ecosystems, and urge the Council to disapprove such plans.

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<sup>114</sup> Full Title: *1994 Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982*

<sup>115</sup> LOSC Part XI, Section 4, Subsection C.

<sup>116</sup> LOSC Article 162 (x)

## 7 Enforcement of a MPA around the Prince Edward Islands

Clearly the enforcement of a MPA in the Southern Ocean more than 1,500km from the nearest port is difficult for any country, let alone a developing country with limited resources. This shortfall was painfully evident during the mid 1990s when rampant IUU fishing around the Prince Edward Islands virtually led to the commercial extinction of toothfish stocks in the area. Clearly there would be little sense to the declaration of an MPA around the Prince Edward Islands if this was still the state of South Africa's enforcement capabilities. In this section we will examine legal and policy changes that should lead to an enhanced ability to enforce the proposed MPA around the Prince Edward Islands.

### 7.1 CCAMLR efforts

Since the mid 1990s CCAMLR has adopted a number of Conservation Measures relating to IUU fishing. These include Conservation Measures aimed at improving flag state control (CM 10-06 (2005)), port state control (CM 10-03 (2005)), trade measures (CM10-05 (2005)) and inspection and observation schemes. In this section we will only examine the Conservation Measures that could have direct pertinence to the monitoring, control and surveillance (MCS) of the proposed Prince Edward Islands MPA.

Perhaps the most significant development that will enable CCAMLR member states to monitor the detailed movement of their own vessels has been the adoption of mandatory satellite-based vessel monitoring systems (VMS) on all vessels operating within the CCAMLR area, except those fishing for krill<sup>117</sup>. In brief, the VMS allows States to monitor the movements of their licensed vessels remotely via a satellite transmitter attached to the vessel. Member States are further required to forward all VMS reports to the CCAMLR secretariat for collation and verification<sup>118</sup>. The main weakness in the current system is that vessels are only required to keep their VMS active while in the CCAMLR area. During the negotiation of this conservation measure, a number of States argued for the need to have the VMS active from port to port, but several fishing nations were strongly opposed to this and saw it as CCAMLR acting beyond its jurisdiction. The weakness in the adopted conservation measure is that a vessel may move into the CCAMLR area, activate its VMS as required, attempt to fish legally in its allocated area, find catches to be poor, move out of the CCAMLR area, deactivate the VMS and then move back into the CCAMLR area and fish illegally in another area (e.g. a MPA or EEZ of a coastal state). Despite this, it can be said that overall CCAMLR has been successful in implementing a system that is fairly robust for monitoring the activities and movements of legal vessels of CCAMLR Member States.

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<sup>117</sup> Conservation Measure 10-04 (2005)

<sup>118</sup> Conservation Measure 10-04 (2005) Article 11

The second major set of developments that affects the monitoring, control and surveillance of MPAs in the Southern Ocean are the CCAMLR System of Inspection and the CCAMLR System of International Scientific Observation. These developments were in response to Article XXIV of the Convention. Article III of the text of the CCAMLR System of Inspection entitles designated inspectors of member States to board fishing vessels in the CCAMLR area in order to verify compliance with conservation measures. Although the original text did not discern between fishing vessels of member States and non-member States, this was later clarified to only apply to vessels of other Member States. However, the entry into force of the UNFSA once again adds an interesting dimension to these provisions. Article 21 (1) of the UNFSA gives a State which is party to the UNFSA and a particular Regional Fisheries Organisation (RFO), the right to board and inspect fishing vessels of another member of the UNFSA in order to ensure compliance with conservation measures adopted by the RFO, regardless of whether such a State party is member of the particular RFO. Hence, under the provisions of the UNFSA, a CCAMLR inspector may board a vessel of another member of the UNFSA fishing in the CCAMLR area, even if the second party is not a CCAMLR member.

Should a CCAMLR inspector detect a violation, the CCAMLR System of Inspection only allows that the violation be reported to the flag State. The flag State is then required to initiate further legal proceedings. Under the UNFSA however, substantially more power is given to the inspecting State. In the case where there are clear grounds for believing a 'serious offence' has been committed and the flag State fails to fulfill its obligation to initiate proceeding, the inspectors may remain aboard, and if appropriate, bring the vessel to the nearest port<sup>119</sup>. However, the UNFSA is also clear that its provisions should only apply in the absence of inspection procedures being set up by the RFO itself<sup>120</sup>. Therefore in the case of an inspection by one CCAMLR member on the vessel of another CCAMLR member, the provisions of the CCAMLR system of inspection will apply. However, the 1969 Vienna Convention on the Law of Treaties is clear that if a CCAMLR member State inspects the vessel of a non-CCAMLR member, and both States are party to the UNFSA, then the provisions of the UNFSA should apply. The nett effect of this is that non-CCAMLR members, but who are party to the UNFSA, may be subject to more stringent inspection procedures than CCAMLR members. This could serve as a good incentive for such States to become members of the CCAMLR regime.

UNFSA has therefore had an effect of widening the number of nations that would be subject to inspection, under either the CCAMLR or UNFSA regimes. However, CCAMLR should also be commended for the efforts it has made to widen its own membership and to increase co-operation with non-contracting parties, most notably through the 1999 adoption of a comprehensive Policy to Enhance Co-operation

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<sup>119</sup> UNFSA Article 21 (8)

<sup>120</sup> UNFSA Article 21 (3)

between CCAMLR and Non-Contracting Parties<sup>121</sup>. These efforts have gone a long way towards widening flag state compliance under the CCAMLR regime<sup>122</sup>.

Over and above the CCAMLR System of Inspection, all vessels of CCAMLR member States are required to carry International Scientific Observers. Observers are required, amongst other duties, to record details of vessels operations<sup>123</sup>, including the position of fishing activity. This information is an additional means of monitoring the activities of vessels of CCAMLR members in relation to restricted areas such as the EEZs of coastal States and MPAs.

## 7.2 National legislation and policy

Over and above the provisions of CCAMLR, South Africa's national fisheries policy<sup>124</sup> also requires all licensed large commercial fishing vessels (Cluster A, B & C) to be fitted with an approved and functioning satellite-based VMS. Furthermore all South African licensed vessels fishing within the Prince Edward Islands EEZ are required to carry a scientific observer. An interesting application of the use of satellite-based VMS is the use of so-called 'exclusion zones' in which all fishing vessels are excluded, irrespective of whether the vessels are actually fishing or not. As we have seen earlier, there is some precedent for such 'exclusion zones' in both South African and Australian MPA regulations. In Australia, the Commonwealth has prosecuted fishing vessels for being present in such exclusion zones, based purely on their satellite VMS data<sup>125</sup>. The fact that the VMS navigation pattern might suggest the vessel had been fishing can be used to justify a steeper penalty, but there no need for the Commonwealth to prove that the vessel was actually fishing. Its mere presence is an offence.

During 2003 South Africa acquired three new purpose-built fisheries patrol vessels. One of these vessels, the *Sarah Baartman*, was built specifically for its blue water capabilities and ability to patrol waters around the Prince Edward Islands. Furthermore, the South African Navy recently acquired four new Corvettes. Although these vessels are not operational yet, an integral part of the motivation to acquire these vessels was the need to secure South Africa's offshore marine resources, including those adjacent to the Prince Edward Islands.

The Marine Living Resources Act empowers fisheries control officers aboard such vessels to order foreign or local fishing vessels within the South African EEZ to stop and to board and inspect such vessels<sup>126</sup>. Should the officer have reasonable grounds to suspect that an offence has been committed he or she may take the

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<sup>121</sup> CCAMLR, Report of the Eighteenth Meeting of the Commission (CCAMLRXVIII) Annex 8

<sup>122</sup> Millar *et al.* note 51 above

<sup>123</sup> Text of the CCAMLR Scheme of International Scientific Observation, Annex I, 2 (i)

<sup>124</sup> General Policy on the Allocation and Management of Long Term Commercial Fishing Rights: 2004. Department of Environmental Affairs and Tourism, South Africa.

<sup>125</sup> See Moolenaar note 59 above

<sup>126</sup> Marine Living Resources Act (1998) s51 (2) (a) & (h)

vessel to a port, or seize the vessel<sup>127</sup>. Seizure of vessels (or other property) by the State is subject to application for release upon the provision of appropriate security<sup>128</sup>. In the case of foreign vessels, this would be consistent with the provisions for “prompt release” on the posting of a “reasonable bond” under article 73 of the LOSC<sup>129</sup>. Interestingly though, the South African legislation stipulates that such financial security or bond should be calculated by adding the maximum possible fine for the offences (in this case two million South African Rands per offence<sup>130</sup>) allegedly committed *and* the “costs and expenses incurred or reasonably foreseen to be incurred by the State”<sup>131</sup>. In the case of a several thousand kilometer “hot pursuit” across the Southern Ocean, as we witnessed in the recent case of the *Viarsa I*, the costs incurred by the State can amount to several million dollars. These provisions are obviously important for the coastal States in order to recover expenses of very costly surveillance and enforcement operations. However, Article 73 of the LOSC only speaks of the posting a “reasonable bond” for “prompt release” of a detained vessel and crew. It remains to be tested whether cost recovery for such a long distance pursuit will qualify as a “reasonable bond” under the LOSC. Traditionally the International Tribunal for the Law of the Sea (ITLOS) has been quite conservative in its estimation of a “reasonable bond”<sup>132</sup>. Importantly, Australia has recently amended its Fisheries Management Act (1991) significantly, to allow for cost recovery of such surveillance and enforcement operations. The amended Australian Fisheries Management Act, allows for the arrested vessel to be automatically forfeited to the Commonwealth, so long as procedural notice obligations are complied with. There is no independent requirement for one of the crew members or master to be successfully prosecuted<sup>133</sup>. The owner’s only redress is to bring an action for the release of its vessel with the civil burden of proof resting on the owner’s shoulders to prove that the vessel was not involved in the commission of an offence against the Act. The amended Act gives the Australian authorities a power to include the pursuit costs recoverable as part of any bond set for the release of the vessel. These initiatives are a symptom of the frustration of coastal States to the perceived limitations in international law in protecting their sovereign rights from IUU fishing activities. Raising maximum fines payable on conviction, confiscating the vessels and equipment used in an offence, and recovering the costs of pursuit as a penalty are some of the few domestic avenues open to coastal States to directly deter foreign illegal fishing.

Perhaps the most promising development in terms of increasing compliance efforts around the Prince Edward Islands is the development of a draft bilateral compliance agreement between South Africa and Australia on co-operation for surveillance

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<sup>127</sup> Marine Living Resources Act (1998) s51 (2) (j) & (3) (c)

<sup>128</sup> Marine Living Resources Act (1998) s62 (1)

<sup>129</sup> LOSC Article 73 (2)

<sup>130</sup> Marine Living Resources Act (1998) s58 (1)

<sup>131</sup> Marine Living Resources Act (1998) s62 (2)

<sup>132</sup> Kimpton P (2004) Current Legal Developments Australia: Recent domestic and international law developments. *International Journal of Marine and Coastal Law*, 19, 537-543; and references therein.

<sup>133</sup> See Kimpton P (2004) note 132 above

around these nation's Southern Ocean territories<sup>134</sup> (i.e. Heard & McDonald Islands (Australia); and the Prince Edward Islands (South Africa)). A similar agreement was concluded between recently Australia and France<sup>135</sup> for the co-operative surveillance of their respective and neighbouring Southern Ocean territories on 24 November 2003. This agreement creates an 'Area of Cooperation' that corresponds to the French and Australian EEZs surrounding their island possessions in the Southern Ocean. The principal aims of the Treaty are to enhance cooperative surveillance and scientific research, as well as to establish a framework for collaborative activities like patrol missions, exchange of information and hot pursuit. An interesting provision from an international law perspective is the right of a Party, in Article 4, to continue hot pursuit of a fishing vessel through the territorial sea of the other Party, provided that the other Party is informed and no physical law enforcement is taken by the pursuing Party during that phase of the pursuit. The signing of this Treaty is an encouraging development in international law and the battle against IUU fishing in a region where surveillance and enforcement is extremely difficult. Furthermore, the Treaty text leaves the possibility open for Australia and France to explore other avenues of increasing cooperation through establishing collaborative enforcement regimes under Article 2 of Annex III.

Clearly it would make sense for South Africa to conclude its own bilateral Treaty with Australia as soon as possible. However, given the proximity of the Crozet Islands (France) and Bouvet Island (Norway) it would make sense that South Africa concludes similar Agreements with these States as well. This is especially pertinent in the case of 'hot pursuit' of transgressing vessels in terms of Article 111 (2) of the LOSC, which requires the pursuing Party to break off 'hot pursuit' as soon as the vessel enters the territorial waters of a third State. Although no formal treaties exist at present, South African compliance authorities have a good co-operative working relationship with the relevant authorities in Australia and France and have in the recent past co-operated with both governments in the arrest of suspected IUU vessels (the arrests of the *South Tomi* and *Viarsa* with Australia, and the *Apache* with France).

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<sup>134</sup> Baird R (2004) Coastal State Fisheries Management: A review of Australian Enforcement Action in the Heard and McDonald Islands Australian Fishing Zone. *Deakin Law Review*, 9, 91-118

<sup>135</sup> Full Title: Treaty between the Government of Australia and the Government of the French Republic on cooperation in the maritime areas adjacent to the French Southern and Antarctic Territories (TAAF), Heard Island and the McDonald Islands (Canberra, 24 November 2003)

## 8 Conclusions and Recommendations

### 8.1 Meeting international obligations and commitments

South Africa's participation in the CBD and the LOSC, as well as its public commitment to various widely accepted international policy statements (e.g. the Jakarta Mandate, WSSD plan of implementation, and the World Parks Congress Recommendations), places it under a legal obligation to develop a representative network of MPAs in the maritime zones under its jurisdiction. These legal instruments together highlight the need for such networks of MPAs to conform to three main criteria:

1. be consistent with international law,
2. be science-based, and
3. be representative of all marine habitats.

Overall, it can be said that South Africa has performed well in terms of meeting these international commitments. Almost 20% of our coastline is now protected within MPAs. However in the past, little specific planning was put into ensuring that this network is representative of all marine habitats (aside from a reasonably broad biogeographic representation). The recent conclusion of the marine component of the National Spatial Biodiversity Component and subsequent fine-scale plans being developed under this planning framework, have added a new dimension to this work and will ensure that future MPA declarations are based on these explicit requirements. The marine conservation plan developed for the Prince Edward Islands and the proposed MPA delineation (see Figure 2) is therefore consistent with these international requirements (of being science-based and representative of all marine habitats) and will contribute greatly to the South African government meeting its international commitments. The proposed MPA delineation is shown in Figure 2. It is important to note that the plan proposes four IUCN category 1a reserves, which will be strict 'sanctuary areas' (no-extractive activities allowed). These four category 1a reserves are linked by a conservation zone in which controlled fishing activity will be permitted.

Over and above the obvious marine biodiversity benefits, the MPA will also contribute to South Africa's duty under the LOSC to protect and restore overexploited fish stocks (in this case Patagonian Toothfish) to levels that can produce a maximum sustainable yield. The Prince Edward MPA plan also takes into account the migration routes and foraging areas of albatrosses breeding on the islands and as such seeks to fulfill South Africa's commitment under the ACAP to protect these marine habitats.

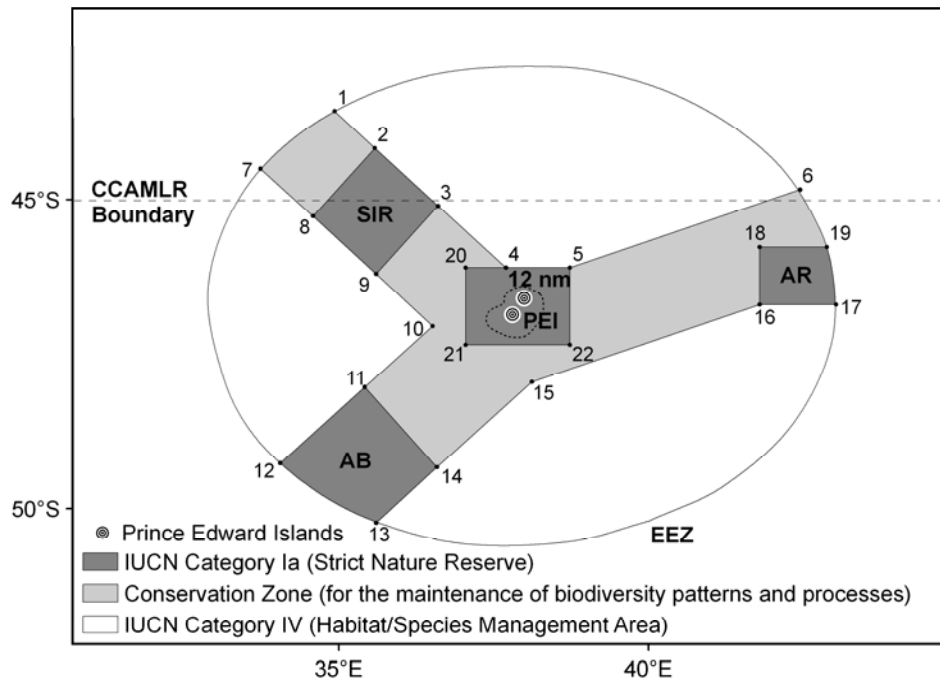


Figure 2. The proposed boundaries for the Prince Edward Islands MPA. The four Category 1a reserves are: Southwest Indian Ridge (SIR); Prince Edward Islands (PEI); Africana II Rise (AR); and Abyss (AB). From Lombard *et al.* (2006)

## 8.2 Harmonisation with regional arrangements

Although nothing can derogate from South Africa's sovereign rights to "explore and exploit" and "conserve and manage" the natural resources of its EEZ surrounding the Prince Edward Islands, both the LOSC and the UNFSA convey an obligation for South Africa to harmonise its management and conservation efforts with those of CCAMLR in the adjacent waters.

Recent developments within CCAMLR have established that it is the Commission's view that MPAs can play an important role in furthering the objectives of CCAMLR. The Commission has also endorsed a workplan for the development of a science-based approach towards the identification and development of a representative network of MPAs within the Convention area.

It can be concluded that South African efforts to establish a MPA in the Prince Edward Islands EEZ are completely consistent with the objectives of CCAMLR as well as recent developments under the CCAMLR regime. In fact the science-based approach adopted by South Africa was specifically commended by the Scientific Committee.



### 8.3 World heritage site nomination

Aside from elevating the conservation responsibility of this area to an international duty, it is doubtful whether a successful World Heritage Site nomination that includes the territorial sea will afford any extra protection to the marine areas on its own. It is also unclear whether the World Heritage system will be able to practically assist (financially, technically or otherwise) in marine conservation matters in this area, which are so heavily dominated by fisheries threats. This is the realm of regional fisheries organizations. However, the mere status that a World heritage Site brings along with it may afford certain secondary benefits to the area as a whole.

### 8.4 Options under South African domestic law

An extension of the existing Special Nature Reserve to include the 12 nautical mile territorial sea, as one component of a larger MPA, has significant legal and practical management implications.

The main difficulty with Special Nature Reserve Status for the territorial sea is that it will restrict access to the area almost exclusively to scientific research and environmental monitoring purposes. This will have an effect of excluding all vessels (including and especially fishing vessels) from the territorial sea, other than those involved directly in the management of the islands or engaged in scientific research or environmental monitoring. This presents some difficulty from the legal perspective and from a practical management perspective. From a legal perspective, these are not insurmountable; however, practically this may not be the best option.

From a legal perspective, at first there may seem to be a conflict between these stringent access conditions for a Special Nature Reserve and the rights of passage for local and foreign vessels. Firstly in terms of local fishing vessels, we have noted that in both South African and Australian domestic fisheries law there is precedent for excluding vessels completely from designated areas (irrespective of whether they are fishing or not). Secondly in term of both local merchant ships and foreign vessels (merchant or fishing), we have seen that coastal States have sovereign rights within their territorial seas to declare routeing measures, including 'areas to be avoided'. These measures are not contingent on IMO approval and South Africa only needs to take into consideration the recommendations of this body. Therefore from a legal perspective it appears that South Africa could impose a strict 'area to be avoided' by shipping traffic that corresponded with the limits of the territorial sea. However, from a practical point of view South African quota holders fishing for Patagonian Toothfish in the area, often need to use the lee of the islands to shelter from fierce storms in this area. A Special Nature Reserve Status including the Territorial Sea would preclude this option in most circumstances, and vessels could only justify seeking shelter in the case of *force majeure*. Given the key role that the legal South African fishery has played in keeping a surveillance presence around the islands over the past years, this course of action would seem excessive.

It would therefore seem that from a practical implementation point of view the more flexible structure provided by section 43 of the Marine Living Resources Act would be more preferable. The question is whether a proclamation under section 43 of the Marine Living Resources Act can afford a similar level of comprehensive protection from a wide range of threats, as afforded a Special Nature Reserve Status under NEMPA. It appears that the provisions of section 43 have been used to control a wide range of potential impacts including fishing, extraction, mining, disturbance, pollution, and construction. Furthermore, State practice appears to indicate the 'catch-all' provision that asserts the Minister right to prohibit "any activity that may adversely impact on the ecosystems of the area," has been used to good effect to control a wide range of activities, including the passage of fishing vessels. Section 43 of the Marine Living Resources Act, however, has the advantage of possessing the necessary flexibility to allow legally permitted fishing vessels to shelter in the lee of the islands under prescribed conditions. Such conditions could include a requirement to stow all fishing gear whilst within the MPA and to inform the officer-in-charge at the scientific station on the islands of the vessels intended movements.

It is therefore concluded that extension of the present Prince Edward Islands Special Nature Reserve to include the territorial sea would not be appropriate due to stringent and inflexible nature of this legislation. Section 43 of the Marine Living Resources Act, if used in conjunction with complementary legislation (e.g. to regulate marine traffic; see next section) can afford a similar level of protection to this area, while maintaining the necessary flexibility to manage the practicalities of an active fishery in the area.

## **8.5 Regulation of shipping activity**

Despite the longstanding navigational rights of seagoing vessels, modern international law affords coastal States with considerable rights to regulate international shipping traffic within its territorial sea and EEZ for the specific objective of conserving the marine resources of this area. Within the territorial sea surrounding the Prince Edward Islands, South Africa has sovereign rights to regulate traffic through measures that include mandatory reporting and routing measures and mandatory 'areas to be avoided'. For these purposes, South Africa merely needs to take into account the recommendations of IMO. It would therefore be possible to declare the entire territorial sea surrounding the Prince Edward Islands as an 'area to be avoided' with designated sea lanes leading to and from designated anchoring sites. Such anchoring sites would be positioned so as to ensure maximum safety of vessels (especially vessels that are not familiar with the islands) and thus avoid any situations which could lead to vessels floundering and consequent pollution threats to the wildlife of the islands. Although the threat of pollution would be a major reason for these regulations, international legal practice allows marine traffic measures to be taken for environmental reasons other than the threat of pollution. At the Prince Edward Islands there is one such reason to regulate the minimum distance at which

vessels may anchor from the islands. Possibly the greatest threat to the terrestrial ecosystems of the islands and the millions of seabirds that breed here is the accidental introduction of rats from ships. Rats have wreaked havoc on several sub-Antarctic and temperate islands to which they have been introduced. As rats are known to be able to swim considerable distances, it seems prudent that a minimum anchoring distance be enforced.

For the parts of the Prince Edward Islands MPA that fall outside of the territorial sea but within the EEZ, it is recommended that mandatory reporting requirements are imposed for all vessels. The reasons for this are mainly related to enhancing fisheries compliance and enforcement efforts (see later discussion). These measures will be subject to approval from the IMO, however, given the low levels of marine traffic in the vicinity of the Prince Edward Islands, it is unlikely that such a proposal should pose a problem.

As with World Heritage Site status, pursuing a PSSA status for the Prince Edward Islands MPA will not afford the area any extra protection on its own. Protective regulations will still need to be developed separately to the PSSA approval by IMO, adding an extra administrative hurdle to the process. However, as South Africa is in the process of submitting a PSSA proposal for its continental EEZ, it seems logical that this proposal is expanded to include the Prince Edward Islands.

## **8.6 Protection of ecosystem process on the high seas**

The Prince Edward Islands MPA planning process revealed that two important and spatially defined ecosystem processes are located adjacent to the Prince Edward Islands EEZ. Ensuring comprehensive protection for the marine ecosystems of the Prince Edward Islands EEZ would therefore ideally include protection of these processes which occur on the high seas, but within the jurisdiction of CCAMLR. Fortuitously, both these areas also occur in the areas where South Africa is proposing to claim extended continental shelf rights under the LOSC. This claim will certainly increase South Africa's international legal standing to afford higher protection to the biodiversity and ecosystem processes of these areas. However, more comprehensive protection will need to be facilitated through CCAMLR. Both these areas are currently closed to the main fishing activity in this area (that for Patagonian Toothfish) under CCAMLR Conservation Measures. Furthermore, the Commission has endorsed the role that MPAs can play in furthering the objectives of CCAMLR. A proposal by South Africa for the protection of these areas adjacent to its EEZ in order to secure the wellbeing of the ecosystems occurring within its EEZ, should receive due consideration from the Commission. This process would be consistent with international law and would not infringe on the rights of non-contracting parties to CCAMLR. This position is held mainly because of the growing acceptance of the UNFSA and the effect it has had on clarifying the provisions of the

LOSC<sup>136</sup> with regard to co-operation between coastal States and States harvesting stocks that straddle the coastal States EEZ.

## 8.7 Enforcement options

The requirement for all vessels operating within the Prince Edward Islands EEZ and within CCAMLR waters to be fitted with satellite-based VMS and carry scientific observers, has greatly increased the ability of CCAMLR parties to monitor and control the movements and activities of their own fishing vessels. Efforts within the CCAMLR system, such those to widen the membership and to enhance co-operation with non-contracting parties, as well as growing acceptance of reciprocal inspection and compliance procedures under the UNFSA, have also had an effect of increasing the potential level of control over vessels flagged to non-contracting parties operating within the CCAMLR area. Although, improvements have been evident in this area, it would be naïve to think that the battle has been won. There are still significant problems with political will, from both non-contracting parties and some contracting parties, in exercising proper and responsible flag State control over their fishing vessels. This is not a problem that is unique to CCAMLR and subject global concern and attention.

It is the opinion of Millar *et al.*<sup>137</sup> that “it is probably true to say that deterrence of toothfish IUU fishing in the CCAMLR Area has been most effectively prosecuted through coastal State action in respect of waters under their national jurisdiction, rather than *via* direct application of specific CCAMLR conservation measures”. The reasons for this are two fold. Firstly, the levels of fines being imposed by coastal States now present a real deterrent. This is evident by the fines being imposed by Australia (e.g. in the case of the *Volga*). In addition to making provision for substantial fines, South African domestic law allows for the recovery of any costs the State may have incurred in making the arrest. In the case of illegal fishing within the Prince Edward Islands, this could amount to a considerable financial deterrent for any would-be poacher. Secondly, there is a growing political will to combat IUU fishing by coastal States in the Southern Ocean. This is evident in the acquisition of purpose built patrol vessels by South Africa and the developments towards bilateral co-operative surveillance agreements between Australia, France and South Africa. These developments will have an immense effect on South Africa’s ability to monitor and manage an MPA around its Prince Edward Islands. Co-operation between these nations in costly surveillance exercises in the Southern Ocean makes absolute political, logistical and economic sense and will greatly enhance compliance efforts in this area. It is recommended that South Africa conclude its negotiations towards compliance agreements with both Australia and France with great urgency. However, it is also urged that a similar agreement be struck with Norway with regards to its neighbouring Bouvet Island. The Norwegian territorial sea around Bouvet, situated

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<sup>136</sup> With regard to the obligation for States to co-operate in harvesting the living resources on the high seas. LOSC Article 118; UNFSA Article 8

<sup>137</sup> See Millar *et al.* note 51 above

less than 1000km from the Prince Edward Islands could prove to be a geographical and legal loophole in the case of a “hot pursuit” of an IUU vessel sighted fishing within the Prince Edward Islands MPA.

In terms of the regulations pertaining to the Prince Edward Islands MPA declaration, it is recommended that four category 1a reserves be declared a fishing vessel ‘exclusion zones’ under the Marine Living Resources Act except for designated approach lanes and anchoring locations in the category 1a reserve immediately around the islands (PEI in Figure 2). These ‘exclusion zones’ will play an important enforcement role. Firstly, in terms of effecting a successful prosecution of illegal vessels sighted within the MPA, the State will not need to prove that the vessel was actually fishing (this can be difficult at times) and the mere presence of the vessel in the MPA is enough to prosecute. Evidence of fishing activity can however be used to argue for a heavier sentence. Secondly, should South Africa ever wish to avail itself of remote-sensed satellite surveillance imagery, such a no-vessel area will greatly enhance the ability to detect illegal fishing activity.

Furthermore, it is recommended that the entire MPA, outside of the territorial waters is subject to mandatory reporting measures. For South African flagged vessels, this can be regulated through the Marine Traffic Act and the Marine Living Resources Act. However, for application to foreign flagged vessels, such a measure will be subject to the endorsement of the IMO. Such measures will once again greatly ease compliance and enforcement activities in the area. In other words, should a vessel be sighted within the MPA, that had not reported its passage, it would immediately be liable for prosecution without having to prove that the vessel was indeed fishing. Secondly, reporting by vessels that are legally passing through the area will greatly assist in detecting other vessels that are there illegally (via remote sensed imagery or other surveillance). Finally, mandatory reporting by all vessels entering these zones can facilitate voluntary surveillance efforts. In other words, all vessels entering these zones can be asked to report any fishing activity (vessels or fishing lines) that is observed. This can then be validated or investigated by the South African fishing authorities.

## **8.8 Concluding remarks and summary of recommendations**

In summary, it is submitted that the development of a MPA around the Prince Edward Islands will greatly advance South Africa’s progress towards meeting its international legal obligations and policy commitments, including the:

- development of representative networks of MPAs in its waters, and
- sound conservation and management of the marine resources under its jurisdiction.

It is also held that, taking into account the arguments and recommendations put forward in this thesis, the development of such an MPA is:

- consistent with international and national law.

- feasible to implement, manage and enforce using current international, regional, bilateral and national legal and policy instruments.

Based on this legal analysis, the following recommendations are made for ensuring comprehensive legal protection for the marine biodiversity and resources of the Prince Edward Islands:

1. The proclamation of a multi-zoned MPA around the Prince Edward Islands (as illustrated in Figure 2) should be pursued entirely under section 43 of the Marine Living Resources Act. All extractive activities should be prohibited from the four IUCN Category 1a reserves, whilst controlled fishing should be permitted in the conservation zone.
2. Passage of all fishing vessels should be prohibited within all four category 1a reserves within the Prince Edward Islands MPA (see figure 2); under section 43 of the Marine Living Resources Act.
3. Passage of all fishing vessels through other parts of the MPA (i.e. conservation zones) should be subject to mandatory reporting; under section 43 of the Marine Living Resources Act.
4. The 12 nautical mile territorial sea surrounding the islands, should be designated as an 'area to be avoided' by all shipping, with specific designated approach sea lanes and anchoring sites for vessels wishing to approach the island or fishing vessels wishing to seek shelter from storms. A minimum approach and anchoring distance should also be stipulated. Whilst such measures are not contingent on IMO approval, this proposal will need to be sent to IMO for its recommendations. These regulations can be passed under Marine Traffic Act as amended by section 25 (a) of the General Shipping Amendment Act.
5. The parts of the MPA falling outside of the territorial sea should be proposed as a mandatory reporting zone for foreign vessels, through the appropriate IMO channels. For South African vessels, the Marine Traffic Act can be used to legislate such measures.
6. The Prince Edward Islands MPA should be added to the South African PSSA proposal
7. Bilateral surveillance co-operation agreements need to be concluded with Australia, France and Norway as soon as possible.
8. South Africa should put forward a proposal to CCAMLR to justify the protection of important ecosystem processes in areas adjacent to the South African EEZ, but within the CCAMLR area.
9. South Africa should pursue the delimitation of its extended continental shelf claim in this area with urgency, as it is held that this claim can afford added protection to these areas adjacent to the South African EEZ.
10. Whilst World Heritage Site status will probably not add any extra protection to the marine resources of this area on its own, such status could have a secondary effect of increased conservation and precautionary management in this area. If South Africa is to proceed with the nomination process, careful

consideration should be given to not create a situation of overlapping legislative and institutional authority.

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